

# **TITANIUM DIOXIDE FROM BELGIUM, FRANCE, THE UNITED KINGDOM, AND THE FEDERAL REPUBLIC OF GERMANY**

**Determination of "A Reasonable  
Indication of Injury"  
in Inquiry No. AA1921-Inq.-23  
Under the Antidumping Act,  
1921, as Amended**

**USITC PUBLICATION 930**

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# UNITED STATES INTERNATIONAL TRADE COMMISSION

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George M. Moore  
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# NEWS

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## USITC REPORTS ON TITANIUM DIOXIDE FROM BELGIUM, FRANCE, THE UNITED KINGDOM, AND THE FEDERAL REPUBLIC OF GERMANY

### Treasury Investigation to Continue

The United States International Trade Commission today notified the Secretary of the Treasury that the pending Treasury Department investigation on the nature and extent of sales at less than fair value (LTFV) on titanium dioxide from Belgium, France, the United Kingdom, and the Federal Republic of Germany under the Antidumping Act, 1921, should not be terminated.

The Commission had been asked to determine if there was no reasonable indication of injury or the likelihood of injury to an industry in the United States from the imports of such merchandise. The Commission determined that there was a reasonable indication of injury or the likelihood thereof.

Chairman Joseph O. Parker and Commissioners George M. Moore and Catherine Bedell concurred in the determination. Vice Chairman Bill Alberger and Commissioner Paula Stern dissented.

As a result of the determination, the Treasury Department will continue its investigation, which it instituted under the Antidumping Act upon receipt of a complaint from the SCM Corp. of New York, NY., alleging LTFV sales of the product.

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USITC REPORTS ON TITANIUM DIOXIDE FROM BELGIUM, FRANCE, THE UNITED KINGDOM, AND THE  
FEDERAL REPUBLIC OF GERMANY

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Titanium dioxide is a whitening agent used in paint, ink, plastics, paper, textiles, and rubber compounds. Six domestic producers--Du Pont, N. L. Industries, SCM Corp., American Cyanamid Co., Kerr-McGee Corp., and Gulf & Western--operated 11 plants in 1977 in the following locations: two each in New Jersey and Ohio, and one each in California, Georgia, Tennessee, Mississippi, Delaware, Maryland, and Missouri. The Missouri plant, which was operated by N. L. Industries, was closed earlier this year.

U.S. production of titanium dioxide trended downward between 1973-77 and in 1977 was 13.5 percent below the 1973 level. Domestic consumption in 1977 was also down by 8.2 percent compared with the 1973 level, as were employment and profits. Imports from the countries named in the petition filed by the SCM Corp, with the Treasury Department were 126 percent greater in 1977 than in 1973, while total imports increased by 92 percent during the same period. The share of U.S. consumption accounted for by the four countries increased from 2 percent in 1974 to 10 percent in 1977.

The Commission's report, Titanium Dioxide from Belgium, France, the United Kingdom, and the Federal Republic of Germany (USITC Publication 930), contains the views of the Commissioners and information developed during the inquiry (No. AA1921-Inq.-23). Copies may be obtained by calling (202) 523-5178 or from the Office of the Secretary, 701 E Street NW., Washington, D.C. 20436.

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UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, D.C.

[AA1921-Inq.-23]

TITANIUM DIOXIDE  
from  
BELGIUM, FRANCE, THE UNITED KINGDOM, AND THE FEDERAL  
REPUBLIC OF GERMANY

Commission Determines "A Reasonable Indication of Injury"

On the basis of information developed during the course of inquiry No. AA1921-Inq.-23 undertaken by the United States International Trade Commission under section 201(c) of the Antidumping Act, 1921, as amended, the Commission determines that there is a reasonable indication that an industry in the United States is being or is likely to be injured by reason of the importation of titanium dioxide from Belgium, France, the United Kingdom, and the Federal Republic of Germany (West Germany) allegedly sold at less than fair value as indicated by the Department of the Treasury. 1/

On October 30, 1978, the Commission received advice from the Department of the Treasury that, in accordance with section 201(c)(1) of the Antidumping Act, 1921, as amended, an antidumping investigation was

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1/ Commissioners George M. Moore and Catherine Bedell, voting to continue the investigation, determine that there is a reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of the subject titanium dioxide.

Chairman Joseph O. Parker, also voting to continue the investigation, does not determine that there is no reasonable indication that an industry in the United States is being or is likely to be injured by reason of the importation of the subject titanium dioxide.

Vice Chairman Bill Alberger and Commissioner Paula Stern, voting to terminate the investigation, determine that there is no reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of the subject titanium dioxide.

being initiated with respect to titanium dioxide from Belgium, France, the United Kingdom, and West Germany, and that, pursuant to section 201(c)(2) of the act, information developed during Treasury's preliminary investigation led to the conclusion that there is substantial doubt that an industry in the United States is being or is likely to be injured by reason of the importation of titanium dioxide from Belgium, France, the United Kingdom, and West Germany into the United States. Accordingly, the Commission, on November 6, 1978, instituted inquiry No. AA1921-Inq.-23 under section 201(c)(2) of the act to determine whether there is no reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States.

A public hearing was held on November 15, 1978, in Washington, D.C. Public notice of both the institution of the inquiry and of the hearing was duly given by posting copies of the notice at the Secretary's office in the Commission in Washington, D.C., and at the Commission's office in New York City, and by publishing the original notice in the Federal Register of November 13, 1978 (43 F.R. 52551).

The Treasury Department instituted its investigation after receiving a properly filed complaint on September 18, 1978, from counsel acting on behalf of the SCM Corporation, New York, New York. Treasury's notice of its antidumping proceeding was published in the Federal Register of October 31, 1978 (43 F.R. 50781).



Views of Chairman Joseph O. Parker and  
Commissioners George M. Moore and Catherine Bedell

On October 30, 1978, the United States International Trade Commission received advice from the Department of the Treasury that, during the course of determining whether to institute an investigation with respect to titanium dioxide from Belgium, France, the Federal Republic of Germany, and the United Kingdom in accordance with section 201(c) of the Antidumping Act, 1921, as amended, Treasury had concluded from the information available that there is substantial doubt that an industry in the United States is being or is likely to be injured, by reason of the importation of this merchandise into the United States.

Determination

On the basis of the information developed with respect to this inquiry we determine that the standards set forth in section 201(c)(2) of the Anti-dumping Act, 1921, as amended, for terminating the Treasury investigation have not been satisfied.

Discussion

During this inquiry, information was presented to show that U.S. producers of titanium dioxide who constitute a relevant industry for purposes of this inquiry, may be adversely affected by imports of titanium dioxide from Belgium, France, the United Kingdom, and the Federal Republic of Germany found by Treasury to have apparently been sold in the United States at less than fair value.

U.S. production of titanium dioxide trended downward between 1973 and 1977 and in 1977 was 13.5 percent below the 1973 level. Domestic consumption in 1977 was also down-by 8.2 percent--from the 1973 level, as were employment

and profits. During this same period, \*\*\* of the \*\*\* firms that responded to the Commission questionnaire reported a loss in every year except 1976. The Commission's staff, in a random sampling of the customers reported by these domestic manufacturers, found that there were instances of sales lost by domestic producers to imports from the four subject countries. At the same time, imports from the countries named in the petition filed with Treasury by counsel for the SCM Corporation were 126 percent greater in 1977 than in 1973 while total imports increased by 92 percent during the same period. The share of U.S. consumption accounted for by the four named countries increased from 4 percent in 1973 to 10 percent in 1977.

#### Conclusion

On the basis of the information available to the Commission, we have determined that the investigation should not be terminated.

## VIEWS OF COMMISSIONER BILL ALBERGER

Statutory criteria of section 201(c)(2)

If the Secretary of the Treasury concludes, during a preliminary investigation under the Antidumping Act, 1921, as amended, that there is substantial doubt regarding possible injury to an industry in the United States, he shall forward to the U.S. International Trade Commission (Commission) his reasons for such doubt. Within 30 days of receipt of the Secretary's reasons, the Commission shall determine whether there is no reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, 1/ by reason of the importation of merchandise allegedly sold in the United States at less than fair value (LTFV). Therefore, the Commission, on November 6, 1978, instituted AA1921-Inq.-23, concerning imports of titanium dioxide from Belgium, France, the Federal Republic of Germany (West Germany), and the United Kingdom.

Determination

On the basis of information developed during the course of this investigation, I determine that there is no reasonable indication that an industry in the United States is being or is likely to be injured by reason of the importation of titanium dioxide into the United States from Belgium, France, West Germany and the United Kingdom allegedly sold at less than fair value, as indicated by the Department of the Treasury.

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1/ Prevention of the establishment of an industry is not a question in this inquiry and will not be discussed further.

### The imported article and the domestic industry

Titanium dioxide is a white solid, metallic oxide which is the whitest, most inert and most opaque of all commercial pigments. It is used to whiten, brighten, and opacify paints, paper, plastics, inks, synthetic fibers, and rubber compounds. There are six firms currently producing titanium dioxide in the United States. These are: E.I. DuPont de Nemours and Company, Inc. (DuPont), SCM Corporation (SCM), Kerr-McGee Corporation, American Cyanamid Company, Gulf and Western, and National Lead Industries (NL). In 1977, these firms operated 11 plants. However, in 1978, one firm closed one of its two facilities and greatly curtailed production at its other facility.

### Information regarding alleged margins of LTFV sales

The Department of the Treasury advised the Commission that the petitioner alleged margins of LTFV sales from 5 to 37 percent.

### No reasonable indication of injury

Imports from Belgium, France, West Germany and the United Kingdom -- Imports increased irregularly from 1973 through 1977, hitting a low in 1975 and climbing to their highest levels in 1977. As a percent of U.S. consumption, 1977 imports from these four countries represented 10 percent of U.S. consumption with West German imports accounting for 6 of the 10 percent. In addition, the major portion of West German and Belgian imports in 1977 were accounted for by NL Industries, a domestic producer.

U.S. production and shipments -- U.S. production of titanium dioxide peaked in 1974 at 562,000 short tons, then dropped to just over 453,000 short tons in 1975, a recession year. Production in 1976 jumped appreciably over

1975 levels, and then tailed off slightly in 1977. January-June 1978 production figures ran ahead of the comparable period in 1977.

Shipments by the three domestic producers who provided the Commission with data were at their highest in 1973, then plummeted to their lowest levels in 1975. From 1975 through 1977, shipments made a steady climb and during 1977 were at levels slightly below 1973. January-June 1978 shipments by these firms were down very slightly in comparison with the same period in 1977.

Capacity utilization -- U.S. producers operated at a rate of capacity utilization slightly over 63 percent in 1974. This rate dropped to nearly 48 percent in 1975 before climbing back to a level slightly over 54 percent in 1977.

Inventories -- Inventories held by U.S. producers moved upward from 10,000 short tons in 1973 to 110,000 short tons in 1977. The latter figure represents about 20 percent of production. January-September 1978 inventories are down about 15 percent by comparison with the same period in 1977. This decrease in inventories has occurred in spite of a slight drop in shipments by U.S. producers.

Employment -- Employment in the domestic industry has followed a downward pattern since 1973. The number of production and related workers has decreased slightly over 20 percent from 1973 through 1977. A good portion of this drop is due to the closure of one plant by a domestic firm who cited environmental problems as the major cause of the closure.

