BARIUM CARBONATE AND STRONTIUM CARBONATE FROM THE FEDERAL REPUBLIC OF GERMANY AND STRONTIUM NITRATE FROM ITALY

Determinations of the Commission in Investigations Nos. 731-TA-31-33 (Preliminary) Under the Tariff Act of 1930, Together With the Information Obtained

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UNITED STATES INTERNATIONAL TRADE COMMISSION

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

Investigation Nos. 731-TA-31-33 (Preliminary)

BARIUM CARBONATE FROM THE FEDERAL REPUBLIC OF GERMANY
STRONTIUM CARBONATE FROM THE FEDERAL REPUBLIC OF GERMANY
STRONTIUM NITRATE FROM ITALY

Determination

On the basis of the record 1/ developed in investigation No. 731-TA-31 (Preliminary), the Commission unanimously determines that there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury, 2/ by reason of imports of barium carbonate from the Federal Republic of Germany, provided for in item 472.06 of the Tariff Schedules of the United States (TSUS), which are allegedly being sold in the United States at less than fair value (LTFV).

On the basis of the record 1/ developed in investigation No. 731-TA-32 (Preliminary), the Commission determines 3/ that there is no reasonable indication that an industry in the United States is materially injured or threatened with material injury 4/ by reason of imports of strontium carbonate from the Federal Republic of Germany, provided for in item 421.72 of the TSUS, which are allegedly being sold in the United States at LTFV.

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

2/ Chairman Alberger found only that there is a reasonable indication that an industry in the United States is materially injured.

3/ Commissioners Moore and Bedell dissenting.

4/ Material retardation of the establishment of an industry is not an issue in this investigation.

On the basis of the record 1/ developed in investigation No. 731-TA-33 (Preliminary), the Commission unanimously determines that there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury, 2/ by reason of imports of strontium nitrate from Italy, provided for in item 421.74 of the TSUS, which are allegedly being sold in the United States at LTFV.

Background

On September 9, 1980, the U.S. International Trade Commission and the U.S. Department of Commerce each received three petitions alleging sales in the United States at LTFV. The products identified in the petitions were precipitated barium carbonate imported from the Federal Republic of Germany, 3/ precipitated strontium carbonate imported from the Federal Republic of Germany, 4/ and strontium nitrate imported from Italy. 5/ Accordingly, the Commission instituted preliminary antidumping investigations under section 733 of the Tariff Act of 1930 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 of the specified products into the United States. The statute directs that the Commission make its determination within 45 days of its receipt of the petition, or in this case by October 24, 1980.

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

2/ Chairman Alberger found only that there is a reasonable indication that an industry in the United States is materially injured.

3/ Petition filed on behalf of FMC Corp., Chemical Products Corp., and the Sherwin-Williams Co.

4/ Petition filed on behalf of FMC Corp. and Chemical Products Corp.

5/ Petition filed on behalf of FMC Corp.

Notice of the institution of the Commission's investigations and of a public conference to be held in connection therewith was duly given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, D.C., and in the Commission's New York City Office, located at 6 World Trade Center, and by publishing the notice in the Federal Register on September 24, 1980 (45 F.R. 63388). The public conference was held in Washington, D.C., on October 3, 1980, and all persons who requested the opportunity were permitted to appear in person or by counsel.

STATEMENT OF REASONS FOR THE AFFIRMATIVE DETERMINATION
OF CHAIRMAN BILL ALBERGER, VICE CHAIRMAN MICHAEL J. CALHOUN,
COMMISSIONERS GEORGE M. MOORE AND CATHERINE BEDELL
IN INVESTIGATION No. 731-TA-31 (Preliminary) AND
IN INVESTIGATION No. 731-TA-33 (Preliminary)

Determinations

On the basis of the record in investigation No. 731-TA-31 (Preliminary), we determine that there is a reasonable indication that an industry in the United States is materially injured 1/ or is threatened with material injury, 2/ by reason of imports from the Federal Republic of Germany of barium carbonate, provided for in item 472.06 of the Tariff Schedules of the United States, allegedly sold or likely to be sold in the United States at less than fair value (LTFV).

On the basis of the record in investigation No. 731-TA-33 (Preliminary), we determine that there is a reasonable indication that an industry in the United States is materially injured, 1/ or is threatened with material injury, 2/ by reason of imports from Italy of strontium nitrate, provided for in item 421.74 of the Tariff Schedules of the United States, allegedly sold or likely to be sold in the United States at less than fair value.

The following findings and conclusions, based on the record in these investigations, support these determinations.

1/ Chairman Alberger finds only that there is a reasonable indication that an industry is materially injured.

2/ Material retardation of the establishment of an industry is not in issue in these case since there are producers of each product under consideration. Thus this issue is not discussed further.

The Products

Each of the products subject to these investigations has distinct uses and characteristics, and each is therefore sold in a distinct market. Barium carbonate is used in a variety of ways, principally to prevent scumming in the manufacture of bricks and discoloration in the production of ceramics, and to increase the brilliance and refractive index of glass. It is also used in lesser amounts in the manufacture of permanent-magnet ferrites and photographic paper, and in the manufacture of other chemicals. 1/ Strontium nitrate is used primarily in the manufacture of pyrotechnic devices, with small amounts being used in chromate coatings and as chemical reagents. There appear to be no available commercial substitutes for barium carbonate and strontium nitrate.

Because domestically produced barium carbonate and strontium nitrate are virtually identical to the respective products being imported, we conclude that for investigation 731-TA-31 (Preliminary) the like product is barium carbonate and for Investigation 731-TA-33 (Preliminary) the like product is strontium nitrate within the meaning of section 771(10) of the Tariff Act of 1930 (19 U.S.C. 1677(10)).

The Domestic Industry

In these investigations, we have concluded that there are separate appropriate domestic industries against which the impact of the alleged LTFV sales of the imports should be measured, each consisting of the producers of the respective like products. 2/

1/ Chemical Profile on barium carbonate, Sept. 8, 1980.

2/ See views of Chairman Alberger and Vice Chairman Calhoun in investigation No. 731-TA-32 for the relationship among these products.

Each of these chemicals is produced continuously on either a separate production line or for several months at a time on a production line which may also be used for other chemical products. Further, each of the products is very different in characteristics and uses, and each is sold in a different market. Therefore, we conclude that there is a separate industry corresponding to each chemical, and that the data permit the assessment of injury in each industry.

The Question of Reasonable Indication of Material Injury or Threat Thereof

Section 733(a) of the Tariff Act directs that the Commission "shall make a determination, based upon the best information available to it at the time of the determination . . . ." Section 771(7)(A) defines the term "material injury" to mean "harm which is not inconsequential, immaterial, or unimportant." Section 771(7)(B) directs that in making its injury determination, the Commission shall consider, among other factors, (1) the volume of imports of the merchandise which is the subject of the investigation, (2) the effect of imports of such merchandise on prices in the United States for like products, and (3) the impact of imports of such merchandise on domestic producers of like products. In light of these directives, we base our decisions on the findings of fact and conclusions of law discussed below.

Barium Carbonate

Volume of imports.--U.S imports of precipitated barium carbonate from West Germany, by far the major foreign supplier, have increased substantially in recent years, rising from 11.4 million pounds in 1977 to 15.6 million pounds in 1979, or by 37 percent. The market penetration of imports from West Germany has similarly increased, rising from 13.6 percent in 1977 to 18.6 percent in 1979. 1/

Effects of imports on prices.--During 1977-79, a period of sharply increased imports of West German barium carbonate, the imported product consistently undersold its domestic counterpart by substantial margins. These margins of underselling, which were at their highest level during 1979, continued into January-June 1980. In all instances, the margins of underselling were more than accounted for by the alleged margins of sales at less than fair value. 2/

Impact of imports on the domestic producers.--The record shows that domestic production, capacity utilization, sales, and profit realized from U.S. producers' barium carbonate operations fell during 1977-79 and January-June 1980. During this period--one in which imports increased substantially--inventories held by domestic producers displayed sharp and continuing increases. 3/

1/ Report, at pp. A-33 through A-35.
2/ Report, at pp. A-6, and A-40 through A-44.
3/ Report, at p. A-23 through A-25.

U.S. production of barium carbonate declined from 69 million pounds in 1977 to 63 million pounds in 1979, and capacity utilization declined from 92 percent to 83 percent. 1/ Producers' domestic sales fell from 70 million pounds to 61 million pounds, or by 13 percent, and declined an additional 18 percent in January-June 1980 compared with sales in the corresponding period of 1979. 2/ Producers' inventories of barium carbonate increased from 5 million pounds as of yearend 1977 to about 7 million pounds by yearend 1979, and then almost doubled to 14 million pounds as of June 30, 1980. 3/

U.S. producers realized low profit from their operations in producing barium carbonate during 1977-79, and virtually no profit during January-June 1980. The ratio of net operating profit to net sales of barium carbonate by domestic producers increased from 1.6 percent in 1977 to 5.2 percent in 1979, but then fell to about 0.05 percent in January-June 1980. 4/

Strontium Nitrate

Volume of imports.--Imports of strontium nitrate from Italy began only in mid-1978; since that time, however, Italy has been virtually the only foreign supplier of this product to the United States. Imports from Italy increased from zero in 1977 to 0.5 million pounds in 1978, and then jumped to 3.1 million pounds in 1979. The market penetration of imports from Italy similarly increased, rising more than fourfold from 1978 to 1979. 5/

Effects of imports on prices.--During 1977-79, a period of very sharply increased imports of Italian strontium nitrate, the imported product generally

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1/ Report, at p. A-17.
2/ Report, at pp. A-19 and A-20.
3/ Report, at pp. A-23 through A-25.
4/ Report, at pp. A-28 through A-30.
5/ Report, at pp. A-34 through A-36.

undersold its domestic counterpart by substantial margins. The margins of underselling increased markedly during 1979. In all instances, the margins of underselling were more than accounted for by the alleged margins of sales at less than fair value. 1/

Impact of imports on the domestic producers.--U.S. production of strontium nitrate increased from 1977 to 1978, but fell substantially thereafter. Production declined by more than one-fourth in January-June 1980 in comparison with production during the corresponding period of 1979. Trends in capacity utilization were similar. 2/

End-of-period inventories of strontium nitrate held by the domestic producer increased without interruption during the period January 1977-June 1980. Inventories as of June 30, 1980, were more than double those held a year earlier, and were equivalent to a very large percentage of the producer's annual sales of this product. 3/

The number of man-hours worked by production and related workers in producing strontium nitrate in the United States, as well as wages paid to such employees, declined from 1978 to 1979. These declines continued into Jaunary-June 1980. 4/

The domestic producer's sales of strontium nitrate increased from 1977 to 1978, and then fell substantially in 1979. The decline in such sales continued into January-June 1980, as compared with sales during the corresponding period of 1979. 5/

1/ Report, at pp. A-6, A-47 and A-49.
2/ Report, at pp. A-17 through A-19.
3/ Report, at pp. A-24 and A-26.
4/ Report, at pp. A-27 and A-28.
5/ Report, at pp. A-20 and A-23.

The U.S. producer's profit realized from operations in producing strontium nitrate deteriorated sharply after 1978, the year in which imports of strontium nitrate from Italy first entered the U.S. market. The ratio of net operating profit to net sales in 1979 was less than half that in 1978, and the ratio continued to fall during January-June 1980. 1/

Conclusions

On the basis of the large margin of underselling coupled with rising U.S. producers' inventories and the declining trends in their production, capacity utilization, sales, and profit during 1977-79 and January-June 1980, we conclude that there is a reasonable indication that the domestic industry producing barium carbonate is materially injured, 2/ or is threatened with material injury, by reason of imports from West Germany allegedly sold, or likely to be sold, at less than fair value.

On the basis of the margin of underselling coupled with the high inventories held by the U.S. producer and declining trends in domestic production, capacity utilization, sales, employment, and profit during 1977-79 and January-June 1980, we conclude that there is a reasonable indication that the domestic industry producing strontium nitrate is materially injured, 2/ or is threatened with material injury, by reason of imports from Italy allegedly sold, or likely to be sold, at less than fair value.

1/ Report, at pp. A-29 and A-31.
2/ Chairman Alberger's finding is limited to material injury.

VIEWS OF COMMISSIONER PAULA STERN

Introduction

On the basis of the best available information in these preliminary antidumping investigations, I voted in the affirmative in both investigations 731-TA-31 (Barium Carbonate from the Federal Republic of Germany) and 731-TA-33 (Strontium Nitrate from Italy). In Investigation 731-TA-32 (Strontium Carbonate from the Federal Republic of Germany), my determination was negative.

I concur with my colleagues regarding the definition of industry in each investigation. */

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*/ Further, I point out that the available data permit analysis of the effects of the alleged LTFV imports on production of the respective like products. In contrast to Pipes and Tubes of Iron and Steel from Japan (Inv. No. 731-TA-15 (Preliminary), April 1980), it is not necessary to aggregate. In these cases, data clearly provide a separate identity for each product. Each of the chemicals is produced either on a separate production line or on an individual production line for several months at a time. As a result, the task of allocating was less complex than in Pipes and Tubes. There is a virtually unique demand for each chemical, and all of the companies provided allocated profit-and-loss data. For these reasons, a product-by-product analysis is possible.

Material Injury by Reason of Alleged LTFV Imports

Investigation 731-TA-31
Barium Carbonate from the Federal Republic of Germany

The most striking indications of the economic difficulties being experienced by the U.S. barium carbonate industry are the data related to sales and profitability. Sales of barium carbonate have fallen steadily since 1977. In 1977 sales amounted to 69.9 million pounds. By 1979 they had fallen thirteen percent to 60.8 million pounds, and from January-June 1980 they declined roughly eighteen percent over the January-June 1979 level. Profitability has been low since the beginning of the period under consideration. Profits did increase from 1977 to 1979; however, from January-June 1980 they fell to less than 0.5 percent of sales. 1/

The industry is comprised of three domestic producers -- FMC Corp. (FMC), Chemicals Products Corp. (CPC), and Sherwin-Williams Co. The unusual production procedure utilized by FMC, where barium and strontium carbonate are produced on the same production line on a "campaign" basis 2/, requires looking beyond the aggregated figures on production, capacity and inventories to determine whether FMC's product mix shifts are camouflaging economic difficulties facing the industry as a whole. Production, capacity and inventory figures on a company-by-company basis

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1/ Profitability has varied substantially by company. Should this case return for a final investigation, profit data will need to be reviewed carefully to ensure that allocations have been made in a uniform manner by all companies.

2/ In production by "campaign," common equipment is used to alternately produce barium carbonate and strontium carbonate. Between changeovers, the equipment is purged and cleaned. The plant "turns around" between the production of the two chemicals two to four times per year.

reveal adverse signs that cannot be attributed to the "campaign" production of FMC. Production has been declining since 1978. Though capacity utilization has generally been high, analysis suggests some weakness in the figures. There has also been a significant build-up of inventories in 1980.

The question that needs to be answered is whether these indications of injury can be attributed to the alleged LTFV imports. A number of causes other than imports were put forward in this preliminary investigation, including the recession-related drop in consumption, the shift from barium to strontium carbonate for use in controlling TV X-ray emissions, and internal problems of the domestic producers. Further analysis of the record also raises another possible cause. The drop in domestic sales from January-June 1980 is largely accounted for by a drop in sales of chemical grade barium carbonate. However, it is not clear if West Germany ships chemical grade barium carbonate to the United States. 3/

In antidumping cases the Commission does not weigh the causes of injury to a domestic industry. Other factors are to be considered, however, and the essential point is that the Commission "must satisfy itself that in light of all the information presented, there is sufficient causal link between the less-than-fair-value imports and the requisite injury." 4/

In this preliminary investigation, I found a reasonable indication that the injury discussed above is by reason of alleged LTFV imports. The staff report in this investigation shows sizeable margins of underselling for both glass and

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3/ The Staff Report identifies various grades of both barium and strontium carbonate. There are, however, no published industry-wide specifications concerning grades, and staff advises that the end-user can normally adapt to the use of any of the available grades. All the grades of each product are chemically identical.

4/ S. Rep. No. 96-249, 96th Cong., 1st Sess. 75 (1979).

ceramic grade barium carbonate. 5/ Underselling by the alleged LTFV imports of the glass grade barium carbonate averaged fourteen percent for the period under consideration. Ceramic grade carbonate imports from West Germany undersold the similar U.S. product by an average of twenty percent over the same period.

Imports increased from 1977 to 1979 from 11.4 million pounds to 15.6 million pounds. Though imports have been dropping since 1978 concomitant with the decline in consumption, market penetration from January-June 1980 was still above the 1977 level. Market penetration increased from 13.6 percent in 1977 to 18.3 percent in 1978. This increase in part results from the fact that the "supply gap" (the shortfall between domestic capacity and demand) increased from 8 million pounds in 1977 to 14 million pounds in 1978. However, in 1979 when the "supply gap" narrowed to 9 million pounds, the share of the market held by imports did not decline. In fact, in 1979, it continued to increase minimally. At that time the margin of underselling was at the highest levels for the whole period under consideration. While market penetration dropped from 19.3 percent in January-June 1979 to 15.4 percent in the same period in 1980, the latest level is still significant.

Prices of both U.S.-produced and imported barium carbonate have been increasing substantially. During the period under consideration, U.S. prices of ceramic grade barium carbonate rose 57 percent, while prices of imports increased fifty percent. Over the same period, U.S. prices of glass grade barium carbonate

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5/ A brief submitted late in the investigation by the importer raises questions about the veracity of the margins. The staff did not have time to verify data submitted in this brief.

rose fifty percent, while import prices rose 55 percent. Despite the substantial U.S. price increases, the petitioners allege that prices have been suppressed because they have not been able to cover rising costs with sufficiently large price increases. Should the case return for a final determination, this issue needs to be explored further.

Based on the information developed in this investigation concerning the level of imports, the margin of underselling, and the economic condition of the U.S. industry, I have found that there has been a showing of a reasonable indication of material injury by reason of the alleged LTFV imports. 6/

Investigation 731-TA-32
Strontium Carbonate from the
Federal Republic of Germany

In this investigation price data gathered by the Commission staff reveal that underselling has increased significantly from 1977 to the present. In January-June 1977 the price of imported strontium carbonate was only slightly less than the U.S. price. The margin of underselling from mid-1977 through the first quarter of 1979 averaged about five percent. At that time the differential between the prices of U.S. and strontium carbonate imported from West Germany jumped to approximately fifteen percent. By October 1979, however, the margin began to narrow, and in June 1980 stood at about ten percent. 7/ 7a/ While underselling might suggest a

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6/ Important data necessary to analyze threat were not available in this investigation. This issue requires thorough exploration should this case return for a final determination.

7/ The term "underselling" or "undercutting" as in Section 771(7)(c)(ii)(I) of the Tariff Act of 1930, refers to the circumstances where the price of the alleged LTFV imports is below the price of the domestic like product in the U.S. market.

7a/ Supra note 5 at page 14.

causal link to alleged LTFV imports, I have not found any reasonable indication of material injury by reason of such imports.

A number of factors might indicate that the health of the U.S. industry is deteriorating. Though increasing over the 1977-79 period, the figures for production, sales, and capacity utilization are down from January to June 1980. Production dropped more than fifteen percent from the January-June 1979 level. Sales fell nearly five percent over the same period, and capacity utilization declined accordingly. Inventories in June 1980 were higher than in June 1979, another possible indication of ill health.

