

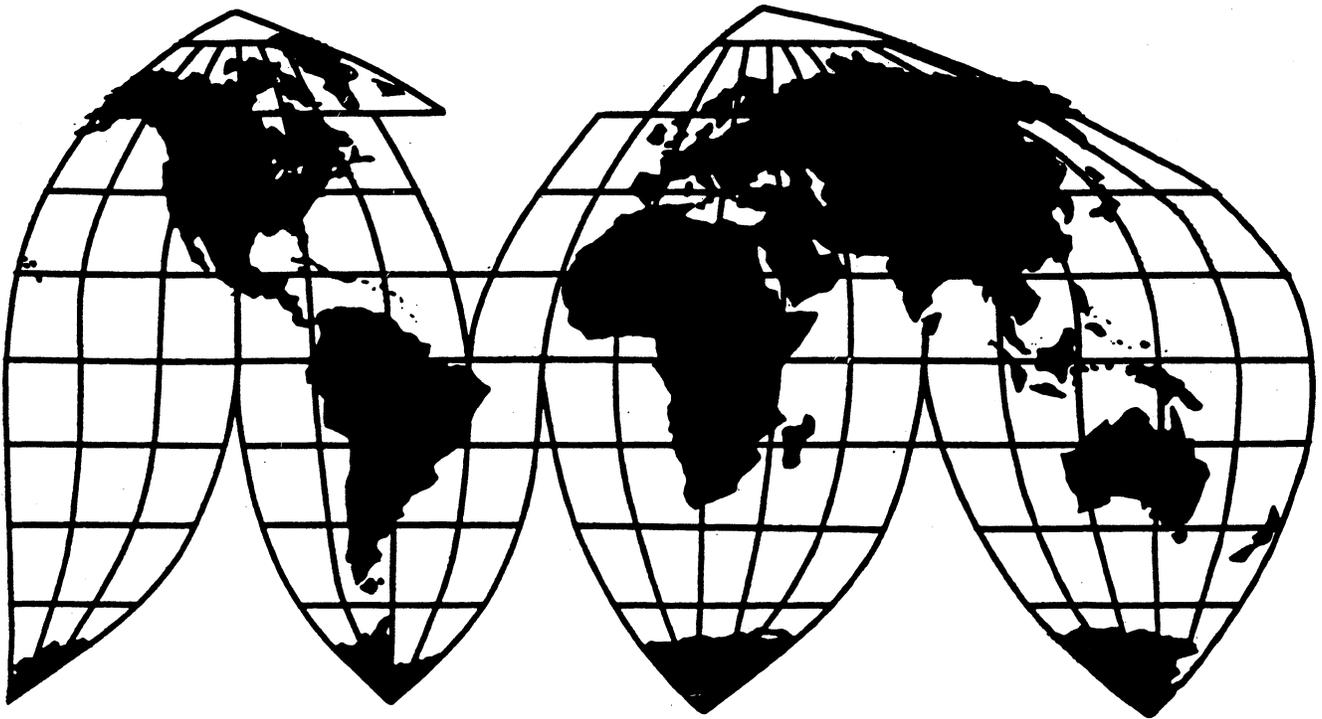
# **Manganese Sulfate from The People's Republic of China**

Investigation No. 731-TA-725 (Preliminary)

Publication 2848

January 1995

**U.S. International Trade Commission**



Washington, DC 20436

# **U.S. International Trade Commission**

## **COMMISSIONERS**

**Peter S. Watson, Chairman**

**Janet A. Nuzum, Vice Chairman**

**David B. Rohr**

**Don E. Newquist**

**Carol T. Crawford**

**Lynn M. Bragg**

---

**Robert A. Rogowsky**  
**Director of Operations**

---

### *Staff assigned:*

**Jonathan Seiger, Investigator**

**Stephen Wanser, Economist**

**Jack Greenblatt, Commodity/Industry Analyst**

**Marshall Wade, Financial Analyst**

**James M. Lyons, Attorney**

**Robert Eninger, Supervisory Investigator**

**Address all communications to  
Secretary to the Commission  
United States International Trade Commission  
Washington, DC 20436**