Profits -- The aggregate profits of U.S. producers increased from 1975 through 1977. The petitioner in this inquiry showed a loss in 1978

for its titanium dioxide operations, but the dominant producers in the industry continue to show good profits in 1978.

Prices -- Evidence before the Commission indicates that West Germany, the largest importer of the four countries subject to this inquiry, is selling its product at or above the domestic price. Belgian prices are at or slightly below domestic prices, while those of France and the United Kingdom are only slightly below the U.S. price. There appears to be very little variance among the prices of the six U.S. producers. In fact, the evidence before the Commission indicates that price changes by domestic producers are basically related to the position of the dominant U.S. producer, DuPont. In some instances, DuPont has been able to effect a price rollback when it felt announced price increases by other domestic producers were too substantial.

Lost sales -- The Commission was able to verify only two instances of lost sales. In both cases, DuPont lost sales to producers in the United Kingdom on the basis of price. In other alleged instances of lost sales, quality and availability of product were given as reasons for changes in purchasing practices. In other cases, purchasers shifted to countries not subject to this inquiry.

Foreign capacity -- While there are some plans for expansion of capacity in the four countries under investigation, the volume and potential for additional exports to the United States is insufficient to cause great concern.

### Conclusion

DuPont is clearly the dominant firm in the domestic industry, with about half of domestic production and a unique chloride production process which is

much more efficient than any other in the world. DuPont's profits are at reasonable levels and it plans major capacity expansions. I have not found much evidence of injury in the factors analyzed, but I am convinced that any injury which may exist is not by reason of imports from these four countries, but is more likely related to conditions of competition among domestic producers.

An examination country-by-country is clearly unnecessary since I find imports collectively are not injuring the industry. However, imports from West Germany appear to be priced at or above domestic prices; imports from Belgium are from two firms, one of which prices at domestic prices and the other has been exporting declining quantities to the United States; imports from France are the smallest amounts of the four countries and their producers face more stringent and costly environmental restrictions than in other European countries; and imports from the United Kingdom compete mostly in narrow portions of the market with DuPont. No individual case against any country is strong -- the U.K. case is better than the others, but I cannot find any reasonable indication that such imports have caused injury to the domestic industry.

Since this determination is part of the minority view, this case may return to the Commission in the event that Treasury finds sales at less than fair value from one or more of these countries. If that occurs, I will, of course, take a fresh look at all allegations of injury, and if the evidence is compelling, could reach a different conclusion.

Determination of Commissioner Stern

Having considered all of the information before me in this inquiry, I have determined that there is no reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation into the United States of titanium dioxide from Belgium, France, the Federal Republic of Germany, and the United Kingdom.

Discussion

Section 201 of the Antidumping Act, 1921, was amended by the Trade Act of 1974 to incorporate a new provision, section 201(c)(2), which, in the words of the Senate Finance Committee Report,

"provides for the elimination, at an early stage of the antidumping proceedings, of those cases in which there is no reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of the merchandise concerned into the United States. The amendment is designed to eliminate unnecessary and costly investigations which are an administrative burden and an impediment to trade." 1/

Within thirty days of receipt of information from the Secretary of the Treasury indicating substantial doubt that injury under the Antidumping Act exists, the U.S. International

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1/ Senate Report 93-1298, pp. 170-71.



Trade Commission must determine whether a reasonable indication of injury or likelihood of injury to an industry exists. An affirmative determination terminates further Treasury proceedings; otherwise, the investigation continues.

The International Trade Commission considered the allegation of SCM Corporation that titanium dioxide imports from Belgium, France, the United Kingdom, and the Federal Republic of Germany were injuring or were likely to injure an industry in the United States. Examining this petition required close analysis of two major sets of economic issues. The first set of issues relates to the economic conditions prevailing and likely to prevail in the domestic industry. The second set relates to recent and potential import trends for titanium dioxide from the four countries stated in the petition.

The statute gives the Commission no specific direction on which economic factors to analyze. The Senate Report suggests we consider suppression or depression of prices, loss of customers, and penetration of the U.S. market. The Commission has indicated in written submission to the House Committee on Ways and Means that the factors we consider include the three factors listed above plus employment, lost profits, production, capacity utilization, inventories, and foreign capacity to produce for export.

In this particular case, I found that there were several additional issues which required examination. For example, price levels and trends of the domestic product and imports were examined. The degree of substitutability between imports and the domestic product was taken into account. Attention was also focused on the type of ownership of the foreign suppliers and on government policies affecting foreign production conditions. The economic prospects of the foreign industry were examined, particularly in the context of future capacity plans of firms, as these may present a threat of injury to the U.S. industry. <sup>2/</sup>

This case appears on the surface to be highly complex. There are four importing countries involved and a number of producers operating in each. Moreover, there are six domestic producers. However, a closer look reveals that only one of the six domestic producers complained of injury. The multiplicity of possible actors in this country and elsewhere masked the more salient issues in the case. First, one domestic producer, duPont, is the world's largest producer, the price leader in the U.S. market, and has almost fifty percent of U.S. capacity. Second, NL Industries, another U.S. producer, has substantially shifted its production to two of the countries named in the complaint, and thus contributed to the increase in import figures.

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<sup>2/</sup> These points will be further developed.

### The Domestic Industry

The domestic industry consists of six firms with titanium dioxide production facilities: duPont, SCM, NL Industries, Gulf and Western, Kerr-McGee, and American Cyanamid. duPont dominates the industry. Information supplied to the Commission indicates that duPont generally sets the pricing pattern for the industry. duPont's patented chloride-process makes it the most efficient U.S. producer of titanium dioxide. duPont plans to begin operating a large, new plant sometime in mid-1979, increasing its capacity by over thirty percent. This capacity expansion exceeds the total expansion plans of all other U.S. producers plus those in West Germany, the United Kingdom, Belgium and France. While alleging injury, SCM also plans expansion.

There are other indications that the problems of the industry are due to domestic factors. NL Industries, which has greatly increased its European imports, while at the same time phasing out a plant in Missouri in 1977 and 1978, is not complaining of injury from imports. According to statements made by NL Industries at the Commission hearing, most of NL's imports have replaced lost domestic production due to strikes in 1976 and 1977 and to the phasing out of NL's St. Louis plant which had high environmental costs. Furthermore, NL asserted that no other domestic producer lost existing market shares as a result of NL's imports. This assertion has not been rebutted by any evidence presented to the Commission.

Employment in the industry has declined since 1973. This trend, however, is principally attributable to NL Industries shifting supply to its own plants abroad. When asked by Commissioner Stern if SCM's employment has declined due to imports, counsel for SCM at the Commission hearing answered no.

As for indication of lost sales, in a sample of twenty-five reported lost sales by SCM or duPont, the Commission was able to verify only two instances where sales were lost to imports on the basis of price. In both cases, duPont lost sales to producers in the United Kingdom on the basis of price; in other alleged instances of lost sales, quality and availability of product were given as reasons for changes in purchasing practices. In other cases, purchasers shifted to countries not subject to this inquiry.

In summary, the combination of duPont's lowest cost production process, adequate profit margins at prices at which others claim an inability to make money, and additional expansion plans plus information regarding lost sales and employment are convincing indicators that domestic factors, including an inability to compete with duPont, not imports, has caused whatever injury exists to firms in the industry.

#### Import Trends

U.S. imports of titanium dioxide from the four countries named in the complaint indeed rose from approximately 35-thousand short tons in 1973 to 79-thousand short tons in 1977. For the first nine months of 1978 they were about 66.5 thousand short tons compared to 64.4 thousand for the corresponding 1977 period.

The increase over 1973 levels did not manifest itself until 1976 and 1977. As already noted, the additional imports in 1976 and 1977 are primarily accounted for by the shift of titanium dioxide supplies by NL Industries from its domestic production facilities to its foreign subsidiaries in Belgium and West Germany.

Having examined general import trends, a country-by-country analysis revealed whether a country-specific injury or potential threat of injury existed. The Federal Republic of Germany is the major source of imports of the four countries considered. U.S. imports from this source amounted to 46.5-thousand short tons in 1977, and these were supplied by Bayer AG, Sachtleben, and Kronos. Bayer and Kronos also have plants in Belgium which supply the U.S. market. Kronos, wholly owned by NL Industries, supplies titanium dioxide to the U.S. market from Belgium and West Germany. According to NL testimony, it is sold at the same price as NL Industries' domestically-produced product. The company says this price has typically been the prevailing domestic price. Sachtleben claims it sells about 90 percent of its exports of titanium dioxide to one purchaser; it is the sole supplier because it manufactures a particular grade, sold at a higher price than the going domestic price. Bayer, the third German exporter and the only non-NL exporter selling titanium dioxide from

Belgium to the U.S., has been exporting smaller amounts annually to the U.S. since 1976. Its 1977 level of exports to the U.S. was about the same as in 1973. The average value of sales of German imports was higher than for the comparable U.S. products. Kronos in Germany will expand capacity by approximately 20-thousand short tons in 1978 or 1979, but this is a very small expansion. In Belgium there is no planned capacity expansion. For the first nine months of 1978, imports from Belgium and Germany were below levels of the corresponding 1977 period.

Given the size of the U.S. market (1977 consumption was 781,000 short tons), ownership of Kronos by NL Industries, higher prices in Germany vis-a-vis the U.S., and the nature of production by Sachtleben and Bayer, imports from Belgium and West Germany do not appear to be injurious to the U.S. industry.

Imports from France have been at a lower level than those from the other three countries. In 1977 French imports amounted to about five thousand short tons, one thousand less than in 1976 and over three thousand less than in 1973. For the first nine months of 1978, they were about twice as high as for the same 1977 period, amounting to about 8.1 thousand versus 3.9 thousand short tons. If these trends continue, 1978 French imports would be considerably higher than in the 1976-1977 period, but only about 25 percent higher than for 1973. There are no capacity additions planned by

either of the two French producers, and there are indications that French producers may be faced with more stringent and costly environmental restrictions than in other European countries. Given these factors, plus the relatively small amount of these imports in relation to U.S. consumption, nothing uncovered in this inquiry suggests that the domestic industry is being, or is likely to be, injured by imports of titanium dioxide from France.

Imports from the United Kingdom are now about two percent of consumption after increasing sharply in both 1977 and the first nine months of 1978. About half of U.S. imports from the U.K. came from Laporte Industries Limited. According to Laporte, almost all of its sales in the U.S. are to the paint and paper industries. In the paint industry, it offers several grades. Some have no domestic counterpart, while others have only one, produced by duPont. Laporte asserts that its sales to the paper industry are principally of its WDB grade, competitive in a relatively small share of the market as many of the major users of paper grade titanium dioxide purchase their product in "slurry" form. This puts Laporte at a disadvantage, since it has no domestic facility in which to slurry "dry" titanium dioxide and since it is impractical to import slurry. The remainder of imports from the U.K. comes from the Tioxide Group.

Data indicate that U.K. import prices have increased more rapidly in 1978 over 1977, so that increased imports have occurred during a period for which the U.S. product was becoming more price competitive.<sup>3/</sup> As for the potential threat of injury, it is worth noting that Tioxide is planning a capacity expansion of about 25-thousand short tons to be completed in late-1979. This would not affect production until mid-1980. As with the planned German expansion, it is unlikely that this small capacity expansion is indicative of future injury. Thus, rapidly increasing U.K. prices, projected growth in European paint sales, the specialized nature of the product produced by one of the two U.K. producers, and the U.K.'s small share of the U.S. market, indicates that imports from the U.K. are not injuring, or threatening to injure, the U.S. industry.