However, a careful analysis reveals that these "negative" data are not indicative of material injury by alleged LTFV imports. There are two domestic producers of strontium carbonate, FMC and CPC. FMC uses the same production line for both strontium carbonate and barium carbonate production. From January to June 1980, FMC increased barium carbonate production. This shift fully accounts for the declines in strontium carbonate production, sales, and capacity utilization. 8/ Also, due to FMC's "campaign" plant operations, inventory levels reported for the period under consideration are not necessarily indicative of economic difficulties. FMC maintains high inventories of strontium carbonate while the barium carbonate "campaign" is on; this is a rational business practice and not a negative factor. Strontium carbonate production, sales, and capacity utilization have not declined at any time during the period under consideration for the other domestic producer, which maintains separate production lines for each carbonate.

8/ It is likely that declines in manhours worked in 1980 are also predominantly related to shifts in the barium strontium mix on the FMC production line.

Profitability data in the aggregate shows serious declines between 1977 and 1979, but a rebound in 1980 (though not to 1977 levels). It is essential to disaggregate these data in order to reach a judgment on attributing material injury to LTFV imports. On a disaggregated basis the data reveal that one company has been making handsome profits and that these profits increased over the January-June 1980 period. The other company has been facing increasing profitability problems, although the net-profit-to-sales ratio improved in January-June 1980 compared to the same period in 1979. The problems of the latter company cannot be attributed to imports. Though there may be some allocation problems with the financial data, it is clear that this company's costs -- both "costs of goods" sold and particularly "general, selling and administrative costs" -- are responsible for its financial dilemma. These high costs relate to expenditures necessary to meet environmental regulations and expenditures for freight equalization. These "internal" causes of declining profitability cannot be attributed to the alleged LTFV imports. The other company facing the same alleged LTFV imports but without these handicaps is clearly not suffering material injury.

There have been substantial price increases by U.S. producers of strontium carbonate over the past few years. Domestic producers' average prices of glass grade strontium carbonate -- the principal grade being traded -- rose about fifty percent from January-March 1977 to April-June 1980. Despite these price increases, the petitioners allege price suppression. Given the enormous costs of production of one producer, this allegation is not surprising. It is clear that price increases have not compensated for these heavy costs, but this producer also faces domestic

competition and its inability to raise prices further has not been demonstrably linked to imports. Moreover, a look at profits for the other company reveals it is not experiencing price suppression.

The overall health of the domestic strontium carbonate industry is clearly reflected in sales that have steadily increased since 1977. Even as consumption dropped in 1980, sales continued to grow. U.S. sales increased almost ten percent from 1977 to 1979. From January-June 1980 -- although apparent U.S. consumption dropped about ten percent -- domestic sales increased over January-June 1979 levels.

On the other hand, imports, which had risen substantially from 1977 to 1979, plummeted from January-June 1980. The alleged LTFV imports grew from 2.3 million pounds in 1977 to 7.7 million pounds in 1979. In January-June 1980, imports amounted to only 397,000 pounds. Import penetration rose substantially from 1977 to 1979. In January-June 1980, however, import penetration fell significantly below the 1977 level. The drop in import penetration in 1980 far surpasses the recession-related drop in consumption during that period. Further, the current low level of import penetration combined with all the other information discussed above dispels the idea that the U.S. industry may be "threatened" by the alleged LTFV imports.

Investigation 731-TA-33
Strontium Nitrate from Italy

FMC is the sole domestic producer of strontium nitrate, and all of its problems began when the alleged LTFV imports from Italy arrived in this country in 1978. The actual declines in the company's economic indicators were submitted to the Commission on a confidential basis and can only be referred to in general terms. Declines in production, shipments, capacity utilization, and manhours worked have been sizeable. The decline in profitability has been even more striking, although the data do not show actual losses on the strontium nitrate line. 9/ Inventories have risen steadily and significantly. However, given the "campaign" nature of FMC's production of strontium carbonate, the raw material from which strontium nitrate is produced, inventory data is not particularly useful as an indicator of economic well-being.

These indications of material injury relate directly to the imports of strontium nitrate from Italy. In 1978, the Olin Corporation, an important FMC customer, shifted all of its strontium nitrate purchases for its Peru, Indiana plant to SABED, the Italian producer. As a result, the alleged LTFV imports rose nearly 500 percent from 1978 to 1979, and the import consumption ratio increased accordingly to approximately twenty percent. The level of imports dropped in January-June 1980 -- with the concomitant decline in consumption related to the recession -- but the market penetration of the alleged LTFV imports increased slightly in comparison to January-June 1979.

9/ The profitability data needs to be reviewed carefully in the final investigation. Profitability data provided to the Commission in this investigation raises a question whether FMC has allocated its costs between strontium carbonate and strontium nitrate. Strontium carbonate is an input in the production of strontium nitrate.

On an FOB factory/ex dock basis 10/, the alleged LTFV imports did not undersell U.S. strontium nitrate at the time they first began to trickle into the United States. Nor did they undersell U.S.-produced strontium nitrate in June of this year on this accounting basis. However, at the time when imports were highest (1979), the margin of underselling was greatest. Moreover, on a delivered-price basis -- given the distance from FMC's strontium nitrate plant in California to Olin's plant in Indiana -- imports have undersold the domestic product throughout the period under review.

Allegations of price suppression have also been made in this investigation. The petitioner claims that he has not been able to increase his prices enough to recover his costs due to the alleged LTFV imports. This allegation will need to be further explored should this case return for a final investigation. More research needs to be done on the petitioner's costs relative to production. As mentioned in the strontium carbonate discussion above, it is not clear how much the alleged LTFV imports can be held responsible for FMC's pricing policies.

The importer, Olin, has asked the Commission to dismiss this case because Olin's decision to switch suppliers for its Indiana plant was based on a need for an alternative, reliable source of supply. An Olin representative stated at the conference: "The supply considerations were our sole reason for purchasing from SABED, not price, and not because we wished to cease dealing with FMC." 11/

10/ The domestic producer provided the Commission with f.o.b. factory prices (i.e., net prices received excluding expenses incident to delivering the merchandise to the purchaser). The principal importer of strontium nitrate from Italy provided the Commission with ex dock prices (i.e., purchase price delivered to the first U.S. port of importation, including import duty and clearance charges) paid for such merchandise.

11/ Conference Transcript, p. 160.

The legislative history to the Trade Agreements Act of 1979 provides the Commission with considerable discretion in analyzing the relative importance of various factors related to this investigation. The House Report on the Trade Agreements Act states: "The significance of the various factors affecting an industry will depend upon the facts of each particular case. Neither the presence nor the absence of any factor listed in the bill can necessarily give decisive guidance with respect to an injury determination." 12/

It would be highly unusual for an evaluation of lost sales information to be pivotal rather than supplementary in reaching a determination in either anti-dumping or countervailing duty cases. Clearly, lost sales information is among the most subjective data gathered in these investigations since it is prone to interpretation in terms of the self-interest of the party responding to the questionnaire.

In this case Olin staunchly claims that its decision to switch supplier is not "motivated" by price considerations and thus the problems of the U.S. industry should not be attributed to any alleged LTFV practices of SABED. It is clear, however, from other testimony and from Exhibit D of Exhibit 2, a letter sent from Olin to FMC at the time Olin decided to shift supplier, that price did and does factor into Olin's decision to supply the Indiana plant from Italy.

Exhibit D of Exhibit 2 states: "Our right to develop a second source has become of paramount importance with your continued aggressive pricing policy and the surprise revelation that you have serious environmental problems at Modesto." (Emphasis added.) At the conference, in response to questioning by the ITC staff

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12/ H. Rep. No. 96-317, 96th Cong., 1st Sess. 46 (1979).

as to whether "Olin would pay a substantially higher price in order to have a second source of supply in Italy than the price that was currently quoted by FMC, the sole supplier," counsel for Olin stated:

> "Obviously there are parameters there, but they (Olin) are willing to pay a higher price and did do so."

A second Olin representative added:

> "We have paid a higher price. We have to evaluate the term substantial. The market place in the East for our end product is very competitive. It would be difficult for us to sustain a substantial price increase at the Peru facility." 13/

At another point in the Conference, he stated further:

> "Not only have our supply problems with FMC been extremely serious, but we also are concerned about the rate of FMC's price increases." 14/

The Olin representative also indicated that the decision to use imports at its Peru, Indiana plant and not its Morgan Hill, California plant, was the result of an evaluation of the relative costs of the U.S. and imported products, including the freight cases, to each plant. 15/

The desire of any customer to avoid relying on a sole supplier is inherently related to price considerations. But the central dispute in antidumping cases involves the "fairness" of the price being offered by the alternative, foreign supplier. In this case, there are allegations of substantial dumping margins. If these margins are indeed found to exist by the Department of Commerce and if the

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13/ Conference Transcript, p. 154.

14/ Id., p. 159.

15/ Id., pp. 166-167.

Commission in turn votes in the affirmative in a final investigation, the price of Italian strontium nitrate would increase substantially as a result of the application of antidumping duties. Given the testimony in this investigation, it is questionable whether Olin under these circumstances would continue to purchase Italian strontium nitrate.

It is clear that at this stage there is a reasonable indication that there is material injury by reason of the alleged LTFV imports. 16/

Conclusion

Each of these investigations presented a unique configuration of economic data. In the strontium carbonate case, the variation of the performance of the two domestic producers is striking and the role of the alleged LTFV imports in the U.S. market has declined dramatically. In the barium carbonate industry, in contrast, the role of imports has remained significant and there are reasonable indications of economic difficulties attributable to the subject imports. The strontium nitrate case is highly unusual; in the face of present adverse economic trends, I judged it inappropriate to dismiss the case at this time on the basis of lost sales information undermined by the contradictory record.

16/ In this preliminary investigation important information related to "threat of material injury" was not available. Data on Italian capacity and the likelihood of increased exports being directed to the United States will need to be explored if the case returns for a final investigation.

STATEMENT OF REASONS FOR THE NEGATIVE DETERMINATION
OF CHAIRMAN BILL ALBERGER AND VICE CHAIRMAN MICHAEL J. CALHOUN
IN INVESTIGATION 731-TA-32 (Preliminary)

Determination and Conclusion of Law

On the basis of the record in investigation No. 731-TA-32 (Preliminary), we 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 the Federal Republic of Germany of strontium carbonate, provided for in item 421.72 of the Tariff Schedules of the United States, allegedly sold or likely to be sold in the United States at less than fair value.

Pursuant to Section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1673(b))(hereinafter the Tariff Act), in order to reach a determination in this investigation, we are required to define the domestic industry and review the best information available for a reasonable indication of material injury or threat of material injury by reason of the imports of strontium carbonate.

Domestic Industry

The term "industry" is defined in section 771(4)(A) of the Tariff Act (19 U.S.C. 1677(4)(A)) 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." The term "like product" is further defined in section 771(10) of the Tariff Act (19 U.S.C. 1677(10)) as "a product which is

1/ Material retardation of the establishment of an industry is not in issue in this investigation, since there are producers of strontium carbonate. Thus, this issue is not discussed further.

like, or in the absence of like, most similar in characteristics and uses with the article subject to an investigation...."

Under the statute, the identification of the domestic industry in each investigation is based upon the proper identification of the "like product," which, in turn, is a function of the article which is the subject of the investigation by the Department of Commerce. The Department of Commerce initiated an investigation concerning imports of strontium carbonate. 1/ Furthermore, there is domestically produced strontium carbonate, which is virtually identical to the strontium carbonate being imported. Thus, for the reasons discussed below, we find that in Investigation 731-TA-32 (Preliminary) the like product is strontium carbonate and the domestic industry is the producers of that product.

All strontium carbonate, whether imported or produced in the United States, has the same chemical formula. 2/ It is sold for use primarily in the manufacture of picture tubes for color television receivers (80 percent) because of its superior ability to prevent x-ray emissions. It is also used for the production of ferrite magnets, ceramics, and other uses, including the manufacture of strontium nitrate. There appears to be no practical substitute for the major use of strontium carbonate.

The petitioners in this investigation and in Investigations 731-TA-31 and 731-TA-33 (relating to barium carbonate and strontium nitrate, respectively) acknowledge that there is some relationship among the production of various of the three products being investigated. However, we believe that these are distinct products which serve distinct markets. Each of these chemicals is produced by a few companies: three

1/ 45 F.R. 66186-86 (October 6, 1980).
2/ The chemical formula for strontium carbonate is S_rCO_3.

firms manufacture about 98 percent of U.S. barium carbonate, two firms manufacture 100 percent of the U.S. strontium carbonate, and one firm produces 100 percent of the U.S. strontium nitrate. Each product is produced in either a separate production line or is produced for several months at a time on an individual production line. Further, each of the products is very different in characteristics and uses, and each of the chemicals is sold in a different market. Therefore, we conclude that there is a separate industry corresponding to each chemical and that the data permit the assessment of injury in each industry.

The question of reasonable indication of material injury or threat thereof

Section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1671b) directs the Commission to make a determination, based upon the best information available to it at the time of the determination, whether there is a reasonable indication that an industry is being materially injured or threatened with material injury by reason of the imported merchandise. Section 771(7)(A)(19 U.S.C. 1677(7)) defines the term "material injury" to mean "harm which is not inconsequential, immaterial, or unimportant." In making its determination, the Commission must consider, among other factors, (1) the volume of imports of the merchandise which is the subject of the investigation (2) the effect of imports of such merchandise on prices in the United States for like products, and (3) the impact of imports of such merchandise on domestic producers of like products (19 U.S.C. 1677(7)(B)).

A careful preliminary analysis of the health of the domestic industry has led us to the conclusion that there is no reasonable indication that its condition has sufficient connection to imports to support an affirmative preliminary determination. We were first struck by the drastic decline -- almost disappearance -- of imports in January- June 1980 after three years of increase. Further analysis led us to the conclusion that the decline in the profitability of the industry is related to the high transportation and other general costs incurred by one of the two domestic producers of strontium carbonate. Another domestic factor affecting the industry, particularly inventories, may have been a build-up in inventories to prepare for the shift of the production of one producer from strontium carbonate to barium carbonate. Yet, in the

face of the increase in imports from 1977-1979 and a recent decline in demand, domestic producers have increased prices and sales. Moreover, we found no sales lost by reason of price. Based on these and other considerations, we find no reasonable indication of material injury or the threat thereof by reason of imports of strontium carbonate.

We base our decision on the findings of fact and conclusions of law discussed below.

Volume of Imports

The alleged LTFV imports in this investigation were from Kali-Chemie, A.G., of West Germany, which has accounted for virtually all imports of strontium carbonate since 1977. The volume of imports did increase significantly between 1977 and 1978, and increased slightly in the next year as well. However, the volume of imports in the first six months of 1980 was 85 percent below the amount for the same period of 1979.

In fact, imports in this most recent period were virtually nil, and the market shared enjoyed by West German imports declined substantially from 1979 to the first half of 1980. Moreover, the significant increase in the imports' market share from 1977 to 1978 coincided with a shortfall in supply available from domestic producers in the face of rapidly expanding domestic demand. Thus, purchasers who initially turned to imports because of availability problems may now be seeking to maintain an alternative source of supply.

Effect of LTFV Imports on Prices

The best information available to the Commission at this time does indicate significant price undercutting by the West German imports of glass grade strontium carbonate. This is the grade which accounts for a

large majority of domestic production. However, in the period 1977-78, when the import share experienced its biggest gain, the margin of underselling was relatively small, ranging from almost zero to less than 5 percent. The most significant price undercutting occurred in 1979, but during this period, the imports did not increase by nearly as much, even though the margin of underselling grew. The margin of underselling appears to be narrowing in 1980.

Price suppression does not appear to be a factor either. In fact, domestic prices for the glass grade products have increased almost 50 percent since 1977, a rate of increase well above that experienced by the entire chemical industry.

Impact on the Affected Industry

Domestic production of strontium carbonate grew substantially from 1977 to 1979. While production in the first half of 1980 is down slightly, our investigation reveals that one firm has shifted production significantly to barium carbonate. Since this firm makes both articles on the same production facility, its production of each is on a "campaign" basis, meaning that to produce barium carbonate it must temporarily cease production of strontium carbonate. This may explain the downturn in 1980.

Domestic sales were also up during the period under investigation, increasing approximately 10 percent from 1977 to 1979 and then remaining steady in 1979. Aggregate profits have experienced a contrary trend to production and sales. From 1977 to 1979, for example, net operating profits for the two domestic producers declined by more than 50 percent.

At first blush this may appear to provide a reasonable

indication of injury. However, one of the two producers reported a steadily improving profit situation and, in fact, has substantial profits. The producer whose losses account for the aggregate decline in profitability experienced huge increases in transportation and other selling costs. It is unlikely that competition between and profitability of the two producers would be any different without imports. In addition, this firm shifted much of its production to barium carbonate in 1980, thus accounting for declines in production, shipments, and capacity utilization. Previous to this change, capacity utilization had remained at nearly 100 percent industry wide.

Inventories decreased in 1978, then jumped substantially in 1979. Moreover, inventories are up in the first six months of 1980 over the prior comparable period. Much of this may be because the producer who shifted to barium carbonate sought to build-up its strontium carbonate supplies in anticipation of its changeover. The other producer did not report increasing inventory levels.

Although there were allegations of sales lost to alleged less than fair value imports because of price, we find the evidence on the record does not support the allegations.

STATEMENT OF REASONS FOR THE AFFIRMATIVE DETERMINATION OF
COMMISSIONERS GEORGE M. MOORE AND CATHERINE BEDELL
IN INVESTIGATION NO. 731-TA-32 (Preliminary)

Determination

On the basis of the record in investigation No. 731-TA-32 (Preliminary), we determine that there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury, 1/ by reason of imports from the Federal Republic of Germany of strontium carbonate, provided for in item 421.72 of the Tariff Schedules of the United States, allegedly sold or likely to be sold at less than fair value (LTFV).

The following findings and conclusions, based on the record in this investigation, support this determination.

The Product

Strontium carbonate is used primarily in the production of television picture tubes, as well as in the production of ferrite magnets, ceramics, and other uses, including the manufacture of strontium nitrate. 2/ There appear to be no available commercial substitutes for strontium carbonate.

Because domestically produced strontium carbonate is virtually identical to the imported product, we conclude that the "like product" in this investigation, within the meaning of section 771(10) of the Tariff Act of 1930 (19 U.S.C. 1677(10)) is strontium carbonate.

1/ Since petitioners do not allege that imports of strontium carbonate materially retard the establishment of an industry in the United States, this issue will not be discussed further.

2/ Chemical Profile on strontium carbonate, Oct. 1, 1979.

The Domestic Industry

We have concluded that the relevant domestic industry consists of the domestic producers as a whole of strontium carbonate, within the meaning of section 771(4)A) of the Tariff Act of 1930 (19 U.S.C. 1677(4)(A)).

The Question of Reasonable Indication of Material Injury or Threat Thereof

Section 733(a) of the Tariff Act directs that the Commission "shall make a determination, based upon the best information available to it at the time of the determination . . . ." Section 771(7)(A) defines the term "material injury" to mean "harm which is not inconsequential, immaterial, or unimportant." Section 771(7)(B) directs that in making its determination, the Commission shall consider, among other factors, (1) the volume of imports of the merchandise which is the subject of the investigation, (2) the effect of imports of such merchandise on prices in the United States for like products, and (3) the impact of imports of such merchandise on domestic producers of like products. In light of these directives, we base our decision on the findings of fact and conclusions of law discussed below.