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<sup>3/</sup> According to Chemical Week, Nov. 15, 1978, British prices for titanium dioxide are up at least 10 percent from a year ago, despite overcapacity. The report adds, "producers expect prices to continue to rise without undue ill effects on demand."



Conclusion

In this investigation, there has been no information submitted that would reasonably indicate that the domestic industry is being or is likely to be injured. Therefore, based on the direction provided in Section 201(c)(2), I would recommend that this case be terminated.



## SUMMARY

On September 18, 1978, the Department of the Treasury received a petition on behalf of SCM Corp., New York, N.Y., alleging that titanium dioxide from Belgium, France, the Federal Republic of Germany (West Germany), and the United Kingdom is being, or is likely to be, sold at less than fair value.

On October 30, 1978, the United States International Trade Commission received advice from the Department of the Treasury that, during the course of determining whether to institute an investigation with respect to titanium dioxide from Belgium, France, the Federal Republic of Germany, and the United Kingdom in accordance with section 201(c) of the Antidumping Act, 1921, as amended, Treasury had concluded from the information available that there is reasonable doubt that an industry in the United States is being or is likely to be injured, by reason of the importation of this merchandise into the United States.

Titanium dioxide ( $\text{TiO}_2$ ), a white, solid, metallic oxide is the whitest, most inert, and most opaque of all commercial pigments. Its superior hiding power and chemical stability have made it the most important of the white pigments.  $\text{TiO}_2$  pigments are used to whiten, brighten, and opacify paints, paper, plastics, inks, synthetic fibers, and rubber compounds. Anatase and rutile are the forms principally used as pigments. Both have the same crystal structure, but rutile is more dense. The rutile form accounted for about 75 percent of the titanium pigments used in 1977.

Currently there are six producers of  $\text{TiO}_2$  pigments in the United States: Du Pont, N. L. Industries, SCM Corp., American Cyanamid Co., Kerr-McGee Corp., and Gulf & Western. In 1977 these firms operated 11 plants located as follows: two each in New Jersey and Ohio, and one each in California, Georgia, Tennessee, Mississippi, Delaware, Maryland, and Missouri. The Missouri plant, which was operated by NL Industries, was closed in 1978.

Consumption historically has closely followed the general economic condition of the country. Annual decreases in consumption of titanium dioxide have coincided with economic recessions in the United States, occurring in the early 1950's, 1957, 1960, 1970, and 1975. Apparent U.S. consumption, which totaled 851,000 short tons in 1973, declined to 599,000 short tons in 1975, but increased annually thereafter, and in 1977 totaled 781,000 short tons, or a decrease of 8 percent from the 1973 level of consumption but 30 percent greater than consumption in 1975. The surface coating industry accounted for slightly more than one-half of consumption between 1973-77; the paper industry accounted for about 20 percent, and the plastics industry about 10 percent.

U.S. production increased from 785,000 short tons in 1973 to 787,000 short tons in 1974, but declined irregularly thereafter, and in 1977 amounted to 679,000 short tons. Total shipments by U.S. producers (including inter-plant transfers) declined irregularly from 794,000 short tons, valued at \$404.6 million, in 1973 to 576,000 short tons, valued at \$423.7 million, in

1975 but increased in 1976 to 712,000 short tons, valued at \$594.8 million. Shipment data for 1977 are not available in official statistics, but data submitted to the Commission by questionnaires indicate that producers' shipments increased in 1977.

U.S. exports averaged about 3 percent of U.S. production between 1973-77. Principal foreign markets included the Republic of Korea, Canada, Venezuela, Brazil, and Japan.

U.S. imports trended upward between 1973 and August 1978. Imports from Belgium, France, the United Kingdom, and West Germany increased substantially between 1973-77. Imports during January-August 1978 amounted to 59,000 short tons, valued at \$46.3 million, or an increase of 8 percent by quantity and 19 percent by value from the partial year of 1977. Imports from Belgium, France, the United Kingdom, and West Germany accounted for 4 percent of U.S. consumption in 1973, declined to 2 percent in 1974 and in 1975, then increased to 6 percent in 1976 and to 10 percent in 1977.

During the 1960's, the prices for all grades of titanium dioxide remained relatively stable. In the early 1970's, demand was soft and prices were discounted off list. However, in 1973-1974, the situation reversed sharply as worldwide demand exceeded supply. Although domestic prices for titanium dioxide rose somewhat in 1973 and January-March 1974, such increases were dampened by price controls during that period. Prices continued to rise in 1975, despite a sharp decline in demand, partly because of increased costs for energy and pollution control. Prices have continued upward since 1975, but at a much more moderate rate. Effective June 1978, domestic list prices were increased by 2.5 cents per pound across the board, raising the price of rutile pigment to 51 cents per pound and that of paper-grade anatase pigment to 46 cents per pound; both prices represent historical highs.

In an effort to verify sales lost to imports at the expense of domestic producers, the Commission contacted 36 allegedly lost customers. Most of the lost sales reported by SCM were not definitively attributed to imports from the United Kingdom, France, Belgium, or West Germany; more than one-third of the lost sales reported by Du Pont were not so attributed. Of 7 lost customers reported by SCM and contacted by the Commission, 3 firms reported that they imported only from Canada and one from only Finland. One firm did not import at all and two were not certain of the origin of their imports. Appendix A contains certain statistical tables developed in the course of the investigation.

## INFORMATION OBTAINED IN THE INVESTIGATION

## Introduction

On September 18, 1978, the Department of the Treasury received a properly filed petition from Counsel acting on behalf of SCM Corp., New York, N.Y., alleging that titanium dioxide from Belgium, France, the Federal Republic of Germany (West Germany), and the United Kingdom is being, or is likely to be, sold at less than fair value (LTFV) within the meaning of the Antidumping Act, 1921, as amended (19 U.S.C. 160). The complaint also provided certain allegations and evidence concerning injury to, or the likelihood of injury to, or the prevention or establishment of, an industry in the United States.

On October 30, 1978, the United States International Trade Commission received advice from the Department of the Treasury that, during the course of determining whether to institute an investigation with respect to titanium dioxide from Belgium, France, the United Kingdom and West Germany, in accordance with section 201(c) of the Antidumping Act, 1921, as amended, Treasury had concluded from the information available to it that there is substantial doubt that an industry in the United States is being, or is likely to be, injured by reason of the importation of this merchandise into the United States. Therefore, on November 6, 1978, the Commission instituted an inquiry, AA1921-Inq.-23, under section 201(c) of that act, to determine whether there is no reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States.

A public hearing in connection with the inquiry was held in Washington, D.C., on Wednesday, November 15, 1978. Notice of the Commission's institution of the inquiry and the hearing was duly given by posting copies of the notice at the Office of the Secretary, U.S. International Trade Commission, Washington, D.C., and at the Commission's Office in New York City, and by publishing the original notice in the Federal Register on November 13, 1978 (43 F.R. 52551). 1/

At the same time that the Treasury Department notified the U.S. International Trade Commission that it had concluded that there is substantial doubt that an industry in the United States is being or is likely to be injured, or is prevented from being established, it notified the public that the case was being referred to the U.S. International Trade Commission and that the U.S. Customs Service is instituting an inquiry to verify the information submitted and to obtain the facts necessary to enable the Secretary of the Treasury to reach a determination as to the fact or likelihood of sales at LTFV. Treasury's Antidumping Proceeding Notice was published in the Federal Register of October 31, 1978 (43 F.R. 5078). 2/

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1/ A copy of the Commission's Notice of Inquiry and Hearing is presented in app. B.

2/ A copy of the Treasury Department's Antidumping Proceeding Notice is presented in app. C.

In the event that the U.S. International Trade Commission finds in the affirmative--that there is no reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of titanium dioxide from Belgium, France, the United Kingdom, and West Germany that may be sold in the United States at LTFV--the Treasury Department's investigation as to the fact or likelihood of sales at LTFV will be terminated. In the event that the Commission finds in the negative, the Treasury Department's investigation will continue. The Commission's determination is due to be reported to the Secretary of the Treasury by no later than Wednesday, November 29, 1978.

#### Description and Uses

Titanium dioxide ( $\text{TiO}_2$ ), a white, solid, metallic oxide is the whitest, most inert, and most opaque of all commercial pigments. Its superior hiding power (resulting from its high index of refraction), relatively low specific gravity, and chemical stability have made it the most important of the white pigments. 1/  $\text{TiO}_2$  pigments are used to whiten, brighten, and opacify paints, paper, plastics, inks, synthetic fibers, and rubber compounds.

The  $\text{TiO}_2$  pigments are produced primarily from two types of mineral forms--ilmenite and rutile 2/. The feedstocks differ in  $\text{TiO}_2$  content, a factor that affects their useability in a particular manufacturing process as well as the amount of waste produced. Although ilmenite is the more abundant of the feedstocks, anatase and rutile are the forms principally used as pigments. Both have the same crystal structure, but rutile is more dense. If ilmenite is used, it is usually first processed into either the rutile or anatase form. The rutile form accounted for about 75 percent of the titanium pigments used in 1977.

Both anatase and rutile are marketed in several "pure" grades containing from 91 to 99 percent titanium dioxide, depending on the amount of alumina, silica, zinc oxide, or other additives put into the formula to improve color retention, chalking resistance, dispensibility, or other properties of the pigment. 3/ The various grades and types of pigments are generally manufactured for specific uses, but there is considerable interchangeability between different grades of anatase, different grades of rutile, and to some extent between anatase pigments and rutile pigments.

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1/ Other white pigments include white lead, lithopane, and zinc oxide.

2/ The feedstocks are divided into 2 ore forms: (1) primary (rock) titanomagnites and (2) secondary heavy mineral sands.

3/ Most foreign titanium dioxide suppliers reportedly carry fewer product grades and offer a lower quality product.

TiO<sub>2</sub> pigments are produced by either the sulfate process or the chloride process. The sulfate process is the older of the two and is being superseded by the chloride process. The chloride process requires lower investment and operating costs, produces less waste by-product, and results in a higher quality pigment. No new sulfate plants have been built in the United States since 1959. Until recently the chloride process produced only rutile-grade pigments. Du Pont, in late 1974, however, closed its last sulfate process plant and is making both rutile-grade and anatase-grade titanium dioxide pigments by the chloride process. This innovation has resulted in a competitive advantage for Du Pont, as it is the only producer equipped to economically use abundant, low-cost ilmenite as a chloride process raw material. <sup>1/</sup> Other producers remain dependent upon less abundant and more expensive supplies of imported rutile ores. Although plants which produce by the sulfate process can also use the low-cost ilmenite as a feedstock, the waste disposal costs resulting from this process far outweigh any feedstock cost advantage over the chloride process. Table 1 in appendix A shows total domestic and imported raw materials for pigment production.

#### U.S. Tariff Treatment

Imported titanium dioxide pigments enter the United States under item 473.70 of the Tariff Schedules of the United States (TSUS). The following table shows the current most-favored nation rate (which is applicable to the imports from Belgium, France, West Germany, and the United Kingdom), that rate as of January 1, 1967, and the statutory rate of duty.