Volume of imports.

Imports of precipitated strontium carbonate from West Germany have accounted for virtually all U.S. imports of this product since 1977. Imports from West Germany have increased very sharply in recent years, more than trebling from 2.3 million pounds in 1977 to 7.7 million pounds in 1979. The market penetration of imports from West Germany has similarly increased, almost trebling from 1977 to 1979. 1/

1/ Report, at pp. A-33, A-34, and A-36.

Effects of imports on prices.

During 1977-79, a period of greatly increased imports of West German strontium carbonate, the imported product consistently undersold its domestic counterpart by substantial and generally increasing margins. The margins of underselling increased markedly during 1979 and continued into January-June 1980. In all instances, the margins of underselling were more than accounted for by the alleged margins of sales at less than fair value. 1/

Impact of imports on the domestic producers.

Stimulated by increasing domestic consumption, U.S. production of strontium carbonate increased from 1977 to 1979; however, production declined by more than 15 percent in January-June 1980 in comparison with production during the corresponding period of 1979. Trends in capacity utilization were similar. 2/

Yearend inventories of strontium carbonate held by domestic producers more than doubled from 1978 to 1979. Inventories had been reduced somewhat by mid-1980, but they remained at substantially greater levels than those in other recent years. 3/

Producers' domestic sales of strontium carbonate increased from 1977 to 1978, then remained stable in 1979. The increase in such sales from 1977 to 1979 was far less than the increase in apparent domestic consumption, as imports from West Germany captured a much larger share of the market. 4/

U.S. producers' profit realized from operations in producing strontium carbonate deteriorated sharply from 1977 to 1979; the ratio of net operating

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1/ Report, at pp. A-6, A-40, and A-46 through A-48.
2/ Report, at pp. A-17 through A-18.
3/ Report, at pp. A-24 through A-25.
4/ Report, at pp. A-20 through A-21.

profit to net sales in 1979 was less than half that 2 years earlier. The ratio of net profit to sales increased somewhat during January-June 1980, in comparison with that in the corresponding period of 1979, but remained at a much lower level than that achieved in 1977, the year immediately preceding the large increase in imports from West Germany. 1/

Conclusion

On the basis of the large margin of underselling coupled with the relatively high inventories held by U.S. producers and the stagnant or declining trends in production, capacity utilization, sales, and profit during 1977-79 and January-June, 1980, we conclude that there is a reasonable indication that the domestic industry producing strontium carbonate is materially injured, or is threatened with material injury, by reason of imports from West Germany allegedly sold, or likely to be sold, at less than fair value.

1/ Report, at pp. A-29 through A-31.

INFORMATION OBTAINED IN THE INVESTIGATIONS

Introduction

On September 9, 1980, three petitions were filed with the U.S. International Trade Commission and the U.S. Department of Commerce. One was filed on behalf of FMC Corp., Chemical Products Corp. (CPC), and the Sherwin-Williams Co., alleging that precipitated barium carbonate imported from the Federal Republic of Germany (West Germany) is being, or is likely to be, sold in the United States at less than fair value (LTFV). The second petition was filed on behalf of FMC Corp. and CPC alleging that precipitated strontium carbonate imported from the Federal Republic of Germany is being, or is likely to be, sold in the United States at LTFV. The third petition was filed on behalf of FMC Corp. alleging that strontium nitrate imported from Italy is being, or is likely to be, sold in the United States at LTFV.

Accordingly, on September 12, 1980, the Commission instituted preliminary antidumping investigations Nos. 731-TA-31, 32, and 33 (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 the Federal Republic of Germany of precipitated barium carbonate and precipitated strontium carbonate, provided for in items 472.06 and 421.72, respectively, of the Tariff Schedules of the United States (TSUS), and imports from Italy of strontium nitrate, provided for in TSUS item 421.74. These imports are allegedly being sold, or likely to be sold, at less than fair value. The statute directs that the Commission make its determination within 45 days of receipt of the petitions, or in these cases by October 24, 1980.

Notice of the institution of the Commission's investigations and of the public conference to be held in connection therewith was duly given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, D.C., and the Commission's office in New York City, and by publishing the notice in the Federal Register of September 24, 1980 (45 F.R. 63388). 1/ A public conference was held in Washington, D.C., on October 3, 1980, at which all interested parties were afforded the opportunity to present information and data for consideration by the Commission.

1/ On Sept. 29, 1980, the Department of Commerce issued a notice announcing that it had found the three petitions to be properly filed within the meaning of its rules and that it was instituting the appropriate investigations. Notice to such effect was published in the Federal Register of Oct. 6, 1980 (45 F.R. 66185). The scope of the Commerce investigations is the same as that of the Commission's investigations. A copy of the Commission's notice of investigations and conference is presented in app. A. The Department of Commerce's notice of initiation of its antidumping investigations is presented in app. B.

The Products

Description and uses

Despite some similarities in physical characteristics and end uses, barium carbonate, strontium carbonate, and strontium nitrate have very little in common outside of the process by which they are produced.

Barium carbonate.--Barium carbonate can occur naturally as the mineral witherite, but because of the small tonnage available, it is little known commercially. The synthetic product is known as precipitated barium carbonate because it forms as a solid out of a liquid solution. Precipitated barium carbonate is the most important synthetic barium chemical. It appears as a white powder and can be poisonous if swallowed or inhaled. Barium carbonate is very heavy and is used primarily because of its high density and its solubility.

Barium carbonate has been available for many years and it is used in a wide variety of applications: to prevent scumming in the manufacture of bricks and discoloration in the production of ceramics, to control X-ray emmissions from television picture tubes, and to increase the brilliance and refractive index of glass. It is also used in the manufacture of permanent-magnet ferrites, photograpic paper, barium ditenate, and other barium chemicals. In addition, barium carbonate can be used as a filler in paper and a purifier in water and waste-treatments and conditioners.

A variety of different grades of barium carbonate are manufactured, varying according to particle size, specifications for contaminants, and the degree of refinement. The different grades are generally manufactured for specific end uses. There are no published, industrywide specifications distinguishing each grade, instead, producers and end users of barium carbonate have their own internal specifications for what each produces or requires. This has led to a general consensus concerning the specifications of various grades, but there are no universally accepted definitions. Commercially, the most important grade is known as ceramic grade or soft-fired barium carbonate. This is an industrial grade with a fine particle size, which is suitable for use in the manufacture of bricks and ceramics. Within this general grade classification, however, there are a number of "subgrades" available. These vary according to the way they are prepared and offer the end user a variety of mixing and flowing properties. Because of the density of the product and its fine particle size, ceramic grade, untreated, tends to agglomerate readily and does not flow well. It is, therefore, difficult to handle in bulk quantities. Some producers use "sparger" railroad cars which have special openings that allow a liquid to be pumped into the car to dissolve the barium carbonate. The solution can then be pumped out easily and efficiently.

The second most important commercial grade of barium carbonate is known as glass grade. This is also an industrial grade, but the particles of barium carbonate are much larger than the ceramic grade and appear as granules. This

product can be handled relatively easily in bulk quantities. Both grades are shipped either in bulk quantities by railroad car or in 50-pound, palletized bags. These two grades account for at least 75 percent of U.S. producers' domestic sales during the period under consideration and are the only two grades of barium carbonate mentioned in the petition. However, a chemical grade, an electronic grade, a standard luminescent grade, and a reagent grade of barium carbonate are also produced. The distinction between these grades is not very clear, and some overlap exists; however, these grades are readily distinguished from the two major commercial grades.

Strontium carbonate.--Like barium carbonate, strontium carbonate occurs naturally as the mineral strontianite or it can be produced synthetically. The synthetic product is known as precipitated strontium carbonate. It appears as an off-white, rather grayish powder, which has a low toxicity. While strontium carbonate is not as heavy as barium carbonate, it is still an unusually dense compound.

Strontium is particularly well-suited for capturing X-rays. For this reason, strontium carbonate is used predominately in the manufacture of picture tubes for color television receivers. In fact, regulations were issued in 1970 requiring that strontium carbonate be used rather than barium carbonate, because of its superior ability to prevent X-ray emissions. Strontium carbonate is also used in the production of ferrite magnets, ceramics, some dyes and pigments, and strontium nitrate.

There are only two grades of strontium carbonate produced in the United States--a glass grade and a ceramic grade. Again there are no clear-cut distinctions between the two grades and no published specifications; however, the same general distinction exists between the two grades of strontium carbonate as for the two grades of barium carbonate. The glass grade or granular form of strontium carbonate is by far the more important grade commercially, whereas the ceramic grade or powder form of strontium carbonate is used on a much more limited basis. Both grades are shipped in 50-pound, palletized bags. The glass grade may also be shipped in bulk quantities by railroad car.

Strontium nitrate.--Commercially, strontium nitrate is derived (in the United States) from strontium carbonate. It is found only in the anhydrous form as fine, colorless crystals. The material is only moderately toxic, but acts as a strong oxidizing agent. Strontium nitrate produces a scarlet color when burned and is used primarily in the manufacture of pyrotechnic devices such as flares, fusees, tracer bullets, and fireworks. It is sold in 100-pound, palletized bags.

Manufacturing processes

The manufacturing process for these three chemicals is conceptually simple. However, the process actually requires considerable capital investment in many types of equipment to make the production of these chemicals possible. For barium carbonate and strontium carbonate, the process consists of the same basic steps and utilizes the same equipment. Strontium nitrate is made from strontium carbonate in two additional steps.

For all three chemicals, the production process begins with an ore--either barite, the natural form of barium sulfate, or celestite, the natural form of strontium sulfate. In the first step of the process, the ore is crushed, ground, and mixed with coke. The mixture is then fed into a kiln where the ore is reduced at high temperatures to barium or strontium sulfide; the coke is added to the ore as a source of energy and carbon. The carbon combines with the oxygen of the sulfate group and escapes as carbon dioxide. The sulfide is taken from the kiln, purified, and dissolved. The sulfide solution is then reacted with either sodium carbonate (soda ash) or carbon dioxide to produce the carbonate. The reactions occur as follows:

1. The soda ash method:

$$XS + Na_2CO_3 \longrightarrow XCO_3 + Na_2S$$

barium or strontium sulfide	soda ash	barium or strontium carbonate	sodium sulfide

2. Carbon dioxide method:

$$XS + CO_2 + H_2O \longrightarrow XCO_3 + H_2S$$

barium or strontium sulfide	carbon dioxide	water	barium or strontium carbonate	hydrogen sulfide

In both reactions, the carbonate forms as a solid which must be dried and screened for packaging or shipment. The reaction conditions and drying techniques used in this step of the process determine the particle size and, thus, whether the product will be ceramic or glass grade.

The coproducts obtained in both methods are marketable. The sodium sulfide solution obtained in the soda ash method is concentrated and dried. It is then packaged in 50-pound, palletized bags for shipment. The hydrogen sulfide obtained in the carbon dioxide method can easily be converted to sodium sulfide, sodium sulfahydrate, or ammonium sulfide and then marketed.

Strontium nitrate is produced by mixing strontium carbonate with concentrated nitric acid. The product is then crystallized and dried.

Although there are a number of distinct steps, the production process for barium carbonate and strontium carbonate has been engineered so that it is basically continuous. Production is controlled either by how long the equipment is run or by the flow rate used. The equipment itself is not particularly sophisticated and generally dates back to the 1940's and 1950's. Although improvements in operating efficiency are being made, there have been no substantial technological improvements in the process since then.

Strontium carbonate is converted to strontium nitrate in a separate "mini plant" which is 10 to 15 years old. The process is batch continuous. The reactor is loaded on a batch basis, while the process of crystalization and drying runs on a continuous basis.

Because of the noxious and toxic nature of the materials involved, the producers of these three chemicals have had to make significant investments in environmental protection devices within the last 5 years. Specifically, scrubbers, dust collectors, and waste-water treatment facilities have been installed at various points in the production process. In addition, within the last year, FMC Corp. (which has its production facility in California) has been required to install a solid-waste-handling system for removing to approved dump sites the solid waste products that have been declared hazardous. It is likely that the other producers of barium carbonate and strontium carbonate will be required to treat their solid wastes in a similar manner within the next few years.

U.S. Tariff Treatment

Precipitated barium carbonate is classified under item 472.06 of the TSUS. The column 1 rate of duty is 0.5 cent per pound, which became effective on January 1, 1980, as a result of concessions granted in the recent Tokyo Round of the Multilateral Trade Negotiations (MTN). The current rate will be further reduced to 0.4 cent per pound effective January 1, 1984. 1/ The column 2 rate of duty is 1.5 cents per pound. The rate of duty for least developed developing countries (LDDC) is 0.4 cent per pound. Barium carbonate is also designated as an eligible article for purposes of the Generalized System of Preferences (GSP).

Strontium carbonate (precipitated) and strontium nitrate are dutiable under the provisions of items 421.72 and 421.74 of the TSUS, respectively. Both chemicals have identical rates of duty. The column 1 rate is 5.8 percent ad valorem. This rate became effective on January 1, 1980, as a result of the concessions granted in the recent MTN; it will be reduced progressively each year on January 1 until it reaches 4.2 percent ad valorem in 1987. 2/ The column 2 rate of duty is 25 percent ad valorem. The LDDC rate of duty is 4.2 percent ad valorem. Strontium carbonate and strontium nitrate are also eligible articles for GSP purposes.

Nature and Extent of Alleged Sales at Less Than Fair Value

The allegations in these petitions involve only one manufacturer of each chemical--Kali-Chemie AG (Kali), the only German manufacturer of barium and strontium carbonate known to the petitioners, and the Societa Bario e Derivati S.p.A. (SABED), a wholly owned subsidiary of Kali and the only Italian

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1/ From Jan. 1, 1972, to Jan. 1, 1980, the column 1 rate of duty was 0.6 cent per pound.

2/ From Jan. 1, 1972, to Jan. 1, 1980, the column 1 rate of duty was 6 percent ad valorem.

producer of strontium nitrate known to the petitioners which exports its product to the United States. The petitioners allege that all U.S. sales of these three products by Kali and its subsidiary SABED are at less than fair value.

The petitioners state that Kali began dumping barium carbonate in the U.S. market in 1977, and presented data showing alleged dumping margins for October-December 1979 and January-March 1980 of 38 and 33 percent, respectively. These margins were calculated from U.S. delivered prices for Kali's barium carbonate adjusted to a "factory-net-back" basis to the foreign producer, and from the petitioners' estimates of average net home-market prices. No grade was specified for these prices.

The petitioners allege that Kali began dumping strontium carbonate in the U.S. market in 1978 and presented data indicating a dumping margin of 56 percent for October 1979-March 1980. This margin was calculated from U.S. delivered prices for Kali's strontium carbonate adjusted to a factory-net-back basis to the foreign producer, and from the petitioners' estimates of the average net home-market price of Kali's strontium carbonate. Again, no grade was specified.

The petition states that all recent sales of strontium nitrate imported from Italy are believed to be at LTFV, although no specific time period is mentioned. However, the petition presented data indicating that the dumping margin in October 1979-March 1980 was 36 percent. Again, this margin was calculated from U.S. delivered prices adjusted to a factory-net-back basis to the foreign producer, and from the petitioners' estimates of the average net home-market price.

In each case Kali-Chemie has taken issue with the home-market prices listed and the derivation of the dumping margins.

U.S. Market and Apparent Consumption

There has been a market for barium carbonate, strontium carbonate, and strontium nitrate for at least 40 years. Over the years, the products' end uses and end-users' demands have become well-established. However, some applications have declined significantly in importance for certain products, while other applications have increased.

Barium carbonate

The market for barium carbonate declined significantly and steadily from 1968 to 1976 because of the declining importance of barium carbonate in the manufacture of television picture tubes, soluble barium chemicals, and permanent magnet ferrites. Since 1976, however, the market appears to have stabilized. U.S. consumption of barium carbonate by end-use categories is shown in the following tabulation:

End use	Estimated percent of U.S. consumption 1/
Glass	28
Ceramics	33
Barium ferrites	7
Photographic paper	6
Miscellaneous	26

1/ See the Chemical Profile on barium carbonate published by the Schnell Publishing Co., Sept. 8, 1980.

Because it has unique chemical and physical properties, there is no real substitute for barium carbonate (other than strontium carbonate in certain applications). The derived demand for barium carbonate is, therefore, relatively price inelastic. However, because many of the products made with barium carbonate are sensitive to a recession (e.g., televisions, brick and tile, and small appliances using permanent magnets), the demand for barium carbonate is quite dependent on the business cycle. In fact, data published by the U.S. Bureau of the Census show that domestic shipments of barium carbonate declined markedly during the 1975 recession, falling by 23 percent from 1974 to 1975.

Some industry sources expect demand for barium carbonate to grow at a relatively low rate of less than 2 percent annually. Others, notably representatives of both FMC and Kali, expect the market to remain stable. They feel that the market is "very mature" and foresee neither real growth nor real declines. Apparent U.S. consumption of barium carbonate increased from 85 million pounds in 1977 to 91 million pounds in 1978, or by 6 percent (table 1). However, consumption declined to 86 million pounds in 1979, or by 5.6 percent, and declined again from 46 million pounds in January-June 1979 to 36 million pounds in the corresponding period of 1980, or by 22 percent.

Table 1.--Barium carbonate, strontium carbonate, and strontium nitrate: Apparent U.S. consumption, 1977-79, January-June 1979, and January-June 1980

(In thousands of pounds)

Period	Barium carbonate	Strontium carbonate	Strontium nitrate
1977	85,402	* * *	* * *
1978	90,792	* * *	* * *
1979	85,736	* * *	* * *
January-June--			
1979	46,065	* * *	* * *
1980	35,727	* * *	* * *

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

Strontium carbonate

In contrast to barium carbonate, the market for strontium carbonate has undergone significant growth since 1968, averaging an estimated 18 percent per year through 1978. This growth has been primarily due to the increasing use of strontium carbonate in the manufacture of television picture tubes, particularly for color receivers. It is also supplanting barium carbonate in the manufacture of permanent-magnet ferrites. Demand for strontium carbonate is expected to grow about 4 percent annually through 1983.

U.S. consumption of strontium carbonate by end-use categories is as follows:

End use	Estimated percent of U.S. consumption 1/
Television picture tube glass	80
Ferrite magnets	13
Ceramics	2
Miscellaneous	5

1/ See the Chemical Profile on strontium carbonate published by the Schnell Publishing Co., Oct. 1, 1979.

The demand for strontium carbonate is similar to that for barium carbonate. Because there are no commercial alternatives for strontium carbonate in the majority of its end uses, demand is relatively price inelastic. However, demand for strontium carbonate is dependent on the business cycle since television sales are subject to decline in recessionary periods. For example, during the 1975 recession, U.S. production of television receivers declined significantly, falling by 26 percent from 1974 to 1975. It is believed that demand for strontium carbonate declined by 10 to 20 percent during the same period.

Apparent U.S. consumption of strontium carbonate increased steadily from *** million pounds in 1977 to *** million pounds in 1979, or by *** percent (table 1). However, consumption declined from *** million pounds in January-June 1979 to *** million pounds during the corresponding period of 1980, or by *** percent.