Titanium dioxide: U.S. rates of duty as of Jan. 1, 1967, Jan. 1, 1978,  
and the statutory rate of duty

(In percent ad valorem)				
TSUS item	Description	Rate of duty applicable: to most-favored nations:		
		as of Jan. 1,--		Statutory rate
		1967	1978	
473.70	Titanium dioxide-----	15	7.5	30

Imports from designated beneficiary developing countries are eligible for duty-free treatment under the Generalized System of Preferences (GSP). Belgium, France, West Germany, and the United Kingdom are not eligible for such treatment.

<sup>1/</sup> Du Pont has licensed its chloride process utilizing high-grade feedstock to only 1 firm--the Sherwin Williams Co. whose production is largely for captive use. Du Pont has not licensed its low-grade chloride process to any firms.

### Previous Commission Investigations

The Commission previously conducted 4 investigations on Titanium dioxide under the Antidumping Act. There have been no other Commission investigations on this product. The following table shows the investigations, countries involved, and the results.

Titanium dioxide: Previous Commission investigations under the Antidumping Act, 1921, as amended

Investigation No.	Date	Country	Commission finding
AA1921-31-----	1963	France	No Injury
AA1921-36-----	1964	Japan	No Injury
AA1921-46-----	1965	West Germany	No injury
AA1921-47-----	1966	Japan	No injury

### Nature and Extent of Alleged Sales at Less Than Fair Value

On September 8, 1978, the Department of the Treasury received a complaint from Eugene L. Stewart, of Stewart and Ikenson, counsel to the SCM Corp., alleging that titanium dioxide imported from Belgium, France, the United Kingdom, and West Germany is being or is likely to be sold in the United States at LTFV within the meaning of the Antidumping Act, 1921, as amended. It appears that virtually all information available to Treasury at the time it notified the U.S. International Trade Commission of its conclusion that there was substantial doubt that an industry in the United States is being or is likely to injured, or is prevented from being established, by reason of the importation of titanium dioxide from Belgium, France, the United Kingdom, and West Germany was derived from information contained in the complaint.

In the fall of 1977, according to the complaint, it was reported in a trade journal that the price for European titanium dioxide was deteriorating and that substantial quantities of foreign goods were being offered at less than the domestic list price. Although the domestic producers were reportedly attempting to stabilize the market at the list price, their efforts were hampered by low levels of business activity and the underutilization of domestic capacity. In January 1978 the same trade journal reported that titanium dioxide was being offered and sold on a two-tier pricing basis. Although some firms were doing a fair amount of business at or near the list price of 48.5 cents per pound, they admitted to losing business to foreign firms. At the same time, other domestic producers were reported meeting foreign prices in selected market regions, particularly in the northeast, gulf coast, and Ohio Valley regions.



The complaint filed on behalf of SCM Corp. also reported that although the selling prices of imported titanium dioxide in the United States are not readily available, foreign suppliers are believed to price their goods from 5 to 10 percent below the domestic price. Currently this translates into a margin of underselling of from 2 to 4 cents below the actual domestic selling price. Imports from the European sources named in the complaint increased substantially between 1973-77, increasing irregularly from 35,000 short tons valued at \$15.6 million in 1973 to 79,000 short tons, valued at \$58.0 million, in 1977. Imports during January-August 1978 continued the upward trend.

#### The Domestic Industry

Between 1969-74, a number of titanium dioxide producers either merged with existing producers of  $TiO_2$  pigments, sold their plants to other companies, or closed their plants down completely. Currently there are six producers of  $TiO_2$  pigments in the United States--Du Pont, NL Industries, Inc., SCM Corp., American Cyanamid Co., Kerr-McGee Corp., and Gulf & Western. In 1977 these firms operated 11 plants located as follows: two each in New Jersey and Ohio and one each in California, Georgia, Mississippi, Tennessee, Delaware, Maryland, and Missouri. The Missouri plant, which was operated by NL Industries, Inc., was closed in 1978. The table on page A-9 shows U.S. titanium dioxide plants by firms and locations, the manufacturing process utilized at the plants, plant capacity, and the share of total capacity by plants and manufacturing processes for 1977.

#### Consideration of Injury or Likelihood thereof by reason of Alleged LTFV Sales

##### U.S. consumption

Consumption historically has closely followed the general economic condition of the country. Annual decreases in consumption of titanium dioxide have coincided with economic recessions in the United States, occurring in the early 1950's, 1957, 1960, 1970, and 1975. Apparent U.S. consumption, which totaled 851,000 short tons in 1973, declined to 599,000 short tons in 1975, but increased annually thereafter, and in 1977 totaled 781,000 short tons, or a decrease of 8 percent from the 1973 level of consumption but 30 percent greater than consumption in the recession year of 1975 (table 2). 1/ Industry

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1/ A worldwide shortage of titanium dioxide from 1972 to 1974 caused by under capacity and increased demand resulted in a rise in foreign prices, a reduction in U.S. imports in 1973 and 1974, and a corresponding increase in U.S. exports. The adverse economic conditions in 1975 caused a further decline in U.S. imports and production and a drop in exports.

sources estimate that the demand for titanium dioxide will continue trending upward, reaching between 890,000 and 930,000 short tons by 1982, or an expected average annual growth rate of from 3 to 3.5 percent from 1977 to 1982.

The surface-coating industry accounted for slightly more than one-half of titanium dioxide consumption between 1973-77; the paper industry consumed about 20 percent, and the plastics industry about 10 percent. The following table shows U.S. consumption of titanium dioxide by major end products, 1973-77.

Titanium dioxide: U.S. consumption by major end products, 1973-77

(In percent)					
Product	1973	1974	1975	1976	1977 <sup>1/</sup>
Paint, varnish, and lacquer-----	51.8	53.3	57.2	51.8	51.2
Paper and paperboard-----	21.8	20.4	20.7	20.4	22.8
Plastics-----	10.1	11.9	7.7	11.4	11.9
Elastomers-----	3.0	2.7	2.7	2.6	2.6
Ceramics-----	2.5	2.1	1.9	1.8	1.6
All others <sup>2/</sup> -----	10.8	9.6	9.8	10.0	9.9
Total-----	100.0	100.0	100.0	100.0	100.0

<sup>1/</sup> Preliminary.

<sup>2/</sup> Includes certain floor coverings, printing inks, roofing granules, and other miscellaneous products.

Source: Estimated on the basis of trade literature and information supplied by the domestic industry.

Titanium dioxide: U.S. production facilities and plant capacities, total and for the sulfate and chloride process, by firms and plant locations, 1977

Firm and plant location	Annual capacity	Process	Share of total U.S. capacity	Share of U.S. capacity by the-- Sulfate process	Chloride process
	1,000 short tons		Percent	Percent	Percent
American Cyanamid:					
Savannah, Ga-----	72	Sulfate	8	23	-
	40	Chloride	4	-	6
Du Pont:					
Antioch, Ca-----	30	Chloride	3	-	5
Edgemoor, Miss-----	167	Chloride	18	-	27
New Johnsonville, Tenn----	228	Chloride	25	-	37
Gulf & Western:					
Ashtabula, Ohio-----	29	Chloride	3	-	5
Gloucester City, NJ-----	44	Sulfate	5	14	-
Kerr-McGee:					
Hamilton, Miss-----	50	Chloride	5	-	8
N.L. Industries:					
Sayreville, NJ-----	100	Sulfate	11	33	-
St. Louis, Mo. 1/-----	40	Sulfate	4	13	-
SCM Corp.:					
Ashtabula, Ohio-----	42	Chloride	5	-	7
Baltimore, Md-----	53	Sulfate	6	17	-
	30	Chloride	3	-	5
Total-----	2/ 925	-	100	100	100

1/ The St. Louis plant of N.L. Industries ceased production of titanium dioxide in 1978.

2/ In 1977, of the total of 925,000 short tons, 309,000 short tons (or 33 percent) of the titanium dioxide were manufactured by the sulfate process and 616,000 short tons (67 percent) by the chloride process.

Source: Estimated on the basis of trade literature and information supplied by the domestic industry.

Note.--Table 12 in app. A shows the productive capacity by U.S. companies and foreign areas, 1974-77.

U.S. production

U.S. production of titanium dioxide, as reported in official statistics of the U.S. Department of Commerce, increased from 785,000 short tons in 1973 to 787,000 short tons in 1974, but declined irregularly thereafter, and in 1977 amounted to 679,000 short tons, or a decrease of 14 percent from the 1973 production level. U.S. production amounted to 357,000 short tons in January-June of 1978, which was about 7 percent greater than U.S. production in January-June 1977 (table 3).

During the inquiry, the Commission requested production data from domestic producers. Data were obtained from only three domestic producers in the time allowed for inclusion in this report, but, the companies that responded accounted for nearly 75 percent of total titanium dioxide production in 1977. The following table shows U.S. production of titanium dioxide as reported to the Commission by questionnaire, by types, 1973-77, January-September 1977, and January-September 1978.

Titanium dioxide: U.S. production, by types, 1973-77, January-September 1977, and January-September 1978

(In short tons)				
Period	: Anatase :	: Rutile :	: Total :	
1973-----	: 147,834	: 397,895	: 545,729	
1974-----	: 130,770	: 432,195	: 562,965	
1975-----	: 89,810	: 363,874	: 453,684	
1976-----	: 114,062	: 406,177	: 520,239	
1977-----	: 106,031	: 394,158	: 500,189	
January-September--	:	:	:	
1977-----	: 79,910	: 303,016	: 382,926	
1978-----	: 76,124	: 310,570	: 386,694	
	:	:	:	

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

U.S. producers' shipments

Official Commerce Department statistics report total shipments of titanium dioxide by U.S. producers, which include interplant transfers, for 1973-76; commercial shipments by the producers are shown separately (table 3).

Total shipments declined irregularly from 794,000 short tons valued f.o.b. plant at \$404.6 million in 1973 to 576,000 short tons, valued f.o.b. plant at \$423.7 million, during the 1975 recession year, but increased in 1976 to 712,000 short tons, valued f.o.b. plant at \$594.8 million. On the basis of quantity, shipments in 1976 were 10 percent less than the 1973 level, but were 24 percent greater than the low 1975 level.

Commercial shipments of titanium dioxide by U.S. producers followed the same trend, declining from 698,000 short tons, valued f.o.b. plant at \$353.8 million, in 1973 to 520,000 short tons, valued f.o.b. plant at \$383.1 million, in 1975, but increased in 1976 to 673,000 short tons, valued f.o.b. plant at \$563.1 million, or an increase from the 1975 level of nearly 30 percent by quantity and 47 percent by value. The average unit value of producers' shipments (f.o.b. plant) increased without interruption from 25.4 cents per pound in 1973 to 41.8 cents per pound in 1976.

Shipments by the three domestic manufacturers that responded to the Commission's questionnaire followed the trend reported in official statistics as reported by the U.S. Department of Commerce. Shipments by responding producers declined from 532,000 short tons valued at \$279.9 million, in 1973 to 398,000 short tons, valued at \$314.0 million, in 1975, but increased thereafter and in 1977 amounted to 513,000 short tons, valued at \$457.7 million. Shipments by U.S. producers during January-September 1978 were down 3 percent by quantity and 4 percent by value compared with shipments in the corresponding period of 1977. Table 4 in the appendix shows domestic sales of titanium dioxide, by types, as reported to the Commission by U.S. manufacturers, 1973-77, January-September 1977, and January-September 1978.