Strontium nitrate

There is very little published information on strontium nitrate; however, the primary market for the product has not changed significantly in recent years. Strontium nitrate is used primarily in the manufacture of pyrotechnic devices, with small amounts being used in chromate coatings or as a chemical reagent. According to some industry sources, the market for pyrotechnic devices has been relatively stable for the last 5 years, but could increase by as much as 20 percent over the next few years because of recently passed regulations requiring flares to be carried on small, privately owned pleasure boats.

There are no marketable substitutes for strontium nitrate in its primary use. However, demand for pyrotechnic devices is dependent on the business cycle. Thus, the derived aggregate demand for strontium nitrate, while relatively price inelastic, is dependent on the business cycle. Apparent U.S. consumption of strontium nitrate increased steadily from *** million pounds in 1977 to *** million pounds in 1979, or by *** percent (table 1). However, apparent consumption declined from *** million pounds in January-June 1979 to *** million pounds during the corresponding period of 1980, or by *** percent.

Channels of Distribution

The channels of distribution for all three chemicals are very similar and very simple. Over 95 percent of all transactions occur directly between the producer and the end user. The end uses and the markets are so well established that very little in the way of marketing, salesmanship, or technical assistance is required. Producers know who their customers are and how much they are likely to purchase. There are usually published price lists available to the customers and price increases are announced at least a month in advance. There are also annual contracts between producers and their major customers. However, these contracts are very loose agreements whose purpose is to guarantee the purchaser a certain volume of material should supplies become tight. The contracts neither commit the producer to supply the material at a given price nor commit the purchaser to purchase the entire volume contracted for.

The Domestic Industry

U.S. producers

The changes in the markets for barium carbonate and strontium carbonate have led to a number of significant changes in the supply picture for these chemicals, while other forces unrelated to the strontium nitrate market have affected its supply picture. The decline in demand for barium carbonate led to a reduction of about 30 percent in U.S. capacity to produce the chemical. 1/ In 1961, there were eight U.S. producers of precipitated barium carbonate. In 1971 and 1972, two producers--Chicago Copper Co. and PPG Corp.--closed their facilities, while Sherwin-Williams closed its plant in Ashtabula, Ohio. The remaining six producers are the Chemical and Metallurgical Division of GTE Sylvania, Inc., Barium and Chemicals, Inc., J.T. Baker Chemical Co., the Sherwin-Williams Co., Chemical Products Corp., and FMC Corp.

GTE Sylvania produces only a "standard luminescent," high purity grade of barium carbonate for its own internal consumption. Barium and Chemicals, Inc., also produces barium carbonate only for its own internal consumption. On the other hand, J.T. Baker markets a high purity, reagent grade barium carbonate. However, the production of these three producers accounts for less than 2 percent of total U.S. production. Two of the other producers, namely CPC and FMC, have also shifted the utilization of their production facilities

1/ See petition for barium carbonate, p. 12.

so that more strontium carbonate can be produced. The result is that there is a supply gap between domestic capacity and apparent U.S. consumption of barium carbonate. Consumption exceeded capacity by 8 million pounds in 1977, 14 million pounds in 1978, and 9 million pounds in 1979.

In contrast to the market for barium carbonate, it was the potential increase in demand for strontium carbonate by the manufacturers of television picture tubes that in 1971 enticed Kaiser Chemical Co. to build a 60-million-pound plant in Canada for the production of strontium carbonate. The resulting excess capacity caused one of the three U.S. producers, Sherwin-Williams, to close its facilities in 1972. However, neither the demand for strontium carbonate nor the technology upon which the plant was designed lived up to Kaiser's expectations. The plant was closed in August 1976. This left only two U.S. producers, FMC and CPC, to service the U.S. market. Here again, the market has grown so that the capacity of these two producers is no longer adequate to meet apparent U.S. consumption. In 1978 and 1979, the supply gap amounted to *** million pounds.

In the case of strontium nitrate, E.I. duPont de Nemours and Co. was the sole U.S. supplier until 1973 when FMC entered the market. Kaiser Chemical Co. also began producing strontium nitrate at its strontium carbonate plant around 1975. However, DuPont was forced to close its facilities in mid-1975 because the cost of complying with environmental regulations made the continued production of strontium nitrate prohibitive. 1/ And as mentioned previously, Kaiser closed its plant in 1976. Thus, FMC was left as the sole U.S. producer of strontium nitrate. CPC has shown some interest in producing this chemical. The firm has drawn up plans and recently acquired the necessary permits from the Environmental Protection Agency to make the expansion of its facilities. However, CPC has stated that it is unwilling to make such an investment because of the impact of Kali's predatory practices on the strontium nitrate market. 2/

Thus, the three petitioners in these three cases--FMC, CPC, and Sherwin-Williams--account for virtually all domestic production of barium carbonate, strontium carbonate, and strontium nitrate.

Sherwin-Williams is a large corporation consisting of three operating groups, the Coatings Group, the General Products Group, and the Packaging Products Group. Barium carbonate is manufactured by the Chemicals Division of the General Products Group. Sales of barium carbonate by the Chemicals Division accounted for only a minuscule portion of Sherwin-Williams' total net sales in 1979. The corporation's surviving barium carbonate plant located in Coffeyville, Kansas, was converted from a lithopone plant around 1955. 3/ No other products are made on the equipment used to produce barium carbonate; however, at least three distinct grades--a glass grade, a ceramic grade, and a chemical grade--of barium carbonate are made (table 2). * * * .

1/ See statement of Mr. Jerry L. Chiolero, Olin Corp,, p. 5, submitted for the record at the Oct. 3, 1980, conference.

2/ See transcript, p. 34.

3/ See transcript, p. 95.

Table 2.--Barium carbonate, strontium carbonate, and strontium nitrate: U.S. production, by grades and firms, 1977-79, January-June 1979, and January-June 1980

Item	Quantity					Percentage distribution of quantity				
	1977	1978	1979	January-June--		1977	1978	1979	January-June--	
				1979	1980				1979	1980
	1,000 pounds					Percent				
Barium carbonate:										
Glass grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Ceramic grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Other grades:										
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Total	69,427	70,560	62,968	32,104	34,933	100.0	100.0	100.0	100.0	100.0
Strontium carbonate:										
Glass grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Cermic grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Total	* * *	* * *	* * *	* * *	* * *	100.0	100.0	100.0	100.0	100.0
Strontium nitrate:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	100.0	100.0	100.0	100.0	100.0

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

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

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CPC is a privately owned company founded in 1933. It is a manufacturer of various barium and strontium compounds, sodium silicates, sodium sulfide and sulfahydrate, and ammonium sulfide. It also produces its own barite. CPC has been producing barium carbonate since about 1945 and strontium carbonate since 1969 in Cartersville, Georgia. Although the two chemicals are produced on similar equipment, separate production lines are maintained.

CPC produces five grades of barium carbonate--a glass or calcine grade, a low-sulfur grade, and three ceramic grades. The "free flowing" grade is the untreated, powder form of barium carbonate. CPC also makes a "microflow" grade, which is spray dried to produce tiny spheres of the product, and a patented "aquaflow" grade which contains certain additives to improve the flowability and ease with which the material dissolves. In 1977-79, these three ceramic grades accounted for between *** and *** percent of CPC's barium carbonate production. On the other hand, CPC produces only two grades of strontium carbonate--a glass grade and a ceramic grade. * * * .

FMC is the only producer of all three chemicals. It is a large, multinational corporation which manufactures a wide variety of machinery and chemicals. The Industrial Chemicals Group is characterized by a high level of capital investment, high volume bulk processing, and standardization to meet industrywide specifications. FMC also produces its own natural soda ash and barite. The FMC plant located in Modesto, Calif., dates back to the early 1920's when the facilities were used to produce hydrogen peroxide. The production of barium hydrates and oxides began in 1940 and continued until 1973. The commercial production of barium carbonate, strontium carbonate, and strontium nitrate began in 1973.

FMC's facilities consist of the main production line through which barium carbonate and strontium carbonate pass alternately, and the "north" plant which houses the equipment used to produce barium and strontium nitrate, sodium sulfide, and sodium polysulfide. Barium carbonate and strontium carbonate are produced on a campaign basis. That is, the equipment is used to produce barium carbonate for a while, then it is purged, cleaned, and used to produce strontium carbonate. The plant normally "turns around" two to four times per year. The plant is designed for the production of glass-grade material. However, with some modification of the processing a simple ceramic grade can also be produced. * * * .

The relative importance of the producers of barium carbonate has changed during the period under consideration, while that of the strontium carbonate producers has remained relatively stable. * * * .

U.S. importers

With two or three exceptions, all U.S. importers of barium carbonate and strontium carbonate from West Germany and strontium nitrate from Italy are end users of the products and generally import only one grade of one product. There are a multitude of barium carbonate importers, relatively few strontium carbonate importers, and only one significant importer of strontium nitrate.

The larger importers of barium carbonate include * * * . The Commission was able to obtain responses from U.S. importers accounting for between 56 and 91 percent of annual U.S. imports of barium carbonate from Germany during the period under consideration (table 3). The ceramic grade of barium carbonate accounted for most of the material imported by these firms and generally increased as a share of all barium carbonate imported by the reporting firms. Imports of ceramic-grade barium carbonate accounted for *** percent of the combined imports in 1977, and *** percent in 1979.

There are fewer than 10 importers of strontium carbonate from West Germany, the largest of which is * * *. * * * imports only glass-grade material and has accounted for more than *** percent of total imports of strontium carbonate from West Germany since 1978. Glass-grade strontium carbonate accounted for the vast bulk of imports reported to the Commission since 1977. However, the ceramic grade increased as a percent of total reported imports of strontium carbonate from *** percent in 1978 to *** percent in 1979.

The only significant importer of strontium nitrate from Italy has been the Signal Products Operation of Olin Corp. Olin accounted for virtually all imports of strontium nitrate from Italy during the period under consideration. The Signal Products Operation includes two plants--one in Morgan Hill, Calif., and one in Peru, Ind. Olin manufactures highway and railway safety flares. Prior to mid-1978, FMC was the sole supplier of strontium nitrate to these plants. Olin reported at the Commission's conference that for some time it had been seeking a second source of strontium nitrate because of supply problems experienced with FMC. 1/ Olin was approached by representatives of the Italian producer, which was willing to assume the role of second supplier. Laboratory samples were submitted and approved, and contracts were negotiated in 1978. Olin began importing strontium nitrate from Italy that same year. It now purchases all its requirements for the Peru plant from the Italian producer.

Foreign Producers

There are a number of different sources of barium carbonate, but only one significant source of strontium carbonate and strontium nitrate. Barium carbonate is imported from Italy, the People's Republic of China, Japan, and

1/ See statement of Jerry L. Chiolero, Olin Corp., p. 9, submitted for the record at the Oct. 3, 1980, conference.

Table 3.--Barium carbonate and strontium carbonate from the Federal Republic of Germany and strontium nitrate from Italy: Imports of selected firms, by grades, 1977-79, January-June 1979, and January-June 1980

Item	1977	1978	1979	January-June--	
				1979	1980
	Imports				
Barium carbonate 1/:					
Ceramic grade					
1,000 pounds	* * *	* * *	* * *	* * *	* * *
Glass grade----------do----	* * *	* * *	* * *	* * *	* * *
Total----------do----	6,393	14,929	12,165	5,607	4,084
Strontium carbonate:					
Ceramic grade					
1,000 pounds	* * *	* * *	* * *	* * *	* * *
Glass grade----------do----	* * *	* * *	* * *	* * *	* * *
Total----------do----	* * *	* * *	* * *	* * *	* * *
Strontium nitrate------do----	* * *	* * *	* * *	* * *	* * *
	Percentage distribution				
Barium carbonate 1/:					
Ceramic grade-----percent--	* * *	* * *	* * *	* * *	* * *
Glass grade----------do----	* * *	* * *	* * *	* * *	* * *
Total----------do----	100.0	100.0	100.0	100.0	100.0
Strontium carbonate:					
Ceramic grade--------do----	* * *	* * *	* * *	* * *	* * *
Glass grade----------do----	* * *	* * *	* * *	* * *	* * *
Total----------do----	100.0	100.0	100.0	100.0	100.0
Strontium nitrate------do----	100.0	100.0	100.0	100.0	100.0

1/ The Commission's questionnaires requested data only on ceramic-grade and glass-grade barium carbonate. However, one domestic producer also reported production of "chemical-grade" material. It is possible that some imports of barium carbonate may have been comparable to the domestic "chemical-grade" material.

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

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

West Germany. However, West Germany is, by far, the most important source. The only known producer of barium carbonate in West Germany is Kali-Chemie, A.G., a large, multinational firm which manufactures agricultural, pharmaceutical, and industrial chemicals. West Germany is also the only significant source of strontium carbonate, although imports from Italy and China have been reported. Kali is the only known producer of strontium carbonate in West Germany and has accounted for virtually all U.S. imports of the product since 1978.

Italy, on the other hand, is the only significant source of strontium nitrate, although there is a small producer in West Germany. There are two producers of strontium nitrate in Italy--Ammi Bario and Societa Bario e Derivati S.p.A. (SABED), a wholly owned subsidiary of Kali. SABED is the only Italian producer that exports significant amounts of the product. Thus, SABED has accounted for virtually all imports of strontium nitrate since 1978 and Kali turns out to be the foreign producer of the alleged LTFV imports in each of these cases.

Kali began exporting barium carbonate to the United States in 1972 after the closing of a number of U.S. facilities. However, Kali ceased exports in 1974 and 1975 while the plant was undergoing a revitalization. At that time, a new system for the production of barium carbonate was installed. The process is chemically the same as that used by some U.S. producers. The barite ore is mixed with coke and converted at elevated temperatures to sulfide. The sulfide is then carbonated using carbon dioxide. However, the physical processing of the material is markedly different from anything found in the United States. * * * .

* * * . The six grades Kali produces are an A-grade or normal ceramic grade; a B-grade which is an electric-ceramic grade with a low-sulfur, iron, and aluminium content used in the manufacture of ferrites; a C-grade or sulfur-free grade used in the manufacture of specialty glass; a D-grade or heavy grade, which is the normal glass-grade equivalent; an E-grade which is a chemical grade used to produce barium ditenate; and an F-grade which is a high-purity, reagent grade. Kali's barium carbonate is sold only in 50-pound palletized bags.

Kali exports a large percentage of its barium carbonate; however, according to representatives of Kali, during 1976-79, the home market in West Germany consistently accounted for between *** and *** percent of Kali's barium carbonate sales. Exports to the U.S. market accounted for less than *** percent of Kali's sales.

Kali began exporting strontium carbonate to the United States in 1977 following the close of Kaiser's Canadian plant. * * * . Kali produces three grades of strontium carbonate--a ceramic grade or powder form and two types of glass grade, pressed granulated and hard granulated grades. The hard granulated grade has only become available within the last 2 years.

According to representatives of Kali, the firm's 1979 sales of strontium carbonate can be broken down by the following markets:

Market	Estimated percent of Kali's strontium carbonate sales
Germany	***
United States	***
Japan	***
All other	***

Kali began producing strontium nitrate in 1978 through its Italian subsidiary, SABED. The Italian plant also produces barium carbonate and has produced strontium carbonate. Unlike the domestic producer, SABED does not manufacture strontium nitrate from strontium carbonate, but rather * * * .

The Italian home market for strontium nitrate is very small. According to representatives of Kali, SABED's home-market sales account for less than *** percent of SABED's total strontium nitrate sales. SABED began producing strontium nitrate specifically for Olin Corp. and sells virtually all its product to that firm.

Kali also owns Kali-Chemie Corp., which consists entirely of four employees and an office in New York City. Kali-Chemie Corp. handles all marketing, consulting, and negotiating of sales agreements for Kali and its affiliates in the United States. Kali-Chemie Corp. acts only occasionally as an importer and neither owns nor leases any warehouses or other facilities outside of its New York office.

The Question of Material Injury or Likelihood Thereof

U.S. production, capacity, and capacity utilization

For the domestic producers of barium carbonate, strontium carbonate, and strontium nitrate, data on production, capacity, and capacity utilization show no conclusive trends. However, the general trends should be examined, because they illustrate the ease with which some U.S. producers can shift resources from the production of one chemical into the production of another.

During the period under consideration, annual U.S. production of barium carbonate fluctuated around 70 million pounds and the fluctuations tended to be substantial. From 1977 to 1978, U.S. production of barium carbonate increased only slightly, by a million pounds, or by 2 percent. However, production fell from 70 million pounds in 1978 to 63 million pounds in 1979, or by 11 percent, and then increased from 32 million pounds in January-June 1979 to 35 million pounds during the corresponding period of 1980, or by 9 percent (table 4).

Table 4.--Barium carbonate, strontium carbonate, and strontium nitrate: U.S. production, capacity, and capacity utilization, by products and firms, 1977-79, January-June 1979, and January-June 1980

Item and firm	1977	1978	1979	January-June-- 1979	January-June-- 1980
	Production				
Barium carbonate:					
FMC Corp------1,000 pounds--	* * *	* * *	* * *	* * *	* * *
CPC----------do----	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams------do----	* * *	* * *	* * *	* * *	* * *
Total----------do----	69,427	70,560	62,968	32,104	34,933
Strontium carbonate:					
FMC Corp------1,000 pounds--	* * *	* * *	* * *	* * *	* * *
CPC----------do----	* * *	* * *	* * *	* * *	* * *
Total----------do----	* * *	* * *	* * *	* * *	* * *
Strontium nitrate:					
FMC Corp------1,000 pounds--	* * *	* * *	* * *	* * *	* * *
	Capacity 1/				
Barium carbonate:					
FMC Corp------1,000 pounds--	* * *	* * *	* * *	* * *	* * *
CPC----------do----	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams------do----	* * *	* * *	* * *	* * *	* * *
Other 2/----------do----	1,300	1,300	1,300	650	650
Total----------do----	76,965	76,965	76,965	38,483	38,483
Strontium carbonate:					
FMC Corp------1,000 pounds--	* * *	* * *	* * *	* * *	* * *
CPC----------do----	* * *	* * *	* * *	* * *	* * *
Total----------do----	* * *	* * *	* * *	* * *	* * *
Strontium nitrate:					
FMC Corp------1,000 pounds--	* * *	* * *	* * *	* * *	* * *
	Capacity utilization 3/				
Barium carbonate:					
FMC Corp----------percent--	* * *	* * *	* * *	* * *	* * *
CPC----------do----	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams------do----	* * *	* * *	* * *	* * *	* * *
Average----------do----	91.8	93.3	83.2	84.8	92.3
Strontium carbonate:					
FMC Corp----------percent--	* * *	* * *	* * *	* * *	* * *
CPC----------do----	* * *	* * *	* * *	* * *	* * *
Average----------do----	* * *	* * *	* * *	* * *	* * *
Strontium nitrate:					
FMC Corp----------percent--	* * *	* * *	* * *	* * *	* * *

1/ Capacity is defined as the normal sustained production that can be achieved on an annual basis, making allowance for anticipated maintenance and down-time. Capacity is based on a 24 hours-a-day operation running 7 days a week and on an average annual product mix for January 1977-June 1980.

2/ Includes estimates made by the Commission's staff.

3/ Figures do not reflect estimated capacities.

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

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

The trends in production of barium carbonate varied significantly among the different producers. * * * .

U.S. production of strontium carbonate also fluctuated over the period under consideration. U.S. production declined by *** million pounds, or *** percent, from 1977 to 1978, but then increased from *** million pounds in 1978 to *** million pounds in 1979, or by *** percent. U.S. production then dropped from *** million pounds during January-June 1979 to *** million pounds during the corresponding period of 1980, declining by *** percent. Here too, the trends of the two U.S. producers differ significantly. * * * .

U.S. production of strontium nitrate increased sharply from 1977 to 1978, but has declined by an even greater percentage since then. FMC, the sole U.S. producer, increased its output of strontium nitrate from *** pounds in 1977 to *** pounds in 1978, or by *** percent. However, production slipped by *** pounds from 1978 to 1979, declining by *** percent, and then dropped off sharply from *** pounds in January-June 1979 to *** pounds during the corresponding period of 1980, declining by *** percent.

U.S. capacity for the production of these three chemicals has remained absolutely stable since 1977. Not one producer reported any change in capacity for any of the three chemicals during the entire period under consideration.

The trends in capacity utilization have thus been determined by the trends in the production of barium carbonate, strontium carbonate, and strontium nitrate. It is, however, interesting to note the high levels of capacity utilization for barium and strontium carbonate and the shifting capacity utilization figures of the U.S. producers for each product.

U.S. production of barium carbonate varied by roughly 10 percent during the period under consideration. The aggregate capacity utilization figures for U.S. producers of barium carbonate varied by less than 10 percentage points, wavering between 83 and 93 percent during the period under consideration. Both FMC and CPC produced barium carbonate at greater than 100 percent of reported capacity during part of the period. In fact, FMC's capacity utilization figure for January-June 1980 was *** percent. This was made possible by a large reduction in the amount of time the FMC facility was used to produce strontium carbonate, illustrating the flexible nature of the equipment used to produce barium carbonate and strontium carbonate in that firm's operations.

U.S. producers' aggregate capacity utilization for strontium carbonate varied between *** percent and *** percent from 1977 to 1979, but dropped to *** percent in January-June 1980. Here again, it is instructive to note that FMC was able to produce strontium carbonate at *** percent of its normal capacity in 1979. CPC consistently increased its capacity utilization figures from *** percent in 1977 to *** percent in January-June 1980.

FMC's capacity utilization figures for strontium nitrate show a slightly different picture. The figures indicate that despite increases in production

FMC had substantial excess capacity to produce strontium nitrate during the period under consideration. Capacity utilization increased from *** percent in 1977 to *** percent in 1978, but dropped to *** percent in January-June 1980. It should, however, be noted that the production of strontium nitrate is totally dependent on the production of strontium carbonate, and that FMC had little or no excess capacity for strontium carbonate from 1977 to 1979.

U.S. producers' domestic sales

U.S. producers' domestic sales of barium carbonate, strontium carbonate and strontium nitrate provide a much clearer picture of the market situation for these chemicals than did production figures (table 5).

Barium carbonate.--U.S. producers' domestic sales of barium carbonate declined steadily during the period under consideration, declining from 70 million pounds in 1977 to 61 million pounds in 1979, or by 13 percent. Domestic sales then declined again, by 18 percent, in January-June 1980, when compared with sales during the corresponding period of 1979. However, the value of U.S. producers' domestic sales of barium carbonate increased steadily from $10 million in 1977 to $11 million in 1979, or by 10 percent, before declining by 6 percent in January-June 1980 compared with the value in the corresponding period of 1979.

The total barium carbonate figures consist of three separate segments--glass-grade material, ceramic-grade material, and chemical-grade material. The contributions of these three grades have varied considerably. Domestic sales of glass-grade barium carbonate fell from *** million pounds in 1977 to *** million pounds in 1979, or by *** percent, then declined an additional *** percent in January-June 1980 compared with sales during the corresponding period of 1979. The value of U.S. producers' domestic sales of glass-grade barium carbonate declined from *** in 1977 to *** in 1979, or by *** percent, but then increased by *** percent in January-June 1980 compared with the value of such sales in the corresponding period of 1979.

On the other hand, U.S. producers' domestic sales of ceramic-grade barium carbonate remained fairly stable during the period under consideration, varying by less than *** percent from 1977 to 1979 and declining by only *** percent in January-June 1980 compared with those for the corresponding period of 1979. The value of U.S. producers' domestic sales of ceramic-grade barium carbonate increased steadily during the period under consideration--from *** in 1977 to *** in 1979, or by *** percent, and then by another *** percent in January-June 1980 compared with the value of domestic sales in the corresponding period of 1979.

The figures for chemical-grade barium carbonate delineate a much sharper pattern. U.S. producers' sales of the chemical-grade material increased steadily from *** million pounds in 1977 to *** million pounds in 1979, or by *** percent, but dropped off precipitously, by *** percent, in January-June 1980 relative to domestic sales for the corresponding period of 1979. The value of these domestic sales increased from *** in 1977 to *** in 1979, or by *** percent, but then dropped by *** percent in January-June 1980 compared with that of domestic sales in the corresponding period of 1979.

Table 5.--Barium carbonate, strontium carbonate, and strontium nitrate: U.S. producers' domestic sales, by grades and firms, 1977-79, January-June 1979, and January-June 1980

Item	Quantity					Value				
	1977	1978	1979	January-June--		1977	1978	1979	January-June--	
				1979	1980				1979	1980
	1,000 pounds					1,000 dollars				
Barium carbonate:										
Glass grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Ceramic grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Other grades:										
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Total	69,933	67,787	60,810	32,669	26,943	10,446	11,229	11,489	6,087	5,720
Strontium carbonate:										
Glass grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Cermic grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Total	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Strontium nitrate:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *

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

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The relative share of U.S. producers' total domestic sales of barium carbonate accounted for by each of the three grades has also changed during the period under consideration (table 6). Glass-grade barium carbonate actually represented the largest share of domestic sales in 1977, but has declined since then. As a ratio of total domestic sales, glass-grade barium carbonate declined steadily from *** percent in 1977 to *** percent in January-June 1979, but increased to *** percent in January-June 1980. The chemical grade, on the other hand, increased as a percentage of total domestic sales of barium carbonate from *** percent in 1977 to *** percent in January-June 1979, but then declined sharply to *** percent in January-June 1980. The ceramic-grade's share of U.S. producers' domestic sales of barium carbonate increased steadily from *** percent in 1977 to *** percent in January-June 1980.

Strontium carbonate.--U.S. producers' domestic sales of strontium carbonate increased steadily during the period under consideration. They increased from *** million pounds in 1977 to *** million pounds in 1979, or by *** percent, then increased an additional *** percent in January-June 1980 relative to domestic sales in the corresponding period of 1979 (table 5). Similarly, the value of U.S. producers' domestic sales of strontium carbonate also increased steadily during the period under consideration. The value increased from *** in 1977 to *** in 1979, or by *** percent, and increased by another *** percent in January-June 1980 relative to the value of sales in the corresponding period of 1979.

Here again, the total figures for strontium carbonate are composed of separate contributions from the glass-grade material and the ceramic-grade material. However, in this case, the contributions of these two grades were similar. Domestic sales of glass-grade strontium carbonate increased steadily during the period under consideration, from *** million pounds in 1977 to *** million pounds in 1979, or by *** percent, and increased by another *** percent in January-June 1980 relative to domestic sales for the corresponding period of 1979. The value of U.S. producers' domestic sales of glass-grade strontium carbonate also increased steadily, but more dramatically. The value increased from *** in 1977 to *** in 1979 and increased again, by *** percent in January-June 1980 compared with the value of domestic sales during the corresponding period of 1979. U.S. producers' domestic sales of the ceramic grade of strontium carbonate also increased, from *** million pounds in 1977 to *** million pounds in 1979, or by *** percent, but then declined by *** percent in January-June 1980 compared with domestic sales during the corresponding period of 1979. The value of these sales also increased but at a much greater rate. The value increased from *** in 1977 to *** in 1979, or by *** percent, and then increased by another *** percent in January-June 1980 relative to the value of domestic sales made during the corresponding period of 1979.

The relative share of U.S. producers' domestic sales of strontium carbonate accounted for by the glass-grade material has been stable, fluctuating within *** percentage points during the period under consideration. On the average, glass-grade strontium carbonate accounted for *** percent of U.S. producers' domestic sales of strontium carbonate. The ceramic grade accounted for the remainder.

Table 6.--Barium carbonate, strontium carbonate, and strontium nitrate: Percentage distribution of U.S. producers' sales, by grades and firms, 1977-79, January-June 1979, and January-June 1980

(In percent)

Item	Quantity					Value				
	1977	1978	1979	January-June--		1977	1978	1979	January-June--	
				1979	1980				1979	1980
Barium carbonate:										
Glass grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Ceramic grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Other grades:										
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Strontium carbonate:										
Glass grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Cermic grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Strontium nitrate:										
FMC Corp	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

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

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Strontium nitrate.--FMC's domestic sales of strontium nitrate increased sharply from 1977 to 1978, but have declined by an even greater percentage since then. Sales increased from *** million pounds in 1977 to *** million pounds in 1978, or by *** percent. However, domestic sales fell back by *** percent to *** million pounds in 1979, and then dropped sharply, by *** percent, in January-June 1980 compared with sales for the corresponding period of 1979. The value of these sales followed a similar pattern, although the declines were not as sharp. The value of FMC's domestic sales of strontium nitrate increased from *** in 1977 to *** in 1978, or by *** percent. The value then declined slightly to *** in 1979, or by *** percent before falling by *** percent in January-June 1980 relative to the value of domestic sales for the corresponding period of 1979.

Exports

Exports of barium carbonate, strontium carbonate, and strontium nitrate have not been substantial and virtually all are accounted for by FMC. There were no exports of barium carbonate during the period under consideration except for *** pounds of chemical-grade material which was exported in 1979. However this amounted to less than *** percent of total U.S. production of barium carbonate in that year. FMC exported both glass-grade and ceramic-grade strontium carbonate during the period under consideration. However, these exports amounted to only *** percent of U.S. production in 1977 and less than *** percent in the following years. FMC also exported strontium nitrate during the period under consideration, but again, these exports accounted for less than *** percent of U.S. production.

Inventories

U.S. producers' inventories of barium carbonate, strontium carbonate, and stontium nitrate increased during the period under consideration (table 7).

Barium carbonate.--Inventories of barium carbonate increased steadily from 5 million pounds as of December 31, 1977, to 7 million pounds as of December 31, 1979, or by 32 percent. Inventories then increased sharply to 14 million pounds as of June 30, 1980, more than double relative to inventories as of June 30, 1979. As a ratio of sales, end-of-period inventories of barium carbonate, also increased steadily, from 7 percent in 1977 to 11 percent in 1979. Inventory levels then more than doubled, reaching 26 percent in January-June 1980 as compared with 10 percent for the corresponding period of 1979.

Inventories of glass-grade barium carbonate declined steadily from 1977 to 1979, but increased as a ratio to sales of this grade barium carbonate. The quantity of glass-grade barium carbonate held in inventory declined from *** million pounds as of December 31, 1977, to *** million pounds as of December 31, 1979, or by *** percent, but increased to *** million pounds as of June 30, 1980, or by *** percent compared with inventories held as of June 30, 1979. As a ratio to sales, end-of-period inventories of glass-grade material increased from *** percent in 1977 to *** percent in 1979, and then

Table 7.--Barium carbonate, strontium carbonate, and strontium nitrate: U.S. producers' inventories, by grades and firms, as of December 31, 1977-79, and June 30, 1979, and June 30, 1980

Item	As of Dec. 31--			As of June 30--		As of Dec. 31--			As of June 30--	
	1977	1978	1979	1979	1980	1977	1978	1979	1979	1980
	Quantity					Ratio of inventories to sales 1/				
	1,000 pounds					Percent				
Barium carbonate:										
Glass grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal or average	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Ceramic grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal or average	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Other grades:										
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Total or average	5,182	6,387	6,862	6,395	13,752	7.4	9.4	11.3	9.8	25.5
Strontium carbonate:										
Glass grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal or average	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Ceramic grade:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Subtotal or average	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Total or average	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
Strontium nitrate:										
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *

1/ The ratios during the January-June periods were computed from sales on an annual basis.

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

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

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increased to *** percent in January-June 1980, or almost double the ratio for the corresponding period of 1979.

Inventories of the ceramic grade increased steadily both in quantity and as a ratio to sales of this grade barium carbonate during the period under consideration. They increased from *** million pounds as of December 31, 1977, to *** million pounds as of December 31, 1979, and increased again from *** million pounds as of June 30, 1979, to *** million pounds as of June 30, 1980. As a ratio to sales, end-of-period inventories of the ceramic grade material increased steadily from *** percent in 1977 to *** percent in 1979 and then increased again to *** percent in January-June 1980 from *** percent for the corresponding period of 1979.

Inventories of the chemical grade * * * .

When U.S. producers' inventories of barium carbonate are examined and compared on an individual basis, it becomes evident that FMC is the inventory leader. During the period under consideration, FMC consistently held the highest inventory levels. To a certain extent, this is to be expected. FMC is required to hold fairly high inventories of barium carbonate because they produce it only once or twice a year. Inventory levels among the other two producers were within what they stated as acceptable levels from 1977 to 1979. The inventories of these producers rose to unacceptably high levels only in January-June 1980.

Strontium carbonate.--During the period under consideration, the quantity of strontium carbonate held in inventory fluctuated, but as a ratio to sales, end-of-period inventories generally increased. The ratio declined sharply from *** percent in 1977 to *** percent in 1978, but then rebounded to *** percent in 1979; such inventories increased from *** percent in January-June 1979 to *** percent in January-June 1980. Inventories of glass grade strontium carbonate followed a pattern similar to those of all strontium carbonate. They fluctuated markedly, but generally increased over the period under consideration. The ratio of such inventories to sales of the glass-grade material declined from *** percent in 1977 to *** percent in 1978, but then rose to *** percent in 1979; the ratio increased from *** percent in January-June 1979 to *** percent during the corresponding period of 1980. In contrast, inventories of ceramic grade strontium carbonate declined significantly in quantity and as a ratio to sales during the period under consideration.

Inventories of ceramic-grade strontium carbonate declined from *** pounds as of December 31, 1977, to *** pounds as of December 31, 1979, or by *** percent. Inventories declined again from *** pounds as of June 30, 1979, to *** pounds as of June 30, 1980, or by *** percent. The ratio of end-of-period inventories of ceramic grade to sales of this grade strontium carbonate declined from *** percent in 1977 to *** percent in 1979, and remained at that level in January-June 1980.

Again with regard to strontium carbonate, FMC generally had much higher inventory levels than CPC throughout the period under consideration. * * * .

Strontium nitrate.--Inventories of strontium nitrate increased steadily and significantly during the period under consideration. Inventories more than quadrupled, increasing from *** pounds as of December 31, 1977, to *** pounds as of December 31, 1979. They then * * * from June 30, 1979, to June 30, 1980, increasing from *** to *** pounds. The ratio of end-of-period inventories to sales of strontium nitrate also increased steadily and significantly. The ratio increased from *** percent in 1977 to *** percent in 1979 and jumped to *** percent as of June 30, 1980.

U.S. employment and wages

The available data relating to the employment situation of U.S. producers of barium carbonate, strontium carbonate, and strontium nitrate indicate generally favorable trends, but are not conclusive (table 8). However, employment data rarely show conclusive trends in a capital-intensive industry such as the chemical industry.

The average number of all employees in U.S. establishments producing the three chemicals increased steadily during the period under consideration. The number increased from 585 in 1977 to 617 in 1979, or by 5 percent, and increased slightly again to 630 in January-June 1980 compared with 629 in the corresponding period of 1979. * * * .

The average number of all production and related workers producing barium carbonate, strontium carbonate, and strontium nitrate increased steadily from 1977 to 1979, but declined slightly in January-June 1980. The number increased from 232 in 1977 to 245 in 1979, but declined by 3 workers, or by 1 percent, in January-June 1980 compared with the number in the corresponding period of 1979. The decline in the average number of production and related workers in January-June 1980 is due to * * * .

Man-hours worked by all production and related workers producing these chemicals generally fluctuated, reflecting the patterns established by the production data. Thus, the number of man-hours worked reflects the flexible nature of the production process. Man-hours worked by all production and related workers producing barium carbonate fluctuated between 240,000 and 250,000 (or by less than 5 percent) from 1977 to 1979, but then increased by 15 percent in January-June 1980 over man-hours worked during the corresponding period of 1979. * * * .

Man-hours worked by all production and related workers producing strontium carbonate also fluctuated. However, man-hours increased from *** in 1977 to *** in 1979, or by *** percent, despite a sharp decline in 1978. However, in January-June 1980, man-hours declined by *** percent relative to man-hours worked during the corresponding period of 1979. In the case of strontium carbonate, this fluctuating pattern is reflected in * * *.

Table 8.--Average number of employees in U.S. establishments producing barium carbonate, strontium carbonate, and strontium nitrate, total and all production and related workers producing barium carbonate, strontium carbonate, and strontium nitrate, and wages paid to and man-hours worked by all production and related workers producing barium carbonate, strontium carbonate, or strontium nitrate, by firms, 1977-79, January-June 1979, and January-June 1980

Firm	1977	1978	1979	January-June--	
				1979	1980
Average number of all employees:					
FMC Corp	***	***	***	***	***
CPC	***	***	***	***	***
Sherwin-Williams	***	***	***	***	***
Total	585	596	617	629	630
All production and related workers producing barium carbonate, strontium carbonate, and strontium nitrate:					
FMC Corp	***	***	***	***	***
CPC	***	***	***	***	***
Sherwin-Williams	***	***	***	***	***
Total	232	236	245	245	242
Man-hours worked by all production and related workers producing:					
Barium carbonate:					
FMC Corp----------1,000 hours	***	***	***	***	***
CPC----------do	***	***	***	***	***
Sherwin-Williams----------do	***	***	***	***	***
Total----------do	241	250	240	117	135
Strontium carbonate:					
FMC Corp----------1,000 hours	***	***	***	***	***
CPC----------do	***	***	***	***	***
Total----------do	***	***	***	***	***
Strontium nitrate:					
FMC Corp----------1,000 hours	***	***	***	***	***
Wages paid to all production and related workers producing:					
Barium carbonate:					
FMC Corp----------1,000 dollars	***	***	***	***	***
CPC----------do	***	***	***	***	***
Sherwin-Williams----------do	***	***	***	***	***
Total----------do	1,561	1,791	1,852	926	1,173
Strontium carbonate:					
FMC Corp----------1,000 dollars	***	***	***	***	***
CPC----------do	***	***	***	***	***
Total----------do	***	***	***	***	***
Strontium nitrate:					
FMC Corp----------1,000 dollars	***	***	***	***	***

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

Man-hours worked by those production and related workers producing strontium nitrate increased sharply from 1977 to 1978, but have declined steadily since. Man-hours increased from *** in 1977 to *** in 1978, or by *** percent, but then declined to *** in 1979, or by *** percent, and fell by *** percent in January-June 1980 over man-hours worked during the corresponding period of 1979.

Despite the fluctuations in man-hours, wages paid to all production and related workers producing these chemicals show generally increasing trends. Wages paid to all production and related workers producing barium carbonate increased steadily during the period under consideration. They increased from $1.6 million in 1977 to $1.8 million in 1979, or by 19 percent, and increased by 27 percent in January-June 1980 relative to wages paid during the corresponding period of 1979.