#### U.S. Exports

Separate export data are provided in official statistics for pigment grade titanium dioxide (table 5). U.S. exports of domestic merchandise, which averaged about 3 percent of U.S. production between 1973-77, fluctuated irregularly between a high of 30,000 short tons, valued at \$24.6 million (40.4 cents per pound), in 1974 and a low of 16,000 short tons, valued at \$12 million (38.2 cents per pound), in the recession year of 1975. Exports in 1977 amounted to 16,000 short tons, valued at \$12.5 million (38.5 cents per pound). Principal foreign markets for domestically produced titanium dioxide included Canada, the Republic of Korea, Venezuela, Brazil, and Japan. Table 6 shows that export sales as reported by firms that responded to the Commission questionnaires followed the trend reported in official statistics of the U.S. Department of Commerce.

#### U.S. Imports

U.S. imports of titanium dioxide trended upward between 1973 and the partial year of 1978. Although imports declined from 60,000 short tons, valued at \$27.5 million, in 1973 to 27,000 short tons, valued at \$18.1 million, in 1975, they increased substantially thereafter and in 1977 amounted to 115,000 short tons valued at \$84.7 million, or an increase of 90 percent by quantity and 208 percent by value from imports in 1973. During January-August 1978, imports continued upward, reaching 83,000 short tons, valued at \$63.7 million representing an increase of 8 percent by quantity and 15 percent by

value compared with imports in the corresponding period of 1977. The ratio of imports to apparent consumption declined from 7 percent in 1973 to 4 percent in 1975, but increased thereafter, reaching nearly 15 percent of consumption in 1977 (table 2). Industry sources indicate that much of the increased imports in 1977 represented shipments to NL Industries, Inc., from foreign subsidiaries. According to industry sources, since NL Industries ceased production at its facility in St. Louis, Mo., and is operating at a reduced rate of production at its Sayreville, N.J., facility, this company will continue to be a major importer of  $TiO_2$  pigments. 1/

Imports from Belgium, France, the United Kingdom, and West Germany increased substantially between 1973-77, increasing irregularly from 35,000 short tons valued at \$15.6 million in 1973 to 79,000 short tons, valued at \$58.0 million, in 1977. Imports during January-August 1978 amounted to 59,000 short tons valued at \$46.3 million or an increase of 8 percent by quantity and 19 percent by value compared with imports in January-August 1977. The following table shows the share of total imports by specified countries for 1973-77, January-August 1977, and January-August 1978, and table 8 shows imports from these sources by customs district in 1977.

Titanium dioxide: Share of total U.S. imports, by specified sources, 1973-77, January-August 1977 and January-August 1978

(In percent)								
Source	1973	1974	1975	1976	1977	Jan.-Aug.--		
						1977	1978	
West Germany-----	23	21	20	29	40	42	37	
United Kingdom-----	14	19	21	17	14	15	19	
France-----	14	9	7	9	4	5	8	
Belgium-----	6	5	1/	10	10	10	7	
Total-----	58	54	49	65	69	72	71	
All other countries-----	42	46	51	35	31	28	29	
Total-----	100	100	100	100	100	100	100	
	:	:	:	:	:	:	:	

1/ 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 totals shown.

Imports from Belgium, France, the United Kingdom, and West Germany accounted for 4 percent of apparent U.S. consumption in 1973, declined to 2 percent in 1974 and in 1975, then increased to 6 percent in 1976 and to 10 percent in 1977. <sup>1/</sup> In 1977, total imports from West Germany accounted for about 6 percent of apparent consumption, those from the United Kingdom for about 2 percent, and those from Belgium for about 1 percent; France accounted for less than 1 percent.

Data obtained by Commission questionnaire accounted for 88 percent of the total imports from the countries specified in SCM's complaint to Treasury (table 9). The average value of sales of imported titanium dioxide from those specified sources and the average value of sales by respondent U.S. producers are shown in the following table.

Titanium dioxide: Average value of sales of imported and domestically produced titanium dioxide, by types, and specified foreign sources, 1977, January-September 1977, and January-September 1978

(In cents per pound)					
Item	: United : Kingdom	: France	: Belgium	: West : Germany	: Domestic : products
Anatase:	:	:	:	:	:
1977-----	- :	39.3 :	38.3 :	43.0 :	40.9
January-September--	:	:	:	:	:
1977-----	- :	39.3 :	38.5 :	42.7 :	40.9
1978-----	- :	38.4 :	38.8 :	44.2 :	41.0
Rutile:	:	:	:	:	:
1977-----	43.0 :	42.3 :	49.8 :	46.5 :	45.8
January-September--	:	:	:	:	:
1977-----	43.1 :	42.2 :	46.2 :	46.4 :	45.6
1978-----	43.9 :	38.7 :	44.3 :	47.0 :	45.7
	:	:	:	:	:

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

As shown, on the basis of the average value of sales in 1977, January-September 1977, and the corresponding period of 1978, anatase pigments from Belgium and France generally had a lower average sales value than the domestic article, while the anatase pigments from West Germany had a higher average

<sup>1/</sup> On the basis of the information set forth by the petitioner and that derived from the Customs Service's summary investigation, it appears that margins of sales at LTFV allegedly ranged from 5 to 37 percent, depending on the source of the imports.

value than the domestic product. With respect to the rutile pigments, those from the United Kingdom and France had an average sales value below that of the domestic product, while the average sales value of rutile from Belgium and West Germany were higher except during January-September 1978 when the value of imports from Belgium averaged 1.4 cents below the domestic article.

#### U.S. Producers Inventories

U.S. producers' inventories, as reported by the firms that responded to the Commission questionnaire, increase substantially and without interruption from 10,000 short tons in 1973 to 110,000 short tons in 1977. The inventory reported for 1977 amounted to about 20 percent of production as reported by these firms for 1977. Inventories during January-September 1978 were down 15 percent from inventories in the corresponding period of 1977. The following table shows inventories, by types of pigments, as reported by the three firms, 1973-77, January-September 1977, and January-September 1978.

Titanium dioxide: U.S. producers' inventories by types of pigments, 1973-77, January-September 1977, and January-September 1978

(In short tons)

Period	Anatase	Rutile	Total
1973-----	3,279	7,017	10,296
1974-----	6,981	23,443	30,424
1975-----	12,159	40,808	52,967
1976-----	19,496	83,755	103,251
1977-----	15,466	84,309	109,775
January-September--			
1977-----	24,891	73,505	98,396
1978-----	19,665	63,054	82,719

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

#### U.S. Employment

The trend in employment, as reported to the Commission has been downward since 1973. \* \* \*.

The average number of all persons employed in the establishments where titanium dioxide was produced declined irregularly from 5,058 in 1973 to 4,034 in 1977 and to 3,619 during January-September 1978. The number of production



and related workers followed the same trend, declining from 3,506 in 1973 to 2,771 in 1977 and to 2,483 during January-September 1978 (table 10).

#### Financial position of U.S. producers

SCM Corp. and Du Pont supplied profit and loss data in time for inclusion in this report. \* \* \*. The following table shows a summary of the profit-and-loss data as reported to the Commission.

Profit-and-loss experience of the SCM Corp. and Du Pont on their titanium dioxide operations, 1975-78

\* \* \* \* \*

#### Foreign production

Table 12 shows the world capacity for titanium dioxide production; table 13 shows the capacity of the foreign plants by country. There is evidence that Du Pont has a substantially larger productive capacity than Belgium, France, the United Kingdom, or West Germany individually, and Du Pont's capacity is only 258,000 short tons below the total output of these 4 countries.

#### Prices

Pricing practices.--Both types of titanium dioxide--rutile and anatase--are marketed in several grades which, together with volume and form of delivery (bag, bulk, or slurry), help determine the price of the pigment. Domestic producers generally sell titanium dioxide in any particular grade, volume, and form at uniform delivered prices throughout the United States. Published list base prices normally apply to minimum orders of 20 tons of pigments in 50-pound bags. Less-than-carlot sales are usually 1 cent per pound more than carlots of 20 tons, and shipments of less than 5 tons are generally priced at an additional premium of 1/2 cent per pound. 1/

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1/ According to trade sources, paper-grade anatase slurry has generally been listed at 1/2 cent per pound less than dry paper-grade anatase, in 50-ton lots, dry basis, freight allowed. Bulk shipments of rutile, 65 tons by rail, has been quoted at 1 cent per pound less than the base price. Rutile-grade pigment is also available in slurry and is believed to have price advantages similar to anatase slurry. The more highly treated rutile-grade pigments (e.g., chalk-resistant grades, high oil-absorption grades for latex paints, and so forth) have sold at a 1 cent-per-pound premium over conventional rutile-grade pigments. An increment of 1-cent per pound is applicable to deliveries of anatase slurry to certain western states.

Price trends.--During the 1960's, the prices for all grades of titanium dioxide remained relatively stable. In the early 1970's, demand was low and prices were discounted from list prices. However, in 1973-1974 the situation reversed sharply as worldwide demand exceeded supply. Although domestic prices for titanium dioxide increased somewhat in 1973 and January-March 1974, such increases were dampened by domestic price controls during that period. When the price controls were lifted in early 1974, domestic prices increased by over 40 percent in less than 6 months. Prices continued to increase in 1975, despite a sharp drop in demand, partly because of increased costs for energy and pollution control. Prices have continued their upward trend since 1975, but at much more moderate rates of increase. Effective June 1978, domestic list prices were increased by 2.5 cents per pound across the board, raising the price of rutile pigment to 51 cents per pound and that of paper-grade anatase pigment to 46 cents per pound; both prices represent historical highs. Table 14 shows, by months, the Bureau of Labor Statistics' producer price index for titanium dioxide during the period January 1973-June 1978.

The substantial increases in domestic prices since mid-1974, coupled with slower economic recovery outside the United States, have reversed the price advantage that domestically produced titanium dioxide enjoyed vis-a-vis its

imported counterpart during the 1973-1974 period. Although the selling prices of imported titanium dioxide in the United States are not readily available, foreign suppliers are reported by the complainant in this inquiry to price their goods from 5 to 10 percent less than the domestic price. The figure that follows compares domestic producers' list prices with the average landed duty-paid unit value of imports. The figure indicates that, disregarding any markup on imported titanium dioxide (to reflect profit margins and expenses incidental to reselling imported merchandise in the United States), the imported product undersold domestically produced titanium dioxide by some 3 to 6 cents per pound during the last year. 1/

The principal importer of titanium dioxide from West Germany and Belgium is reported by the complainant to be NL Industries, Inc., which is also a domestic producer. In addition to its subsidiaries in West Germany and Belgium, NL also has wholly owned subsidiaries in Canada and Norway. According to counsel for that firm, NL makes no price distinction between titanium dioxide from various sources.

#### Evidence of lost sales

The domestic producers were requested by the Commission to provide evidence of lost sales, if any, of titanium dioxide to imported products from the United Kingdom, France, West Germany, and/or Belgium during January 1, 1978, to October 31, 1978. Two domestic producers of titanium dioxide (SCM and Du Pont) were able to supply the Commission with dates, customer information, quantities and values, and, in some cases, information on the origin of imports for 112 specific instances of lost sales. The lost sales claims totaled \* \* \* short tons, with a value of \* \* \*. NL Industries also reported that sales have been lost but was unable to provide specific data in the time that was available. 2/

The Commission randomly selected 36 of the reported 112 lost sales for verification and was able to contact the customers named for 25 of them. The 25 lost sales represent responses from 24 separate firms.