Wages paid to all production and related workers producing strontium carbonate also increased steadily from 1977 to 1979, but declined sharply in 1980. Wages increased from *** in 1977 to *** in 1979, or by *** percent, but then declined by *** percent in January-June 1980 relative to wages paid during the corresponding period of 1979. Wages paid by both firms to workers producing strontium carbonate generally increased from 1977 to 1979, but then declined in January-June 1980.

Wages paid to all production and related workers producing strontium nitrate also increased irregularly from 1977 to 1979, and then declined sharply in January-June 1980. Wages increased from *** in 1977 to *** in 1979, or by *** percent, and then declined by *** percent in January-June 1980 relative to wages paid during the corresponding period of 1979.

Financial experience of U.S. producers

The profit-and-loss experience of U.S. producers on their barium carbonate, strontium carbonate, and strontium nitrate operations has been quite diverse, varying not only from product to product, but also from producer to producer (table 9).

Barium carbonate.--Although it has generally been dismal, U.S. producers' profit-and-loss experience on their barium carbonate operations did show signs of improving from 1977 to 1979, but deteriorated quickly in the first half of 1980. U.S. producers' net sales of barium carbonate increased steadily from 1977 to 1979, but declined in January-June 1980. Net sales increased from $10.7 million in 1977 to $11.6 million in 1979, or by 9 percent, but declined by 7 percent in January-June 1980 relative to net sales for the corresponding period of 1979. The cost of goods sold followed a similar pattern, but the shifts were smaller. The cost of goods sold increased from $9.4 million in 1977 to $9.7 million in 1979, or by 3 percent, and then declined by 6 percent in January-June 1980 relative to the figure for the corresponding period of 1979.

The gross profit of U.S. producers on their barium carbonate operations also followed a similar pattern, but the shifts were greater. The gross

Table 9.--Profit-and-loss experience of U.S. producers on their barium carbonate, strontium carbonate, and strontium nitrate operations, by firms, 1977-79, January-June 1979, and January-June 1980

Item	Net sales	Cost of goods sold	Gross profit or (loss)	General, selling, and administrative expenses	Net operating profit or (loss)	Ratio of net operating profit or (loss) to net sales	Ratio of cost of goods sold to net sale
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	Percent	Percent
Operations on barium carbonate:							
1977:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Sherwin-Williams	* * *	* * *	* * *)	* * *	* * *	* * *	* *
Total	10,661	9,429	1,232	1,057	175	1.6	88.
1978:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* *
Total	11,404	9,762	1,642	1,172	470	4.1	85.
1979:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* *
Total	11,604	9,715	1,889	1,288	601	5.2	83.
January-June--							
1979:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* *
Total	5,908	5,110	798	585	213	3.6	86.
1980:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *	* * *	* *
Total	5,516	4,794	722	721	1	1/	86.
Operations on strontium carbonate:							
1977:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Total	* * *	* * *	* * *	* * *	* * *	* * *	* *
1978:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Total	* * *	* * *	* * *	* * *	* * *	* * *	* *
1979:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Total	* * *	* * *	* * *	* * *	* * *	* * *	* *
January-June--							
1979:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Total	* * *	* * *	* * *	* * *	* * *	* * *	* *
1980:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
CPC	* * *	* * *	* * *	* * *	* * *	* * *	* *
Total	* * *	* * *	* * *	* * *	* * *	* * *	* *
Operations on strontium nitrate:							
1977:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
1978:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
1979:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
January-June--							
1979:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *
1980:							
FMC Corp	* * *	* * *	* * *	* * *	* * *	* * *	* *

1/ Less than 0.5 percent.

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

profit increased from $1.2 million in 1977 to $1.9 million in 1979, or by 53 percent, but then declined by 10 percent in January-June 1980 relative to the gross profit for the corresponding period of 1979. General, selling, and adminstrative expenses generated in U.S. producers' barium carbonate operations increased steadily over the period under consideration. They increased from $1.0 million in 1977 to $1.3 million in 1979, or by 22 percent, and then increased by 23 percent in January-June 1980 relative to expenses generated in the corresponding period of 1979.

The net result of all these factors was to produce a net operating profit that increased steadily and significantly from 1977 to 1979, but which declined precipitously in January-June 1980. The net operating profit increased steadily from $175,000 in 1977 to $601,000 in 1979, or by almost 250 percent. However, it then fell by nearly 100 percent, declining from $213,000 in January-June 1979 to only $1,000 in January-June 1980. The ratio of the net operating profit to net sales followed a similar pattern, increasing from 1.6 percent in 1977 to 5.2 percent in 1979, but then declining to virtually nothing in January-June 1980. It is also interesting to note that in spite of the high rates of inflation during the period, the ratio of the cost of goods sold to net sales of barium carbonate declined steadily from 1977 to 1979 and increased only slightly in January-June 1980. The ratio declined from 88.4 percent in 1977 to 83.7 percent in 1979 and only increased by 0.4 percent in January-June compared with the ratio for the corresponding period of 1979.

In this case, it is worthwhile to examine the individual contributions to the aggregate figures on profitability, because they differ so greatly.

* * * * * * *

Strontium carbonate.--The aggregate figures on U.S. producers' profit-and-loss experience on their strontium carbonate operations delineate a pattern which is markedly different from that of barium carbonate. U.S. producers' net sales of strontium carbonate increased steadily and significantly during the period under consideration. Net sales increased from *** in 1977 to *** in 1979, or by *** percent. Net sales then increased again, by *** percent in January-June 1980 relative to net sales during the corresponding period of 1979. The cost of goods sold followed a similar pattern. The figure increased from *** in 1977 to *** in 1979, or by *** percent, and then increased by another *** percent in January-June 1980 relative to the cost of goods sold for the corresponding period of 1979.

Gross profit declined from *** in 1977 to *** in 1979, or by *** percent, and then increased by *** percent in January-June 1980 relative to the gross profit for the corresponding period of 1979. However, general, selling, and administrative expenses increased steadily and significantly during the period under consideration. These expenses nearly * * *, increasing from *** in 1977 to *** in 1979 and then increased by another *** percent in January-June 1980 relative to the expenses for the corresponding period of 1979.

This produced a net operating profit on U.S. producers' strontium carbonate operations which deteriorated rapidly from 1977 to 1979 and then increased sharply in January-June 1980. The net operating profit declined from *** in 1977 to *** in 1979, or by *** percent, and then more than * * *

in January-June 1980 relative to the net operating profit for the corresponding period in 1979. The ratio of net operating profit to net sales followed a similar pattern. The ratio declined from *** percent in 1977 to *** percent in 1979 and then increased to *** percent in January-June 1980. The ratio of the cost of goods sold to net sales followed an opposite pattern. It increased from *** percent in 1977 to *** percent in 1979, but then declined to *** percent in January-June 1980.

* * * * * * *

Strontium nitrate.--FMC's profit-and-loss experience on its strontium nitrate operations declined steadily over the period under consideration.

* * * * * * *

Cash flow.--For the purposes of this report, cash flow from operations is defined as the net operating profit plus depreciation and amortization. Because CPC neglected to list its depreciation and amortization expenses separately, total cash flow for U.S. producers' operations on barium carbonate and strontium carbonate could not be calculated exactly. Instead, CPC's net operating profit, without adjustment, was simply added to the cash flow figures of the other producers to produce a minimum estimate of U.S. producers' cash flow from their operations on these two products (table 10).

The cash flow from U.S. producers' operations on barium carbonate, strontium carbonate, and strontium nitrate closely followed the pattern set by U.S. producers' profitability. The minimum estimate of U.S. producers' cash flow from operations on barium carbonate increased steadily and significantly from 1977 to 1979, by 168 percent, and then declined sharply in January-June 1980. In contrast, the minimum estimate of U.S. producers' cash flow on strontium carbonate operations declined precipitously from 1977 to 1979, by *** percent, then increased by *** percent in January-June 1980 relative to the cash flow for the corresponding period of 1979. The cash flow from FMC's strontium nitrate operations * * *

Table 10.--U.S. producers' cash flow from operations on barium carbonate, strontium carbonate, and strontium nitrate, by firms, 1977-79, January-June 1979, and January-June 1980

(In thousands of dollars)

Item	1977	1978	1979	January-June--	
				1979	1980
Barium carbonate:					
FMC Corp	* * *	* * *	* * *	* * *	* * *
CPC 1/	* * *	* * *	* * *	* * *	* * *
Sherwin-Williams	* * *	* * *	* * *	* * *	* * *
Total	266	566	712	267	72
Strontium carbonate:					
FMC Corp	* * *	* * *	* * *	* * *	* * *
CPC 1/	* * *	* * *	* * *	* * *	* * *
Total	* * *	* * *	* * *	* * *	* * *
Strontium nitrate:					
FMC Corp	* * *	* * *	* * *	* * *	* * *

1/ Net operating profit without adjustment.

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

The Question of the Causal Relationship Between Alleged LTFV Imports and the Alleged Material Injury

U.S. imports and market penetration of alleged LTFV imports

U.S. imports and market penetration of alleged LTFV imports have increased during the period under consideration.

Barium carbonate.--Aggregate U.S. imports of barium carbonate increased substantially from 1977 to 1979, but then declined in 1980 (table 11). U.S. imports increased from 14 million pounds in 1977 to 23 million pounds in 1979, or by 68 percent, but then declined by 37 percent in January-June 1980 relative to imports during the corresponding period of 1979.

Imports of barium carbonate from West Germany, the major source, followed a slightly different pattern, increasing substantially from 1977 to 1978, but declining steadily since. Imports from Germany increased from 11.4 million pounds in 1977 to 16.3 million pounds in 1978, or by 43 percent. Imports from Germany then declined to 15.6 million pounds in 1979, or by 4 percent, and declined sharply, by 38 percent, in January-June 1980 relative to imports during the corresponding period of 1979. Imports of barium carbonate from all other countries, notably Italy, Japan, and China, increased steadily from 1977 to 1979, and then declined in January-June 1980. However, Japan and China were able to maintain their increasing trends through the first half of 1980, in spite of the general decline.

The market penetration of imports of barium carbonate has followed a pattern similar to that established by imports (table 12). The ratio of imports to apparent U.S. market consumption of barium carbonate increased from 16.5 percent in 1977 to 27.6 percent in 1979, but then declined to 22.5 percent in January-June 1980. Similarly, the market penetration of imports from West Germany has been substantial and also increased from 1977 to 1979, and then declined in the first half of 1980. The ratio of imports from West Germany to apparent U.S. market consumption increased from 13.6 percent in 1977 to 18.6 percent in 1979 and then declined to 15.4 percent in January-June 1980. While the market penetration of imports of barium carbonate from all other countries has followed a similar pattern, the increase has been more dramatic. The ratio of imports from all other countries to apparent U.S. market consumption more than tripled, increasing from 2.9 percent in 1977 to 9.0 percent in 1979. The ratio then declined to 7.1 percent in January-June 1980.

Strontium carbonate.--Imports of strontium carbonate from West Germany have accounted for virtually all imports of strontium carbonate since 1977 (table 11). Imports of strontium carbonate from West Germany increased dramatically from 1977 to 1979, but then declined precipitously in January-June 1980. Imports from West Germany increased from 2.3 million pounds in 1977 to 7.7 million pounds in 1979. This amount represents nearly 3.5 times the amount imported in 1977. However, imports dropped from 2.6 million pounds in January-June 1979 to 397,000 pounds during the corresponding period of 1980, or by 85 percent.

Table 11.--Barium carbonate, strontium carbonate, and strontium nitrate: U.S. imports for consumption, by specified sources, 1977-79, January-June 1979, and January-June 1980

Item	Imports					Percent of total				
	1977	1978	1979	January-June-- 1979	January-June-- 1980	1977	1978	1979	January-June-- 1979	January-June-- 1980
Barium carbonate:										
Quantity:										
West Germany										
---------1,000 pounds--	11,404	16,346	15,625	8,709	5,365	82.5	76.3	67.4	70.3	68.4
Italy----------do----	1,786	1,605	3,646	2,063	176	12.9	7.5	15.7	16.7	2.2
China----------do----	220	596	2,462	731	1,412	1.6	2.8	10.6	5.9	18.0
Japan----------do----	411	2,101	1,069	722	887	3.0	9.8	4.6	5.8	11.3
Other----------do----	1/	776	391	159	1/	-	3.6	1.7	1.3	-
Total----------do----	13,821	21,424	23,193	12,384	7,840	100.0	100.0	100.0	100.0	100.0
Value: 2/										
West Germany										
--------1,000 dollars--	1,029	1,756	1,919	1,015	794	74.0	71.2	69.3	67.4	71.0
Italy----------do----	155	155	374	210	20	11.1	6.3	13.5	13.9	1.8
China----------do----	16	39	169	49	151	1.2	1.6	6.1	3.2	13.5
Japan----------do----	190	449	268	211	153	13.6	18.2	9.7	14.0	13.7
Other----------do----	1	66	39	21	1	0.1	2.7	1.4	1.4	0.1
Total----------do----	1,391	2,465	2,770	1,506	1,119	100.0	100.0	100.0	100.0	100.0
Strontium carbonate:										
Quantity:										
West Germany										
---------1,000 pounds--	2,293	6,521	7,683	2,611	397	89.4	99.8	100.0	99.5	100.0
Other----------do----	272	12	3	14	1/	10.6	0.2	3/	0.5	-
Total----------do----	2,564	6,533	7,686	2,625	397	100.0	100.0	100.0	100.0	100.0
Value: 2/										
West Germany										
--------1,000 dollars--	364	1,191	1,498	472	86	87.7	99.4	99.5	98.5	100.0
Other----------do----	51	7	8	7	-	12.3	0.6	0.5	1.5	-
Total----------do----	415	1,198	1,506	479	86	100.0	100.0	100.0	100.0	100.0
Strontium nitrate:										
Quantity:										
West Germany										
---------1,000 pounds--	201	0	2	1	0	71.5	-	0.1	0.1	-
Italy----------do----	0	514	3,086	1,124	777	-	76.4	99.9	99.9	100.0
Other----------do----	80	159	1/	1/	0	28.5	23.6	-	-	-
Total----------do----	281	673	3,088	1,125	777	100.0	100.0	100.0	100.0	100.0
Value: 2/										
West Germany										
--------1,000 dollars--	61	-	4	2	-	77.2	-	0.5	0.7	-
Italy----------do----	-	128	792	268	256	-	71.9	99.4	98.9	100.0
Other----------do----	18	50	1	1	-	22.8	28.1	0.1	0.4	-
Total----------do----	79	178	797	271	256	100.0	100.0	100.0	100.0	100.0

1/ Less than 500 pounds.
2/ Customs import value.
3/ Less than 0.05 percent.

Source: Compiled from official statistics of the U.S. Department of Commerce.

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

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Table 12.--Barium carbonate: U.S. producers' domestic shipments, imports for consumption, and apparent consumption for the commercial and total markets, 1977-79, January-June 1979, and January-June 1980

Item and period	U.S. producers' domestic shipments	Imports			Apparent consumption	Ratio of imports to consumption		
		From West Germany	Other	Total		From West Germany	Other	Total
	1,000 pounds					Percent		
Commercial market:								
1977	69,933	11,404	2,417	13,821	83,754	13.6	2.9	16.5
1978	67,787	16,346	5,078	21,424	89,211	18.3	5.7	24.0
1979	60,810	15,625	7,568	23,193	84,003	18.6	9.0	27.6
January-June--								
1979	32,669	8,709	3,675	12,384	45,053	19.3	8.2	27.5
1980	26,943	5,365	2,475	7,840	34,783	15.4	7.1	22.5
Total market: 1/								
1977	* * *	11,404	2,417	13,821	* * *	* * *	* * *	* * *
1978	* * *	16,346	5,078	21,424	* * *	* * *	* * *	* * *
1979	* * *	15,625	7,568	23,193	* * *	* * *	* * *	* * *
January-June--								
1979	* * *	8,709	3,675	12,384	* * *	* * *	* * *	* * *
1980	* * *	5,365	2,475	7,840	* * *	* * *	* * *	* * *

1/ Includes intracompany consumption.

Source: U.S. producers' domestic shipments, compiled from data submitted in response to questionnaires of the U.S. International Trade Commission; imports, compiled from official statistics of the U.S. Department of Commerce.

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The market penetration of imports of strontium carbonate from West Germany also increased to substantial levels from 1977 to 1979, but declined sharply in 1980 (table 13.) The ratio of imports from West Germany to apparent U.S.consumption increased from *** percent in 1977 to *** percent in 1979, but then declined precipitously to *** percent in January-June 1980.

Strontium nitrate.--The pattern established by imports of strontium nitrate from Italy can be divided into two distinct phases, one before and one after imports began entering the U.S. market from Italy. In 1977 and 1978, imports of strontium nitrate from all other sources were small and accounted for less than *** percent of apparent U.S. consumption (table 14). However, imports from Italy increased dramatically from 514,000 pounds in 1978, to more than 3 million pounds in 1979 (table 11). Imports then dropped by 31 percent in January-June 1980 relative to imports during the corresponding period of 1979. The market penetration of strontium nitrate from Italy has increased substantially since 1978. The ratio of imports from Italy to apparent U.S. consumption increased from *** percent in 1978 to *** percent in 1979; it increased from *** percent in January-June 1979 to *** percent in the corresponding period of 1980.

Prices

As indicated previously, three producers account for virtually all domestic production of barium carbonate, strontium carbonate, and strontium nitrate. FMC, CPC, and Sherwin-Williams produce barium carbonate; FMC and CPC produce strontium carbonate; and only FMC produces strontium nitrate. In general, price lists are published for each of these chemicals, with prices varying according to product grade and volume of sales. Terms of payment are normally 30 days, with no cash discounts allowed. Prices are usually quoted f.o.b. factory, but in some instances--particularly with respect to sales of barium carbonate by FMC (whose plant is in California)--sales are made on the basis of freight equalization to the domestic producer nearest the purchaser's location. All of these chemicals are dense and heavy and have a relatively low price per pound. Therefore, freight costs can be very important, accounting for as much as 20 percent of the final cost of barium carbonate to the end user. 1/

Domestic producers also sell on a contract basis to very large customers who want a guaranteed volume, price, and source of supply. Prices, volume of sales, and terms of payment are negotiated under each contract. However, the prices are subject to announced increases, and the purchaser is not committed to purchase the entire volume of material contracted for.

Barium and strontium carbonate from West Germany are produced and sold by Kali-Chemie, A.G., in West Germany, Strontium nitrate is produced and sold by SABED, a wholly owned Italian subsidiary of Kali. However, much of the marketing, sales negotiating, and customer servicing are done by Kali-Chemie Corp. in New York City. Prices for the imported material are generally quoted on a c.i.f. basis. However, in certain instances, prices are quoted f.o.b.

1/ Transcript of the conference, p. 33.