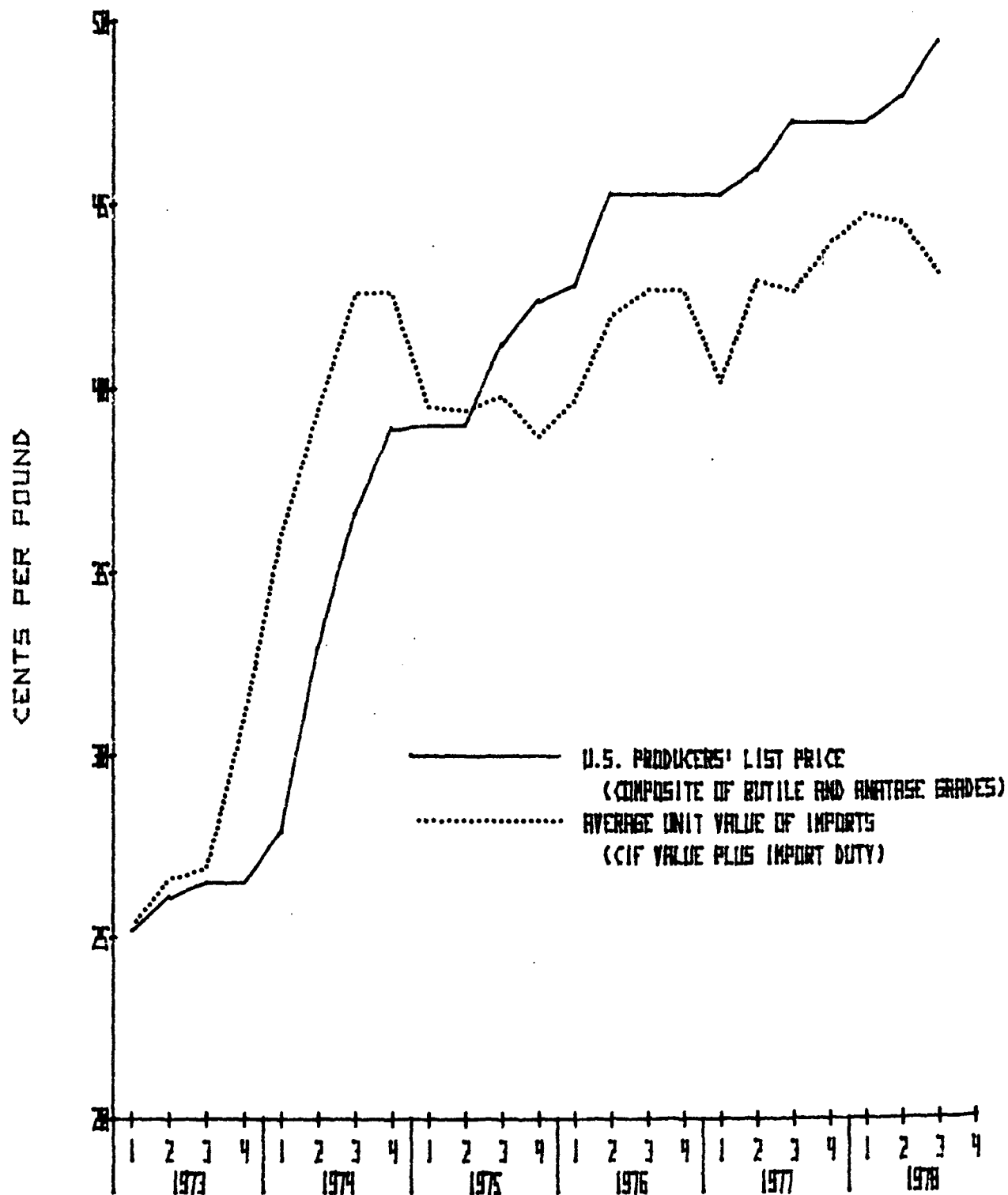
Four of the 24 firms reported that they had not purchased titanium dioxide from the domestic producer for the last 3 years. One other had only

---

1/ This assumes no discounting off list prices by domestic producers. In fact, however, a comparison of unit sales values of commercial shipments with list prices indicates that titanium dioxide has sold at a discount at various times during the last few years, particularly in 1975 and 1976. Data on unit sales value in 1977 are not available to determine whether discounting was widely practiced in that year. According to recent trade articles, "firmness is developing" in current titanium dioxide list prices.

2/ As stated elsewhere in this report, NL Industries has titanium dioxide subsidiary plants in Belgium, West Germany, Canada, and Norway.

FIGURE .--TITANIUM DIOXIDE: U.S. PRODUCERS' LIST PRICE AND AVERAGE UNIT VALUE OF IMPORTS, BY QUARTERS, 1973-77 AND JANUARY-SEPTEMBER 1978



SOURCE: AVERAGE UNIT VALUE OF IMPORTS FROM OFFICIAL STATISTICS OF THE U.S. DEPARTMENT OF COMMERCE; U.S. PRODUCERS' LIST PRICES FROM INFORMATION OBTAINED FROM THE FEDERAL TRADE COMMISSION.

purchased occasional samples. Of the remaining 19 firms, 8 indicated that they had not decreased their purchases from the producer during January 1, 1978, to October 31, 1978. One of the 8 firms did indicate, however, that it had increased its purchases of imports from the United Kingdom to obtain an alternate source for a grade carried by only one domestic producer. Eleven firms did report that they had significantly decreased their purchases of titanium dioxide from the domestic producer in 1978. Details are as follows:

Lost sales data for firms reporting significant decreases in purchases of titanium dioxide from U.S. producers, Jan. 1, 1978-Oct. 31, 1978

\* \* \* \* \*

The staff was able to verify for \* \* \* firms that sales of titanium dioxide had been lost by SCM or Du Pont to imports from the United Kingdom, France, West Germany and/or Belgium for reasons of price. Firms that switched to the imported product stated that if the price of domestic titanium dioxide had been comparable with the price of the imported product they would have purchased from a domestic producer. In \* \* \* other instances \* \* \* sales were lost to imports from the United Kingdom, France, West Germany and/or Belgium due to dissatisfaction with the quality of titanium dioxide produced by the domestic producer.

Selected lost sale data for U.S. producers of titanium dioxide

\* \* \* \* \*

Nearly \* \* \* of the lost sales reported by SCM were not definitively attributed to imports from the United Kingdom, France, Belgium or West Germany; over \* \* \* of the lost sales reported by Du Pont were not so attributed. Of \* \* \* lost sales reported by SCM \* \* \* firms reported they imported only from Canada and \* \* \* imported only from Finland. \* \* \* did not import at all and \* \* \* were not certain of the origin of their imports. \* \* \* of the purchasers involved in sales reported by Du Pont as lost to imports from an unknown origin were contacted. Each of these firms indicated that it had purchased no imported titanium dioxide in 1978.



APPENDIX A  
STATISTICAL TABLES

Table 1.--Domestic and imported raw materials for TiO<sub>2</sub> pigment  
production, 1973-76

(In thousands of short tons)										
Year	:	Domestic	:	Imported	:	Total	:	Primary deposits	:	Secondary deposits
	:		:		:		:		:	
1973-----	:	450	:	441	:	891	:	334	:	557
1974-----	:	427	:	476	:	903	:	307	:	596
1975-----	:	397	:	313	:	710	:	217	:	493
1976-----	:	369	:	461	:	830	:	210	:	620
	:		:		:		:		:	

Source: Minerals Yearbook, U.S. Department of the Interior, Bureau of Mines.

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



Table 2.--Titanium dioxide: U.S. production, foreign trade, producers' stocks, and apparent consumption, 1973-77, January-June 1977 and January-June 1978

Period	Production	Exports	Imports	End-of-period producers' stocks	Consumption	Ratio of imports to consumption
	<u>Short tons</u>	<u>Short tons</u>	<u>Short tons</u>	<u>Short tons</u>	<u>Short tons</u>	<u>Percent</u>
1973-----	784,996	20,554	60,419	40,508	<u>1/</u> 850,622	7.1
1974-----	786,672	30,379	34,996	91,621	740,176	4.7
1975-----	603,429	15,676	26,502	106,963	598,913	4.4
1976-----	712,940	20,555	68,816	113,873	754,291	9.1
1977-----	678,699	16,225	114,810	112,839	781,318	14.7
January-June --						
1977-----	334,783	8,642	51,336	88,377	402,973	12.7
1978-----	356,986	10,805	62,834	83,019	438,835	14.3

1/ Stocks held at producing plants in December 1972 amounted to 66,269 short tons.

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

Table 3.--Titanium dioxide: U.S. producers' shipments, 1973-76

Year	Total shipments <u>1/</u>			:	Commercial shipments		
	Quantity	Value <u>2/</u>	Unit value		Quantity	Value <u>2/</u>	Unit value
		<u>1,000</u>	<u>Cents per</u>			<u>1,000</u>	<u>Cents per</u>
	<u>Short tons</u>	<u>dollars</u>	<u>pound</u>		<u>Short tons</u>	<u>dollars</u>	<u>pound</u>
1973-----	793,991	404,639	25.5	:	697,696	353,766	25.4
1974-----	759,068	513,409	33.8	:	686,257	458,873	33.4
1975-----	576,097	423,701	36.8	:	519,947	383,103	36.8
1976-----	711,774	594,846	41.8	:	672,854	563,110	41.8

1/ Includes interplant shipments.

2/ F.O.B. plant.

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

Table 4.--Titanium dioxide: Domestic sales by types and U.S. manufacturers, 1973-77, January-September 1977, and January-September 1978

Period	Anatase	Rutile	Total
Quantity (short tons)			
1973-----	141,064	391,063	532,127
1974-----	112,890	360,754	473,644
1975-----	91,943	305,848	397,791
1976-----	117,809	365,785	483,594
1977-----	125,890	386,887	512,777
January-September--			
1977-----	95,061	302,420	397,481
1978-----	109,845	274,341	384,186
Value (1,000 dollars)			
1973-----	65,513	214,376	279,889
1974-----	72,343	248,150	320,493
1975-----	66,390	247,570	313,960
1976-----	93,554	323,982	417,536
1977-----	102,938	354,726	457,664
January-September--			
1977-----	77,690	275,711	353,401
1978-----	89,984	250,598	340,582
Average value of sales (cents per pound)			
1973-----	23.2	27.4	26.3
1974-----	32.0	34.4	33.8
1975-----	36.1	40.5	39.5
1976-----	39.7	44.3	43.2
1977-----	40.9	45.8	44.6
January-September--			
1977-----	40.9	45.6	44.5
1978-----	41.0	45.7	44.3

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

Table 5.--Titanium dioxide: U.S. exports, 1/ by principal markets, 1973-77

Market	1973	1974	1975	1976	1977
Quantity (short tons)					
Canada-----	2,304	2,621	2,222	3,706	2,923
Republic of Korea-----	1,979	1,817	1,409	2,241	2,878
Venezuela-----	973	1,876	2,189	3,275	2,148
Brazil-----	550	4,415	993	2,518	1,805
Japan-----	4,035	2,987	1,415	1,355	1,065
Colombia-----	1,674	1,141	446	508	498
Australia-----	558	538	249	580	458
Republic of China-----	1,076	688	368	340	436
West Germany-----	1,059	126	803	375	366
Jamaica-----	24	187	403	589	366
Mexico-----	652	1,226	461	434	280
Philippines-----	1,142	2,637	468	434	276
All other-----	4,528	10,120	4,250	4,200	2,726
Total-----	20,554	30,379	15,676	20,555	16,225
Value (1,000 dollars)					
Canada-----	981	1,452	1,512	2,839	2,102
Republic of Korea-----	1,235	1,991	1,189	1,904	2,227
Venezuela-----	507	1,323	1,760	2,502	1,568
Brazil-----	308	3,545	809	2,110	1,517
Japan-----	3,258	2,747	1,094	1,074	905
Colombia-----	95	1,178	354	404	394
Australia-----	402	331	197	449	367
Republic of China-----	1,095	567	258	273	314
West Germany-----	724	160	462	341	328
Jamaica-----	14	214	329	460	240
Mexico-----	203	703	183	158	135
Philippines-----	850	2,260	367	357	226
All other-----	4,185	8,104	3,462	3,284	2,183
Total-----	13,857	24,575	11,976	16,155	12,506

1/ Data shown are exports under Schedule B, no. 5135520--"Titanium dioxide, pigment grade." Exports under Schedule B, no. 5135540--"Titanium oxides, except pigment grade"--are not included.

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

Table 6.--Titanium dioxide: U.S. producers' export sales, by types, 1973-77, January-September 1977, and January-September 1978

Period	Anatase	Rutile	Total
	Quantity (short tons)		
1973-----	1,022	9,301	10,323
1974-----	665	12,002	12,667
1975-----	382	9,697	10,079
1976-----	542	14,680	15,222
1977-----	352	11,006	11,358
January-September--			
1977-----	251	7,815	8,066
1978-----	237	22,697	22,934
	Value (1,000 dollars)		
1973-----	612	4,845	5,457
1974-----	463	9,058	9,521
1975-----	361	7,451	7,812
1976-----	435	11,357	11,792
1977-----	244	8,360	8,604
January-September--			
1977-----	243	6,037	6,280
1978-----	231	14,554	14,785
	Average value of sales (cents per pound)		
1973-----	29.9	26.0	26.4
1974-----	34.8	37.7	37.6
1975-----	47.3	38.4	38.8
1976-----	40.1	38.7	38.7
1977-----	34.7	38.0	37.9
January-September--			
1977-----	48.4	38.6	38.9
1978-----	48.7	32.1	32.2

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

Table 7.--Titanium dioxide: U.S. imports for consumption, by principal sources, 1973-77, January-August 1977, and January-August 1978

Source	1973	1974	1975	1976	1977	Jan.-Aug.	
						1977	1978
Quantity (short tons)							
West Germany-----	14,148	7,542	5,431	20,069	46,490	32,520	30,744
United Kingdom-----	8,657	6,540	5,610	11,941	16,182	11,193	15,522
France-----	8,247	3,316	1,881	6,064	5,039	3,506	6,514
Belgium-----	3,915	1,666	57	6,703	11,501	7,501	6,157
Total-----	34,967	19,064	12,979	44,777	79,212	54,720	58,937
Canada-----	14,065	7,056	9,971	11,285	15,636	9,242	11,904
Finland-----	5,624	6,474	2,049	4,812	4,688	3,472	3,412
Japan-----	4,062	1,301	580	3,641	3,085	2,374	2,114
Australia-----	1,521	37	507	1,747	2,573	1,846	1,897
Norway-----	0	1	0	1,786	3,614	2,217	400
All other-----	180	1,063	416	768	6,002	2,595	3,902
Total, all countries-----	60,419	34,996	26,502	68,816	114,810	76,466	82,566
Value (1,000 dollars)							
West Germany-----	6,799	5,438	4,539	15,857	34,742	23,409	26,483
United Kingdom-----	3,486	3,982	3,448	7,707	10,861	7,371	10,244
France-----	3,640	2,328	1,137	4,190	3,542	2,464	4,614
Belgium-----	1,685	1,229	34	4,503	8,830	5,626	4,911
Total-----	15,610	12,977	9,158	32,257	57,975	38,870	46,252
Canada-----	6,831	4,784	6,604	8,538	12,246	7,192	9,269
Finland-----	2,448	4,380	1,307	3,247	3,242	2,410	2,414
Japan-----	2,269	1,592	501	3,606	2,805	2,280	1,721
Australia-----	228	24	280	971	1,487	1,064	1,147
Norway-----	0	1/	0	1,273	2,726	1,676	302
All other-----	103	671	281	449	4,231	1,726	2,574
Total, all countries-----	27,489	24,428	18,131	50,341	84,712	55,218	63,680
Unit value (cents per pound)							
West Germany-----	24.0	36.0	41.8	39.5	37.4	36.0	43.1
United Kingdom-----	20.1	30.4	30.7	32.3	33.6	32.9	33.0
France-----	22.1	35.1	30.2	34.5	35.1	35.1	35.4
Belgium-----	21.5	36.9	29.5	33.6	38.4	37.5	39.9
Average-----	22.3	34.0	35.3	36.0	36.6	35.5	39.2
Canada-----	24.3	33.9	33.1	37.8	39.2	38.9	38.9
Finland-----	21.8	33.8	31.9	33.7	34.6	34.7	35.4
Japan-----	27.9	61.2	43.2	49.5	45.4	48.0	40.7
Australia-----	7.5	31.5	27.6	27.8	28.9	28.8	30.2
Norway-----	-	40.7	-	35.6	37.7	37.8	37.7
All other-----	28.6	31.6	33.8	29.2	35.2	33.2	33.0
Average, all countries-----	22.7	34.9	34.2	36.6	36.9	36.1	38.3

1/ Less than \$500.

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

Table 8.--Titanium dioxide: U.S. imports for consumption, by principal sources and by U.S. customs districts, 1977

(In short tons)						
Customs district	United Kingdom	Belgium	France	West Germany	All other countries	Total, all sources
Portland, Maine-----	0	0	0	0	66	66
St. Albans, Vt-----	3	0	0	0	1,412	1,415
Boston, Mass-----	980	0	462	1,568	1,864	4,874
Ogdensburg, N.Y-----	3	160	21	0	11,612	11,796
Buffalo, N.Y-----	20	0	0	0	426	446
New York, N.Y-----	3,677	6,993	1,383	33,416	5,962	51,431
Philadelphia, Pa-----	1,363	0	284	414	840	2,901
Baltimore, Md-----	3,231	19	108	1	649	4,008
Norfolk, Va-----	359	0	153	2,188	38	2,738
Wilmington, N.C-----	0	0	248	1,631	0	1,879
Charleston, S.C-----	217	0	0	250	28	495
Savannah, Ga-----	80	77	0	511	1,146	1,814
Miami, Fla-----	0	0	80	0	0	80
San Juan, P.R-----	162	0	0	0	1,020	1,182
Tampa, Fla-----	0	0	60	0	0	60
Mobile, Ala-----	116	0	21	1	677	815
New Orleans, La-----	0	0	302	0	147	449
Houston, Tex-----	1,672	19	581	0	971	3,243
Laredo, Tex-----	0	0	0	0	2,082	2,082
Los Angeles, Calif-----	59	1,499	700	2,947	2,253	7,458
San Francisco, Calif-----	81	502	0	1,782	910	3,275
Portland, Oreg-----	0	364	0	1,029	378	1,771
Seattle, Wash-----	0	0	0	620	924	1,544
Milwaukee, Wis-----	280	0	0	1/	0	280
Detroit, Mich-----	498	1,567	198	56	2,100	4,419
Chicago, Ill-----	1,675	300	154	76	92	2,297
Cleveland, Ohio-----	1,707	0	286	1/	0	1,993
Total-----	16,183	11,500	5,041	46,490	35,597	114,811

1/ Less than 1,000 pounds.

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

Table 9.--Titanium dioxide: Sales of imported titanium dioxide, by types, by specified sources, 1977, January-September 1977, and January-September 1978

\* \* \* \* \*



Table 10.--Average number of all persons and production and related workers employed in U.S. establishments in which titanium dioxide is produced, 1973-77, January-September 1977, and January-September 1978

Item	:	:	:	:	:	:	Jan.-Sept.--	
	1973	1974	1975	1976	1977			
	1977	1978						
Average number employed:	:	:	:	:	:	:	:	
All persons-----	5,058	5,443	4,984	4,063	4,034	4,036	3,619	
Production and related	:	:	:	:	:	:	:	
workers engaged in	:	:	:	:	:	:	:	
the production of--	:	:	:	:	:	:	:	
All products-----	3,676	3,833	3,472	2,771	2,902	2,898	2,612	
Titanium dioxide-----	3,506	3,462	3,254	2,633	2,771	2,767	2,483	
	:	:	:	:	:	:	:	

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

Table 11.--Profit-and-loss experience of U.S. producers 1/ on their titanium dioxide operations, 1975-77 and January-September 1978

\* \* \* \* \*

Table 12.--Titanium dioxide: Productive capacity, by areas, 1974-77

(In thousands of short tons)

Item	1974	1975	1976	1977
United States: <u>1/</u>				
American Cyanamid Co.-----	112	112	112	112
E. I. Du Pont De Nemours and Co., Inc.---	313	368	425	425
Gulf Western Industries, Inc.-----	73	73	73	73
Kerr McGee Corp.-----	50	50	50	50
NL Industries, Inc.-----	232	232	20	140
SCM Corp.-----	109	112	113	125
Total-----	889	947	977	925
Canada and Mexico-----	73	73	120	120
Brazil-----	24	24	36	36
Western Europe-----	1,031	1,070	1,068	1,128
Eastern Europe-----	<u>2/</u> 128	<u>2/</u> 148	<u>2/</u> 151	<u>2/</u> 182
Asia-----	276	<u>2/</u> 276	<u>2/</u> 276	282
South Africa-----	24	<u>2/</u> 25	<u>2/</u> 29	30
Australia-----	60	60	65	69
Total, all areas-----	2,505	2,623	2,722	2,772

1/ Yearend capacity.2/ Partly estimated.

Source: Estimated on the basis of trade literature and information supplied by the domestic industry.

Table 13.--Titanium dioxide: Production capacities in Belgium, France, West Germany, and the United Kingdom, by country and plant location, 1977

Country, company, and plant location	Manufacturing process	Plant capacity	Trade name
		<u>1,000</u>	
		<u>short</u>	
		<u>tons</u>	
Belgium:			
Bayer Antwerpen-NV:			
Ghent-----	Sulfate	18	Bayertitan
Kronos SA: <u>1/</u>			
Ghent-----	Sulfate	36	Kronos
Total, Belgium-----	-	54	-
France:			
Thann et Mulhouse:			
Lettarve-----	Sulfate	54	Titafrance
Thann-----	Sulfate	22	Do.
Tioxide SA:			
Calais-----	Sulfate	56	Tioxide
Total, France-----	-	132	-
West Germany:			
Bayer AG:			
Krefeld-----	Sulfate	62	Bayertitan
	Chloride	20	Do.
Kronos Titan GmbH: <u>1/</u>			
LeverKusen-----	Sulfate	74	Kronos
	Chloride	15	Do.
Nordenham-----	Sulfate	49	Do.
Pigment-Chemie GmbH:			
Duisburg-----	Sulfate	45	Hombitan
Total, West Germany-----	-	265	-
United Kingdom:			
BTP Tioxide Ltd.:			
Billingham-----	Sulfate	29	Tioxide
Greatham-----	Chloride	27	Do.
Grimsby-----	Sulfate	91	Do.
Laporte Industries, Ltd.:			
Stallingborough, Lincolnshire-----	Sulfate	49	Runa and
	Chloride	36	Tiona
Total, United Kingdom-----	-	232	-
Grand total-----	-	683	-

1/ Owned sales by NL Industries.