Table 13.--Strontium carbonate: U.S. producers' domestic shipments, imports for consumption, and apparent consumption for the commercial and total markets, 1977-79, January-June 1979, and January-June 1980

Item and period	U.S. producers' domestic shipments	Imports			Apparent consumption	Ratio of imports to consumption		
		From West Germany	Other	Total		From West Germany	Other	Total
	1,000 pounds					Percent		
Commercial market:								
1977	* * *	2,293	272	2,564	* * *	* * *	***	* * *
1978	* * *	6,521	12	6,533	* * *	* * *	***	* * *
1979	* * *	7,683	3	7,686	* * *	* * *	***	* * *
January-June--								
1979	* * *	2,611	14	2,625	* * *	* * *	***	* * *
1980	* * *	397	0	397	* * *	* * *	***	* * *
Total market: 2/								
1977	* * *	2,293	272	2,564	* * *	* * *	***	* * *
1978	* * *	6,521	12	6,533	* * *	* * *	***	* * *
1979	* * *	7,683	3	7,686	* * *	* * *	***	* * *
January-June--								
1979	* * *	2,611	14	2,625	* * *	* * *	***	* * *
1980	* * *	397	0	397	* * *	* * *	***	* * *

1/ Less than 0.05 percent.
2/ Includes intracompany consumption.

Source: U.S. producers' domestic shipments, compiled from data submitted in response to questionnaires of the U.S. International Trade Commission; imports, compiled from official statistics of the U.S. Department of Commerce.

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

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Table 14.--Strontium nitrate: U.S. producers' shipments, imports for consumption, exports of domestic merchandise, and apparent consumption, 1977-79, January-June 1979, and January-June 1980

Period	U.S. producers' shipments	Imports			Exports	Apparent consumption	Ratio of imports to consumption		
		From Italy	Other	Total			From Italy	Other	Total
	1,000 pounds						Percent		
1977	* * *	0	281	281	* * *	* * *	* * *	***	* * *
1978	* * *	514	159	673	* * *	* * *	* * *	***	* * *
1979	* * *	3,086	2	3,088	* * *	* * *	* * *	***	* * *
January-June--									
1979	* * *	1,124	1	1,125	* * *	* * *	* * *	***	* * *
1980	* * *	777	0	777	* * *	* * *	* * *	***	* * *

1/ Less than 0.05 percent.

Source: U.S. producers' shipments and exports, compiled from data submitted in response to questionnaires of the U.S. International Trade Commission; imports, compiled from official statistics of the U.S. Department of Commerce.

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European port of exportation. The minimum quantity sold is one ship container, or 20 short tons. Terms of payment are 30 days, and 6-8 weeks must be allowed for delivery.

Factors affecting prices: market conditions.--The domestic markets for barium carbonate, strontium carbonate, and strontium nitrate were described by industry sources testifying on behalf of the petitioners at the Commission's public conference as "balanced" from 1976 to pre-recessionary 1979. During this period, the demand for these products matched their supply, and domestic producers could sell all of their production. Imports were sometimes needed to fill the gap between domestic demand and supply. In the recent past and currently, however, the market was reportedly thrown out of balance because of the recent general economic recession, technological changes which weakened the demand for barium carbonate, and the alleged price predation of Kali.

Barium carbonate, strontium carbonate, and strontium nitrate are used as inputs for end products, many of which are consumer goods strongly affected by economic conditions. Inasmuch as several of the principal industries consuming these three chemical products have been hard hit by the present recession, the demand for such chemicals has also been adversely affected. Technological changes noted earlier in this report which weakened the demand for barium carbonate include its replacement by strontium carbonate in producing TV glass, a trend away from brite brick, and a switch from barium ferrites to strontium ferrites.

Aggregate demand for each of the three chemical products is reportedly price inelastic, since these products are used as inputs to produce final goods, and there are few, if any, economically feasible substitutes. In general, demand for such inputs is relatively less responsive to price changes. Buyers do not buy appreciably more when prices fall or less when prices rise; rather they buy only the quantity necessary for their production. While there are no commercial substitutes for barium carbonate (other than strontium carbonate in certain applications), strontium carbonate, or strontium nitrate, domestic production and imports are highly substitutable. The price inelasticity of aggregate demand for these products, coupled with the high substitutability of domestic production and imports, creates a situation in which the rate of substitution of imports for domestic production increases as prices of domestic products rise relative to prices of imports. 1/

Price trends.--Domestic producers and importers of barium carbonate, strontium carbonate, and strontium nitrate were requested to provide the Commission with quarterly data on net prices (f.o.b. shipping point) realized from sales during January 1977-June 1980 of each product, by grades, to their three largest U.S. customers. Importers that were end users of these chemical products were also requested to report the quarterly net prices paid during this period for the largest shipment received, by countries of origin and by grades. Purchase prices reported were those delivered to the first U.S. port of importation, excluding any inland freight charges.

1/ Witnesses at the Commission's conference described this as price "sensitivity."

Virtually all importers of barium carbonate, strontium carbonate, or strontium nitrate responding to the Commission's questionnaires were end users importing for their own account, and did not resell such merchandise to other firms in the United States. Thus, the following discussion of price trends involves comparisons of prices received by domestic producers with prices paid by end users for imports from West Germany and Italy. The Commission's staff constructed a weighted average price received by each domestic producer, an average price received by all producers, and an average price paid by end users for imports. Price data are not available for all grades of imported merchandise, since not all grades were imported during the period covered by the investigations.

Barium carbonate.--Complete price data are available for barium carbonate in both ceramic grade and glass grade. Over the entire period, importers' average prices of the two grades were consistently lower than domestic producers' average prices.

Prices for glass-grade barium carbonate are presented in table 15 and figure 1. Margins of underselling by importers averaged 14 percent. During January 1977-June 1980, domestic producers' prices increased by an average of 50 percent compared with an increase of about 55 percent in importers's prices.

Price data on ceramic-grade barium carbonate are presented in table 16 and figure 2. The margin of underselling for ceramic grade was consistently higher than that for glass grade. Margins of underselling by importers averaged 20 percent. During January 1977-June 1980, domestic producers' average prices of ceramic-grade barium carbonate increased 57 percent, while importers' prices rose 50 percent.

As noted, U.S. producers' prices of glass-grade barium carbonate rose on the average 50 percent from January-March 1977 to April-June 1980, while producers' prices of the ceramic grade rose by 57 percent. In comparison, the Producers' Price Index for inorganic chemicals other than alkalies and chlorine, published by the U.S. Bureau of Labor Statistics, increased 37 percent from January 1977 to December 1979.

Data on prices received by the sole domestic producer of chemical-grade barium carbonate (Sherwin-Williams) are presented in table 17. No imports of a comparable product were reported.

Strontium carbonate.--Price data on glass-grade strontium carbonate were provided by two domestic producers and two importers (end users). One of the two importers provided data for only two transactions during January 1977-June 1980.

Average prices of glass-grade strontium carbonate are presented in table 18. Margins of underselling by importers averaged *** percent over the period, ranging from less than *** percent in early 1977 to *** percent in mid-1979. In the second quarter of 1980, the margin had narrowed to *** percent. Domestic producers' average prices increased by *** percent from January-March 1977 to April-June 1980.

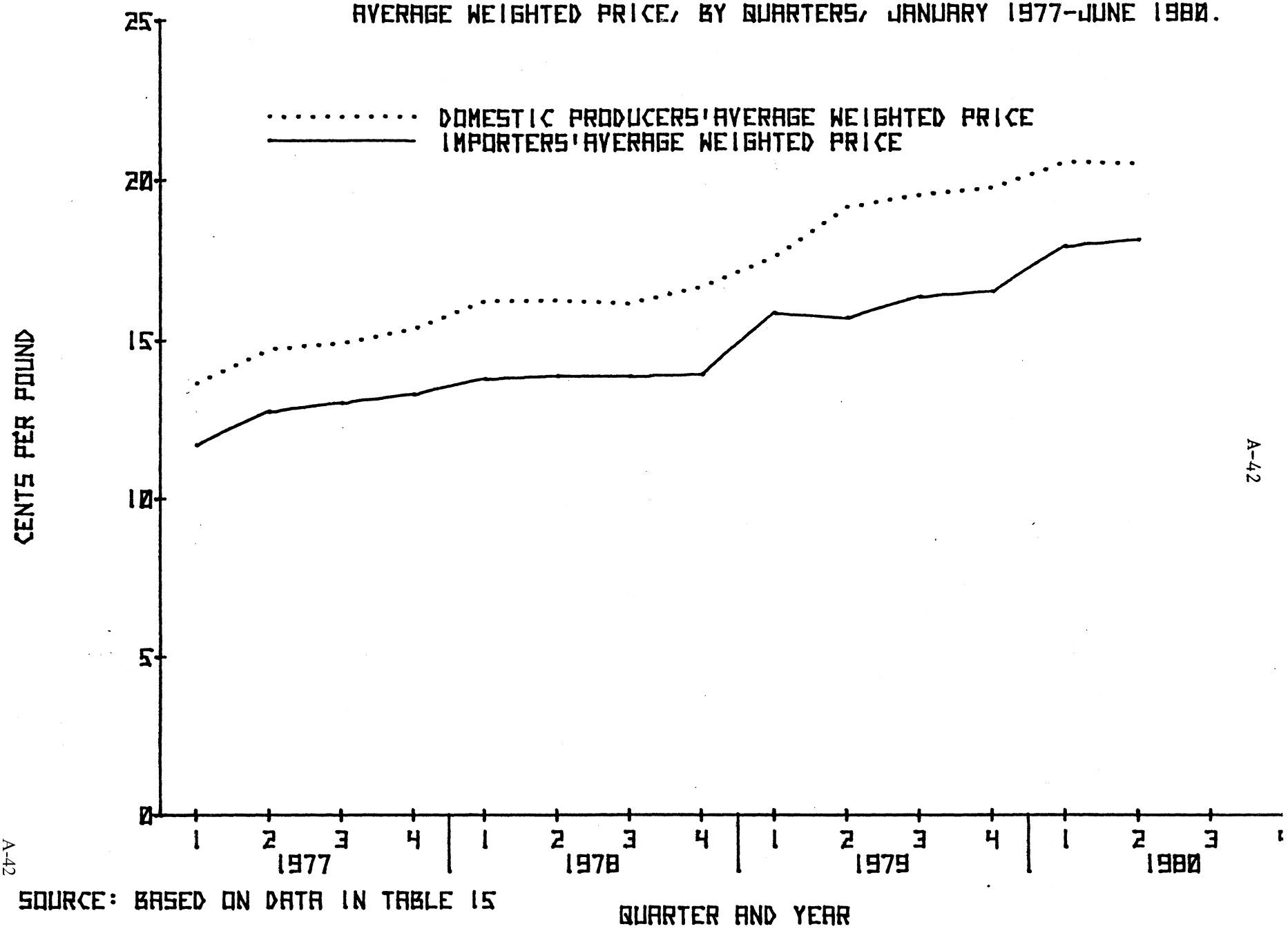
Table 15.--Barium carbonate, glass grade: Average weighted prices of U.S. producers and importers, 1/ by quarters, 1977-79, and Janury-June 1980

Year and quarter	U.S. producers			Average U.S. producers' price	Average importers' price	Margin of underselling
	CPC	FMC	Sherwin-Williams			
	Cents per pound					Percent
1977						
January-March	* * *	* * *	* * *	13.65	11.68	14.5
April-June	* * *	* * *	* * *	14.72	12.73	13.6
July-September	* * *	* * *	* * *	14.92	13.02	12.7
October-December	* * *	* * *	* * *	15.38	13.29	13.6
1978						
January-March	* * *	* * *	* * *	16.29	13.78	15.4
April-June	* * *	* * *	* * *	16.28	13.88	14.7
July-September	* * *	* * *	* * *	16.20	13.87	14.4
October-December	* * *	* * *	* * *	16.75	13.94	16.8
1979						
January-March	* * *	* * *	* * *	17.68	15.88	10.2
April-June	* * *	* * *	* * *	19.20	15.74	18.0
July-September	* * *	* * *	* * *	19.57	16.40	16.2
October-December	* * *	* * *	* * *	19.79	16.57	16.3
1980						
January-March	* * *	* * *	* * *	20.57	17.95	12.7
April-June	* * *	* * *	* * *	20.51	18.15	11.5

1/ Imported from West Germany.

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

FIGURE 1.-BARIUM CARBONATE, GLASS-GRADE: U.S. PRODUCERS' AND IMPORTERS' AVERAGE WEIGHTED PRICE, BY QUARTERS, JANUARY 1977-JUNE 1980.



SOURCE: BASED ON DATA IN TABLE 15

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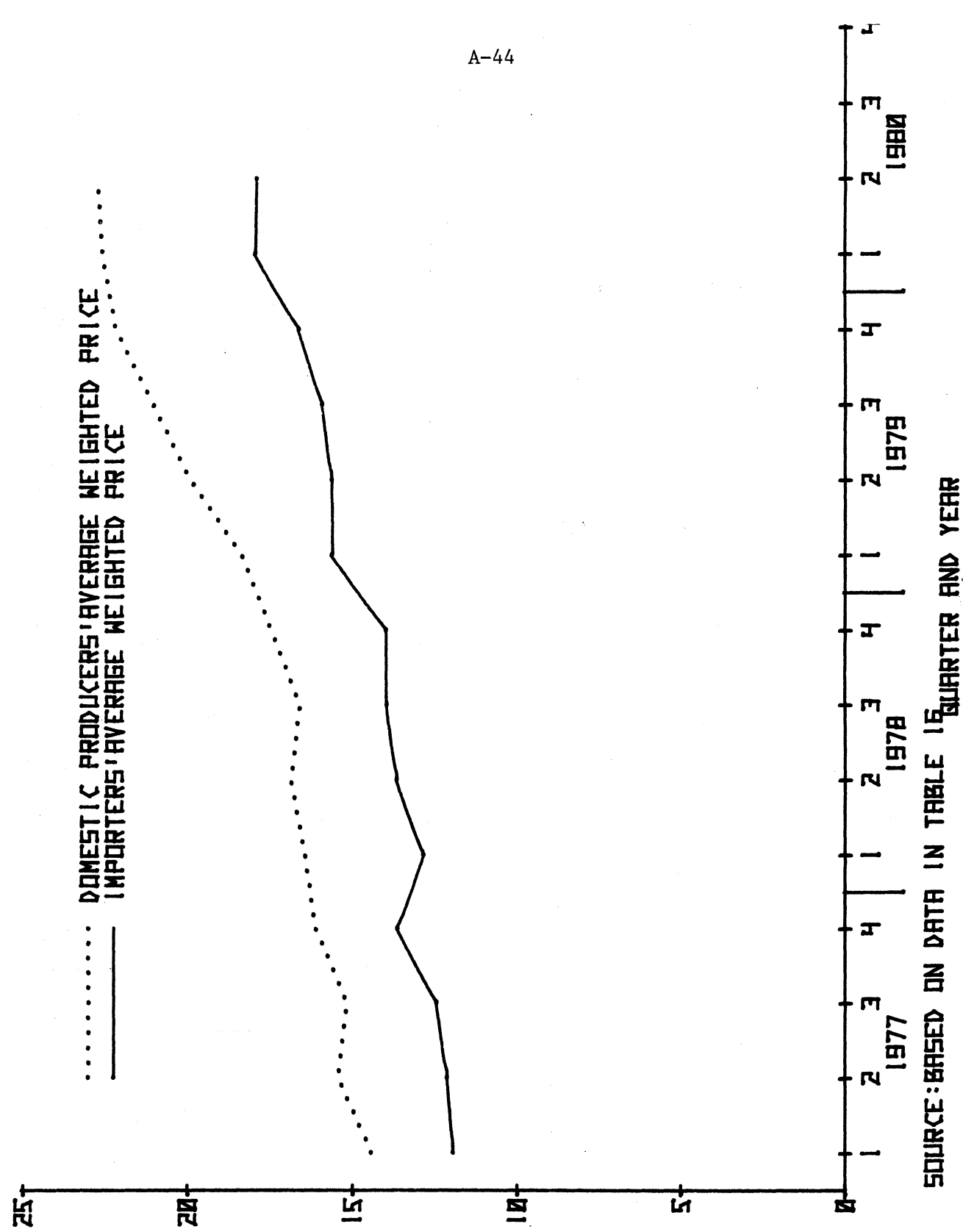
Table 16.--Barium carbonate, ceramic grade: Average weighted prices of U.S. producers and importers, 1/ by quarters, 1977-79, and January-June 1980

Year and quarter	U.S. producers			Average U.S. producers' price	Average importers' price	Margin of underselling
	CPC	FMC	Sherwin-Williams			
	Cents per pound					Percent
1977						
January-March	* * *	* * *	* * *	14.42	11.94	17.2
April-June	* * *	* * *	* * *	15.43	12.11	21.5
July-September	* * *	* * *	* * *	15.16	12.44	17.9
October-December	* * *	* * *	* * *	16.11	13.62	15.4
1978						
January-March	* * *	* * *	* * *	16.43	12.85	21.8
April-June	* * *	* * *	* * *	16.84	13.65	18.9
July-September	* * *	* * *	* * *	16.58	13.95	15.9
October-December	* * *	* * *	* * *	17.44	13.97	19.9
1979						
January-March	* * *	* * *	* * *	18.34	15.59	15.0
April-June	* * *	* * *	* * *	19.90	15.61	21.6
July-September	* * *	* * *	* * *	21.02	15.90	24.4
October-December	* * *	* * *	* * *	22.15	16.60	25.0
1980						
January-March	* * *	* * *	* * *	22.55	17.90	20.6
April-June	* * *	* * *	* * *	22.70	17.88	21.2

1/ Imported from West Germany.

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

FIGURE 2.-BARIUM CARBONATE, CERAMIC-GRADE: U.S. PRODUCERS' AND IMPORTERS' AVERAGE WEIGHTED PRICE, BY QUARTER, JANUARY 1977-JUNE 1980.



SOURCE: BASED ON DATA IN TABLE 15.

Table 17.--Barium carbonate, chemical grade: Average weighted prices of U.S. producers and importers, by quarters, 1977-79, and January-June 1980

* * * * * * *

Table 18.--Strontium carbonate, glass grade: Average weighted prices of U.S. producers and importers, by quarters, 1977-79, and January-June 1980

* * * * * * *

Average prices received by domestic producers for ceramic-grade strontium carbonate are presented in table 19. Price data for imports were available from only one importer/end user. The margin of underselling by this importer ranged from *** percent to *** percent during the period shown.

Strontium nitrate.--Weighted average prices received by the sole domestic producer, FMC, and prices paid by the only significant importer of strontium nitrate from Italy (Olin) are given in table 20; Olin began importing strontium nitrate from Italy in mid-1978. FMC's prices received increased by *** percent from January-June 1977 through the second quarter of 1978, and then by *** percent from the third quarter of 1978 through the second quarter of 1980. In contrast, the price paid by Olin for the imported product * * * from July 1978 through December 1979. However, the price paid by Olin increased *** percent from the fourth quarter of 1979 through the second quarter of 1980. Over the whole period July 1978 to June 1980, the domestic producer's price increased by approximately *** percent, while the price paid for imports rose by about *** percent.

When strontium nitrate from Italy first entered the U.S. market in the third quarter of 1978, it was priced * * * than the domestic product, but in the fourth quarter of that year a reduction in the imported price resulted in an underselling margin of * * * percent. As a result of increases in the domestic price, the margin of underselling increased to * * * percent in the first half of 1979. Subsequent increases in the price of imports reduced the margin to *** percent in the fourth quarter of 1979. After price increases by both the U.S. producer and the foreign supplier, the imported product was reported to again be selling * * * in the second quarter of 1980.

Lost sales

Barium carbonate.--In their responses to the Commission's questionnaires, the three domestic producers of barium carbonate alleged losing sales of this product to imports from West Germany in the following amounts:

Firm	Period	Amount 1,000 pounds	Value $1,000 dollars
CPC----------	1979/80	* * * per year	* * *
FMC----------	1979	* * *	* * *
Sherwin-- Williams-	1978 to present	* * *	* * *

In total, the domestic producers of barium carbonate listed 12 end users as having reduced or ceased purchasing the U.S.-made product because of alleged LTFV imports from West Germany. 1/ The Commission's staff contacted most of

1/ Most of these end users were also recipients of the Commission's questionnaires sent to importers; thus information was obtained on the prices paid by these firms for imports.

Table 19.--Strontium carbonate, ceramic grade: Average weighted prices of U.S. producers and importers, by quarters, 1977-79, and January-June 1980

* * * * * * *

Table 20.--Strontium nitrate: Average weighted prices of U.S. producers and importers, by quarters, 1977-79, and January-June 1980

* * * * * * *

these end users in an attempt to verify the producers' claims of sales lost. Almost all of these end users acknowledged purchasing the German-made product during 1979 or 1980, and gave one or both of two reasons for doing so--price and the desire to have an alternate source of supply. The purchasers reported that they could obtain barium carbonate from West Germany at lower prices (the general difference in delivered prices mentioned was about 2 or 3 cents per pound), but some firms stated that their primary reason for buying imports was its availability and the need to insure an alternate supply source. Some end users reported that they had experienced problems in obtaining the requisite supplies from domestic producers during 1977-79.

Strontium carbonate.--FMC reported losing * * * million pounds (valued at * * *) in sales of strontiun carbonate during 1979 to alleged LTFV imports of this product from West Germany; in its questionnaire response, CPC did not report any lost sales of this product. Two end users were involved, * * * and * * *, both of which acknowledged purchasing the imported product. Although its lower price was mentioned by both firms as one of the reasons for purchasing imported strontium carbonate, both stated that they would have purchased the imported product even if its domestic counterpart had been offered at the same price. Both end users noted the availability of strontium carbonate from West Germany and the need to maintain alternative sources of supply (both now source from one or both domestic suppliers, as well as from the West German supplier).

Strontium nitrate.--FMC, the sole domestic producer, reported losing * * * million pounds (valued at * * *) in sales of strontium nitrate during 1979 to alleged LTFV imports of this product from Italy. Virtually all alleged lost sales involved only one firm--the Olin Corp. An official of Olin presented testimony during the Commission's public conference that one of its two plants which use strontium nitrate (the facility in Peru, Ind.) had switched in mid-1978 from FMC to the imported product. This official stated that the switch was made because of the necessity to insure an alternative source of supply, and not because of price considerations. * * *

APPENDIX A

NOTICE OF COMMISSION'S INVESTIGATIONS AND CONFERENCE

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

731-TA-31, -32, and -33 (Preliminary)

BARIUM CARBONATE AND STRONTIUM CARBONATE FROM THE FEDERAL REPUBLIC OF GERMANY AND STRONTIUM NITRATE FROM ITALY

NOTICE OF INSTITUTION OF PRELIMINARY ANTIDUMPING INVESTIGATIONS AND SCHEDULING OF CONFERENCE

AGENCY: United States International Trade Commission.

ACTION: Institution of preliminary antidumping investigations 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 is materially retarded, by reason of imports from the Federal Republic of Germany of precipitated barium carbonate and precipitated strontium carbonate, provided for in items 472.06 and 421.72, respectively, of the Tariff Schedules of the United States (TSUS), and imports from Italy of strontium nitrate, provided for in TSUS item 421.74, which are allegedly being sold or likely to be sold at less than fair value.

EFFECTIVE DATE: September 9, 1980.

FOR FURTHER INFORMATION CONTACT: Miriam A. Bishop, Investigator (202-523-0291)

SUPPLEMENTARY INFORMATION:

Background. These investigations are being instituted following receipt on September 9, 1980, of petitions filed by Leva, Hawes, Symington, Martin & Oppenheimer, Washington, D.C., on behalf of domestic producers of barium carbonate, strontium carbonate, and strontium nitrate.

Authority. Section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1673b(a)) requires the Commission to make a determination of 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 alleged to be, or likely to be, sold in the United States at less than fair value. Such a determination must be made within 45 days after the date on which a petition is filed under section 732(b) or on which notice is received from the Department of Commerce of an investigation commenced under section 732(a). Accordingly, the Commission, effective September 9, 1980, instituted preliminary antidumping investigations Nos. 731-TA-31, -32, and -33. These investigations will be subject to the provisions of part 207 of the Commission's Rules of Practice and Procedure (19 CFR 207, 44 F.R. 76457) and particularly, subpart B thereof.

Written submissions. Any person may submit to the Commission on or before October 8, 1980, a written statement of information pertinent to the subject matter of these investigations. A signed original and nineteen copies of such statements must be submitted.

Any business information which a submitter desires the Commission to treat as confidential shall be submitted separately and each sheet must be clearly marked at the top "Confidential Business Data." Confidential submissions must conform with the requirements of section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). All written submissions, except for confidential business data, will be available for public inspection.

Conference. The Director of Operations of the Commission has scheduled a conference in connection with these investigations for 10 a.m., e.d.t., on October 3, 1980, at the U.S. International Trade Commission Building, 701 E Street, NW., Washington, D.C. Parties wishing to participate in the

conference should contact the investigator for the investigation, Ms. Miriam A. Bishop (202-523-0291). It is anticipated that parties in support of the petitions for antidumping duties and parties opposed to such petitions will each be collectively allocated one hour within which to make an oral presentation at the conference. Further details concerning the conduct of the conference will be provided by the investigator.

Inspection of petition. The petitions filed in these cases are available for public inspection at the Office of the Secretary, U.S. International Trade Commission and at the New York City office of the U.S. International Trade Commission located at 6 World Trade Center.

By order of the Commission:

Kenneth R. Mason
Secretary

Issued: September 12 1980

APPENDIX B

DEPARTMENT OF COMMERCE'S NOTICE OF INITIATION OF ANDITUMPING INVESTIGATIONS

International Trade Administration

Precipitated Barium Carbonate From the Federal Republic of Germany; Initiation of Antidumping Investigation

AGENCY: U.S. Department of Commerce.

ACTION: Initiation of antidumping investigation.

SUMMARY: This notice advises the public that on the basis of a petition filed in proper form, the Department of Commerce is initiating an antidumping investigation to determine whether precipitated barium carbonate from the Federal Republic of Germany is being, or is likely to be sold, at less than fair value. Sales at less than fair value generally occur when the prices of the merchandise sold for exportation to the United States are less than the prices of such or similar merchandise sold for consumption in the manufacturer's or exporter's home market or less than the price to countries other than the United States, or less than the constructed value. The Department of Commerce is notifying the International Trade Commission of this action so that, in accordance with the Tariff Act of 1930, as amended by the Trade Agreements Act of 1979, the Commission may determine whether there is a reasonable indication of material injury by reason of imports of this merchandise.

EFFECTIVE DATE: October 6, 1980.

FOR FURTHER INFORMATION CONTACT: Charles E. Wilson, Supervisory Import Administration Specialist, Office of Investigations, Import Administration, U.S. Department of Commerce, 14th and Constitution Avenue, NW., Washington, D.C. 20230 (202-377-3530).

SUPPLEMENTARY INFORMATION: On September 9, 1980, the Department of Commerce ("Department") received a petition that complies with the requirements of §§ 353.36 and 353.37 of

the Department Regulations (19 CFR 353.36 and 353.37). Filed by the FMC Corporation, Chicago, Illinois; the Chemical Products Corporation, Cartersville, Georgia; and the Sherwin-Williams Company, Cleveland, Ohio, on behalf of the U.S. industry producing precipitated barium carbonate, the petition alleges that precipitated barium carbonate from the Federal Republic of Germany is being or is likely to be sold at less than fair value within the meaning of section 731 of the Tariff Act of 1930 as amended (93 Stat. 162, 19 U.S.C. 1673) ("the Act") and that the U.S. industry is materially injured, or is threatened with material injury because of these sales.

Precipitated barium carbonate is a chemical compound classified under item number 472.06 of the Tariff Schedules of the United States (TSUS). In granular form (glass grade), this product is used in the glass industry. In powder form (ceramic grade), it is used in the ferrite, ceramic and chemical industries. Other applications are in the manufacture of reflective beads and photo paper, in the formulation of brine treatments, and in the production of other barium chemicals.

The petition includes sufficient evidence supporting the allegation of sales at less than fair value on the basis of comparisons between prices in the home market and in the U.S. market and the allegation of material injury.

In accordance with section 732(c) of the Act (93 Stat. 162, 19 U.S.C. 1673a(c)), I hereby determine that the Department will initiate an investigation to determine whether imports of precipitated barium carbonate from the Federal Republic of Germany are being, or are likely to be, sold at less than fair value. Pursuant to section 732(d) of the Act (93 Stat. 163, 19 U.S.C. 1673a(d)) the Department is notifying the U.S. International Trade Commission (ITC) and providing it with a copy of the information on which I based this determination to initiate an investigation. The International Trade Administration will make available to the ITC all nonprivileged and nonconfidential information. It will also make available all privileged and confidential information in its files, provided the ITC confirms that it will not disclose such information either publicly or under an administrative protective order without the written consent of the Deputy Assistant Secretary for Import Administration.

Pursuant to section 733(a) of the Act (93 Stat. 163, 19 U.S.C. 1673b(a)), the ITC will determine no later than October 21, 1980, whether there is a reasonable indication that an industry in the United States is materially injured, or threatened with material injury, by reason of imports of precipitated barium carbonate from the Federal Republic of Germany. If that determination is negative, this investigation will be deemed terminated and the International Trade Administration will publish no further notice. Otherwise, the investigation will proceed to its conclusion.

Section 733(b) of the Act (93 Stat. 163, 19 U.S.C. 1673b(b)) requires that, normally no later than 160 days after the date on which the petition was filed, the International Trade Administration make a preliminary determination whether there is a reasonable basis to believe or suspect that merchandise which is the subject of this investigation is being, or is likely to be, sold at less than fair value. Therefore, unless the investigation is terminated or extended, the International Trade Administration will make a preliminary determination not later than February 16, 1981.

This notice is published pursuant to section 732 of the Act (93 Stat. 162, 19 U.S.C. 1673a) and § 353.37(b) of the Department Regulations (19 CFR 353.37(b), 45 FR 8199).

John D. Greenwald,

Deputy Assistant Secretary for Import Administration.

September 30, 1980.

[FR Doc. 80-31003 Filed 10-3-80; 8:45 am]

BILLING CODE 3510-25-M

Precipitated Strontium Carbonate From the Federal Republic of Germany; Initiation of Antidumping Investigation

AGENCY: U.S. Department of Commerce.

ACTION: Initiation of antidumping investigation.

SUMMARY: This notice advises the public that on the basis of a petition filed in proper form, the Department of Commerce is initiating an antidumping investigation to determine whether precipitated strontium carbonate from the Federal Republic of Germany is being, or is likely to be, sold at less than fair value. Sales at less than fair value generally occur when the prices of the merchandise sold for exportation to the United States are less than the prices of such or similar merchandise sold for consumption in the manufacturer's or exporter's home market or are less than the prices to countries other than the United States, or less than the constructed value. The Department of Commerce is notifying the International Trade Commission of this action so that, in accordance with the Tariff Act of 1930, as amended by the Trade Agreements Act of 1979, the Commission may determine whether there is a reasonable indication of material injury by reasons of imports of this merchandise.

EFFECTIVE DATE: October 6, 1980.

FOR FURTHER INFORMATION CONTACT: Charles E. Wilson, Supervisory Import Administration Specialist, Office of Investigations, Import Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, D.C. 20230 (202-377-5496).

SUPPLEMENTARY INFORMATION: On September 9, 1980, the Department of Commerce ("Department") received a petition that complies with the requirements of §§ 353.36 and 353.37 of the Department Regulations (19 CFR 353.36 and 353.37). Filed by the FMC Corporation, Chicago, Illinois and the Chemical Products Corporation, Cartersville, Georgia on behalf of the U.S. industry producing precipitated strontium carbonate, the petition alleges that precipitated strontium carbonate from the Federal Republic of Germany is being, or is likely to be, sold at less than fair value within the meaning of section 731 of the Tariff Act of 1930, as amended. (93 Stat. 162, 19 U.S.C. 1673) ("the Act") and that the U.S. industry is materially injured or is threatened with material injury because of these sales.

Precipitated strontium carbonate is a chemical compound classified under item number 421.72 of the Tariff Schedules of the United States (TSUS). In granular form (glass grade) this product is used in the television glass industry. In powder form (ceramic grade) it is used in the ferrite, ceramic, and chemical industries. Other uses include ferrite magnets used in stereo speakers, food processors and lawn care equipment. It is also used, to a small degree, in the manufacture of certain pigments.

The petition includes sufficient evidence supporting both the allegation of sales at less than fair value on the basis of comparisons between prices in the home market and in the U.S. market and the allegation of material injury.

In accordance with section 732(c) of the Act (93 Stat. 162, 19 U.S.C. 1673a(c)), I hereby determine that the Department will initiate an investigation to determine whether imports of precipitated strontium carbonate from the Federal Republic of Germany are being, or are likely to be, sold at less than fair value.

A-57

Pursuant to section 732(d) of the Act (93 Stat. 163, 19 U.S.C. 1673a(d)) the Department is notifying the U.S. International Trade Commission (ITC) and providing it with a copy of the

information on which I based this determination to initiate an investigation. The International Trade Administration will make available to the ITC all nonprivileged and nonconfidential information. It will also make available all privileged and confidential information in its files, provided the ITC confirms that it will not disclose such information either publicly or under an administrative protective order without the written consent of the Deputy Assistant Secretary for Import Administration.

Pursuant to section 733(a) of the Act (93 Stat. 163, 19 U.S.C. 1673b(a)), the ITC will determine no later than October 21, 1980, whether there is a reasonable indication that an industry in the United States is materially injured, or threatened with material injury, by reason of imports of precipitated strontium carbonate from the Federal Republic of Germany. If that determination is negative, this investigation will be deemed terminated and the International Trade Administration will publish no further notice. Otherwise, the investigation will proceed to its conclusion.

Section 733(b) of the Act (93 Stat. 163, 19 U.S.C. 1673b(b)) requires that, normally no later than 160 days after the date on which the peition was filed, the International Trade Administration make a preliminary determination whether there is a reasonable basis to believe or suspect that merchandise which is the subject of this investigation is being, or is likely to be sold, at less than fair value. Therefore, unless the investigation is terminated or extended, the International Trade Administration will make a preliminary determination not later than February 16, 1981.

This notice is published pursuant to section 732 of the Act (93 Stat. 162, 19 U.S.C. 1673a) and § 353.37(b) of the Department Regulations, (19 CFR 353.37(b), 45 FR 8199).

John D. Greenwald,

Deputy Assistant Secretary, for Import Administration.

September 30, 1980.

[FR Doc. 80-31005 Filed 10-3-80; 8:45 am]

BILLING CODE 3510-25-M

Strontium Nitrate From Italy; Initiation of Antidumping Investigation

AGENCY: U.S. Department of Commerce.

ACTION: Initiation of antidumping investigation.

SUMMARY: This notice advises the public that on the basis of a petition filed in proper form, the Department of Commerce is initiating an antidumping investigation to determine whether strontium nitrate from Italy is being, or is likely to be, sold at less than fair value. Sales at less than fair value generally occur when the prices of the merchandise sold for exportation to the United States are less than the prices of such or similar merchandise sold for consumption in the manufacturer's or exporter's home market or less than the prices to countries other than the United States, or less than the constructed value. The Department of Commerce is notifying the International Trade Commission of this action so that, in accordance with the Tariff Act of 1930 as amended by the Trade Agreements Act of 1979, the Commission may determine whether there is a reasonable indication of material injury by reason of imports of this merchandise.

EFFECTIVE DATE: October 3, 1980.

FOR FURTHER INFORMATION CONTACT: Eileen Doughty, Import Administration Specialist, Office of Investigations, Import Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, D.C. 20230 (202-377-3530).

SUPPLEMENTARY INFORMATION: On September 9, 1980, the Department of Commerce ("Department") received a petition that complies with the requirements of §§ 353.36 and 353.37 of the Department's regulations (19 CFR 353.36 and 353.37). Filed by the FMC Corporation, Chicago, Illinois, on behalf of the U.S. industry producing strontium nitrate, the petition alleges that strontium nitrate from Italy is being or is likely to be, sold at less than fair value within the meaning of section 731 of the Tariff Act of 1930, as amended (93 Stat. 162, 19 U.S.C. 1673) ("the Act") and that the U.S. industry is materially injured, or is threatened with material injury because of these sales.

Strontium nitrate is a chemical compound used predominately for producing red colors during combustion of pyrotechnics, such as distress signals, rockets, flares, fuses and fireworks. It is also used in the manufacture of certain pigments. Strontium nitrate is classified under item number 421.74 of the Tariff Schedules of the United States (TSUS).

The petition includes sufficient evidence supporting the allegation of sales at less than fair value on the basis of comparisons between prices in the home market and in the U.S. market and the allegation of material injury.

In accordance with § 732(c) of the Act (93 Stat. 162, 19 U.S.C. 1673a(c)), I hereby determine that the Department will initiate an investigation to determine whether imports of strontium nitrate from Italy are being, or are likely to be, sold at less than fair value. Pursuant to section 732(d) of the Act (93 Stat. 163, 19 U.S.C. 1673a(d)) the Department is notifying the U.S. International Trade Commission (ITC) and providing it with a copy of the information on which I based this determination to initiate an investigation. The International Trade Administration will make available to the ITC all nonprivileged and nonconfidential information. It will also make available all privileged and confidential information in its files, provided the ITC confirms that it will not disclose such information either publicly or under an administrative protective order without the written consent of the Deputy Assistant Secretary for Import Administration.

Pursuant to section 733(a) of the Act (93 Stat. 163, 19 U.S.C. 1673b(a)), the ITC will determine no later than October 21, 1980, whether there is a reasonable indication that an industry in the United States is materially injured, or threatened with material injury, by reason of imports of strontium nitrate from Italy. If that determination is negative, this investigation will be deemed terminated and the International Trade Administration will publish no further notice. Otherwise, the investigation will proceed to its conclusion.

Section 733(b) of the Act (93 Stat. 163, 19 U.S.C. 1673b(b)) requires that, normally no later than 160 days after the date on which the petition was filed, the International Trade Administration make a preliminary determination whether there is a reasonable basis to believe or suspect that merchandise which is the subject of this investigation is being, or is likely to be, sold at less than fair value. Therefore, unless the investigation is terminated or extended, the International Trade Administration will make a preliminary determination not later than February 16, 1981.

This notice is published pursuant to section 732 of the Act (93 Stat. 162, 19 U.S.C. 1673a) and § 353.37(b) of the Department Regulations (19 CFR 353.37(b), 45 FR 8199).

John D. Greenwald,

Deputy Assistant Secretary for Import Administration.

September 30, 1980.

[FR Doc. 80-31004 Filed 10-3-80; 8:45 am]

BILLING CODE 3510-25-M