Source: Estimated on the basis of trade literature and information supplied by the domestic industry.

Table 14.--Titanium dioxide: Indexes of U.S. producers' prices,  
by months, January 1973-June 1978

(1967=100)						
Month	1973	1974	1975	1976	1977	1978
January-----	96.3	105.6	148.1	161.1	175.4	179.9
February-----	96.3	105.6	148.1	161.1	175.4	176.9
March-----	96.3	105.6	148.1	161.1	175.7	176.9
April-----	96.3	111.1	148.1	172.2	175.7	1/
May-----	101.9	111.1	148.1	172.2	178.4	176.9
June-----	101.9	111.1	148.1	172.2	179.9	179.3
July-----	101.9	148.1	148.1	173.8	179.9	
August-----	101.9	148.1	148.1	175.5	179.9	
September-----	101.9	148.1	161.1	175.2	179.9	
October-----	101.9	148.1	161.1	175.5	179.9	
November-----	101.9	148.1	161.1	175.4	179.9	
December-----	101.9	148.1	161.1	175.4	179.9	
Average-----	100.0	128.2	152.4	170.9	178.3	

1/ Not available.

Source: Compiled from official statistics of the U.S. Bureau of Labor Statistics.



APPENDIX B

COMMISSION'S NOTICE OF INQUIRY AND HEARING

UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, D.C.

[AA1921-Inq.-23]

TITANIUM DIOXIDE FROM BELGIUM, FRANCE, THE UNITED KINGDOM  
AND THE FEDERAL REPUBLIC OF GERMANY

Notice of Inquiry and Hearing

The United States International Trade Commission (Commission) received advice from the Department of the Treasury (Treasury) on October 30, 1978, that during the course of determining, in accordance with section 201(c) of the Antidumping Act, 1921, as amended (19 U.S.C. 160(c)), whether to institute an investigation with respect to titanium dioxide from Belgium, France, the United Kingdom, and the Federal Republic of Germany, Treasury had concluded from the information available to it that there is substantial doubt that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of this merchandise into the United States. Therefore, the Commission on November 6, 1978, instituted inquiry No. AA1921-Inq.-23, under section 201(c)(2) of the act, to determine whether there is no reasonable indication that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation of such merchandise into the United States.

Treasury advised the Commission as follows--



Dear Mr. Chairman:

In accordance with section 201(c) of the Antidumping Act of 1921, as amended, an antidumping investigation is being initiated with respect to Titanium Dioxide from Belgium, France, the United Kingdom and the Federal Republic of Germany. Pursuant to section 201(c)(2) of the Act, you are hereby advised that the information developed during our preliminary investigation has led me to the conclusion that there is a substantial doubt that an industry in the United States is being, or is likely to be, injured by reason of the importation of this merchandise into the United States.

The bases for my determination are summarized in the attached copy of the Antidumping Proceeding Notice in this case. Additional information will be provided by the U.S. Customs Service.

Some of the information involved in this case is regarded by Treasury to be of a confidential nature. It is therefore requested that the Commission consider all the information provided for its investigation to be for the official use of the ITC only and not to be disclosed to others without prior clearance from the Treasury Department.


Sincerely,

Robert H. Mundheim

Hearing.--A public hearing in connection with the inquiry will be held at 11:00 a.m. on Wednesday, November 15, 1978, in the Hearing Room, U.S. International Trade Commission, 701 E Street, N.W., Washington, D.C. All parties will be given an opportunity to be present, to produce evidence, and to be heard at such hearing. Requests to appear at the public hearing should be received in writing in the office of the Secretary to the Commission not later than noon Tuesday, November 7, 1978.

Written statements.--Interested parties may submit statements in writing in lieu of, **or** in addition to, appearance at the public hearing. A signed original and nineteen true copies of such statements should be submitted. To be assured of their being given due consideration by the Commission, such statements should be received no later than Wednesday, November 13, 1978.

By order of the Commission.

  
Kenneth R. Mason  
Secretary

ISSUED: November 7, 1978

APPENDIX C

TREASURY DEPARTMENTS ANTIDUMPING <sup>Y133</sup> PROCEEDING NOTICE



1-A-42

THE GENERAL COUNSEL OF THE TREASURY  
WASHINGTON, D.C. 20220

BOOKLET NUMBER
OCT 25 1978
# 538
Office of the Secretary Int. Trade Commission

Dear Mr. Chairman: OCT 23 PM 1 16

In accordance with section 201(c) of the Antidumping Act of 1921<sup>9</sup> as amended, an antidumping investigation is being initiated with respect to Titanium Dioxide from Belgium, France, the United Kingdom and the Federal Republic of Germany. Pursuant to section 201(c)(2) of the Act, you are hereby advised that the information developed during our preliminary investigation has led me to the conclusion that there is a substantial doubt that an industry in the United States is being, or is likely to be, injured by reason of the importation of this merchandise into the United States.

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Sincerely,

  
Robert H. Mundheim

The Honorable  
Joseph O. Parker, Chairman  
U.S. International Trade  
Commission  
Washington, D.C. 20436

Enclosure

OCT 30 PM 2:43

DEPARTMENT OF THE TREASURY  
OFFICE OF THE SECRETARY

TITANIUM DIOXIDE  
FROM BELGIUM, FRANCE,  
THE FEDERAL REPUBLIC OF GERMANY  
AND THE UNITED KINGDOM

ANTIDUMPING PROCEEDING NOTICE

AGENCY: U.S. Treasury Department

ACTION: Initiation of Antidumping Investigation

SUMMARY:

This notice is to advise the public that a petition in proper form has been received and an antidumping investigation is being initiated for the purpose of determining whether imports of titanium dioxide from Belgium, France, West Germany and the United Kingdom are being, or are likely to be, sold at less than fair value within the meaning of the Antidumping Act of 1921, as amended. There is substantial doubt that imports of the subject merchandise, allegedly at less than fair value, are causing, or are likely to cause, injury to an industry in the United States. Therefore, the case is being referred to the U.S. International Trade Commission for a determination on the injury question.

EFFECTIVE DATE:

(Date of publication in the FEDERAL REGISTER).

## FOR FURTHER INFORMATION CONTACT:

Mary S. Clapp, Duty Assessment Division, U.S. Customs Service, Constitution Avenue, N.W., Washington, D.C. 20229, telephone (202-566-5492).

## SUPPLEMENTARY INFORMATION:

On September 18, 1978, a petition in proper form was received pursuant to sections 153.26 and 153.27, Customs Regulations (19 CFR 153.26, 153.27), from counsel on behalf of SCM Corporation, New York, New York, alleging that titanium dioxide from Belgium, France, West Germany and the United Kingdom is being, or is likely to be, sold at less than fair value within the meaning of the Antidumping Act of 1921, as amended (19 U.S.C. 160 et seq.) (referred to in this notice as the "Act").

Titanium dioxide,  $TiO_2$ , is the primary white pigment consumed in the paint and coatings, paper and paper bond, and plastics industries. It is classifiable under item 473.70 of the Tariff Schedules of the United States.

It appears that foreign producers and some purchasers in the United States are related within the meaning of the Act and, therefore, it will be necessary to establish the exporter's sales price of the merchandise in the U.S. market.

Based upon the information set forth in the petition and that derived from the Customs Service's summary

investigation, it appears that the margins of dumping may range from as low as 5 percent to as much as 37 percent depending on the source of the imports.

There is evidence on record concerning injury, or likelihood of injury, to the U.S. industry from the alleged less than fair value imports of titanium dioxide from Belgium, France, West Germany and the United Kingdom. The petition indicates that the alleged less than fair value imports represent an increasing share of the U.S. market, having expanded from 4.1% of the U.S. market in 1973 to 10.2% in 1977. Although year-end stocks of titanium dioxide have grown continuously since 1973, preliminary reports show a small decline in 1977.

The petition also indicates that domestic production of titanium dioxide dropped 4 to 5 percent in 1977. However, the volume of overall domestic shipments and consumption has been rising. In addition, the capacity utilization of the domestic industry apparently has stabilized with a substantial expansion of production capacity likely in the near future. Finally, although the petitioner has submitted information to demonstrate that the industry's profit margins have eroded in the last two years, annual price increases have occurred with the most recent increase made effective in June 1978. More importantly, if price suppression does, in fact, exist,

it may be a result of competition among domestic producers rather than a result of sales by foreign manufacturers at less than fair value.

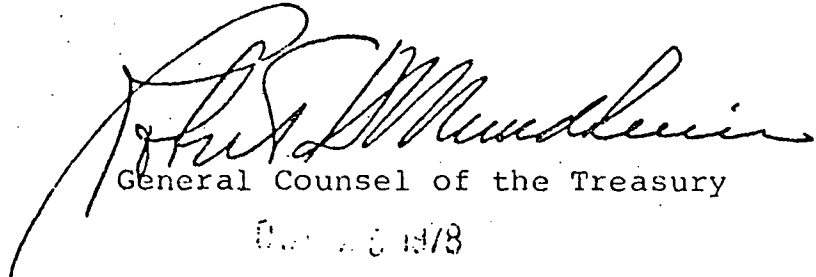
On the basis of such evidence, it has been concluded that there is substantial doubt of injury or likelihood of injury to an industry in the United States by virtue of such imports from Belgium, France, West Germany and the United Kingdom. Accordingly, the U.S. International Trade Commission is being advised of such doubt pursuant to section 201(c)(2) of the Act (19 U.S.C. 160(c)(2)).

Having conducted a summary investigation as required by section 153.29 of the Customs Regulations (19 CFR 153.29), and having determined as a result thereof that there are grounds for so doing, the U.S. Customs Service is instituting an inquiry to verify the information submitted and to obtain the facts necessary to enable the Secretary of the Treasury to reach a determination as to the fact or likelihood of sales at less than fair value. Should the International Trade Commission, within 30 days of receipt of this referral, advise the Secretary that there is no reasonable indication that an industry in the United States is being, or is likely to be, injured by reason of the importation of such merchandise into the United States, this



investigation will be terminated. Otherwise, the investigation will continue to conclusion.

This notice is published pursuant to section 153.30 of the Customs Regulations (19 CFR 153.30).



General Counsel of the Treasury  
Oct 26 1978

Robert H. Mundheim



Library Cataloging Data

U.S. International Trade Commission.

Titanium dioxide from Belgium, France, the United Kingdom, and the Federal Republic of Germany. Determination of "Reasonable indication of injury" in inquiry no.AA1921-Inq.-23 under the Antidumping act, 1921, as amended. Washington, 1978.

19, A 47 p. illus. 28 cm. (USITC Publication 930)

1. Titanium oxides. I. Title.

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

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