# **U.S. International Trade Commission**

Washington, DC 20436

## **Manganese Sulfate from The People's Republic of China**



**Publication 2848**

**January 1995**



## **CONTENTS**



# C O N T E N T S

	<u>Page</u>
Part I: Determination and views of the Commission . . . . .	I-1
Determination . . . . .	I-3
Views of the Commission . . . . .	I-5
Part II: Information obtained in the investigation . . . . .	II-1
Introduction . . . . .	II-3
Nature and extent of the alleged sales at LTFV . . . . .	II-3
The product . . . . .	II-4
Description and uses . . . . .	II-4
Manufacturing process . . . . .	II-6
Substitute products . . . . .	II-6
U.S. tariff treatment . . . . .	II-7
The U.S. market . . . . .	II-7
U.S. producers . . . . .	II-7
U.S. importers . . . . .	II-8
Channels of distribution . . . . .	II-9
Apparent U.S. consumption . . . . .	II-10
Consideration of material injury to an industry in the United States . . . . .	II-12
U.S. production, capacity, and capacity utilization . . . . .	II-13
U.S. producers' domestic shipments . . . . .	II-13
U.S. producers' inventories . . . . .	II-14
U.S. employment, wages, and productivity . . . . .	II-14
Financial experience of U.S. producers . . . . .	II-15
Overall establishment operations . . . . .	II-15
Operations on manganese sulfate . . . . .	II-15
Investment in productive facilities . . . . .	II-16
Capital expenditures . . . . .	II-16
Research and development expenditures . . . . .	II-16
Capital and investment . . . . .	II-16
Consideration of threat of material injury to an industry in the United States . . . . .	II-17
U.S. importers' inventories . . . . .	II-18
Ability of foreign producers to generate exports and the availability of export markets other than the United States . . . . .	II-19
Consideration of the causal relationship between imports of the subject merchandise and the alleged material injury . . . . .	II-20
U.S. imports . . . . .	II-20
U.S. market penetration by imports . . . . .	II-21
Prices . . . . .	II-23
Marketing practices . . . . .	II-23
Questionnaire price data . . . . .	II-24
Exchange rates . . . . .	II-24
Lost sales and revenues . . . . .	II-28

# C O N T E N T S

	<u>Page</u>
Appendixes	
A. <u>Federal Register</u> notices . . . . .	A-1
B. Calendar of the public conference . . . . .	B-1
C. Summary data . . . . .	C-1
D. Estimates of apparent U.S. consumption using official U.S. import statistics . . . . .	D-1
E. Impact of imports on U.S. producers' growth, investment, ability to raise capital, and existing development and production efforts . . . . .	E-1
F. Financial data of Allied and AMT . . . . .	F-1
G. Official U.S. import statistics . . . . .	G-1
H. Market penetration by U.S. imports using official U.S. import statistics . . . . .	H-1

## Figures

1. Manganese sulfate: Weighted-average net f.o.b. prices of products 1 and 2, by sources and by quarters, Jan. 1991-Sept. 1994 . . . . .	II-27
2. Manganese sulfate: Weighted-average net f.o.b. prices of product 3, by sources and by quarters, Jan. 1991-Sept. 1994 . . . . .	II-27
3. Exchange rates: Indexes of nominal exchange rates between the U.S. dollar and Chinese yuan, by quarters, Jan. 1991-Sept. 1994 . . . . .	II-28
E-1. Manganese sulfate: Income and loss . . . . .	E-3

## Tables

1. Manganese sulfate: U.S. shipments of domestic product, U.S. shipments of imports, by sources, and apparent U.S. consumption, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-11
2. Manganese sulfate: U.S. end-of-period capacity, production, and capacity utilization, by firms, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-13
3. Manganese sulfate: U.S. producers' domestic shipments, by firms, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-14
4. Manganese sulfate: End-of-period inventories of U.S. producers, by firms, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-14
5. Average number of production and related workers producing manganese sulfate, hours worked, wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs, by firms, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-15
6. Income-and-loss experience of AMT on the overall operations of its establishments wherein manganese sulfate is produced, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-15
7. Income-and-loss experience of AMT on its operations producing manganese sulfate, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-16

# C O N T E N T S

	<u>Page</u>
Tables--Continued	
8. Value of assets and return on assets of AMT's establishment wherein manganese sulfate is produced, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-16
9. Capital expenditures reported by AMT, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-16
10. Manganese sulfate: End-of-period inventories of U.S. importers, by sources, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-19
11. Manganese sulfate: U.S. imports, by sources, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-21
12. Manganese sulfate: Apparent U.S. consumption and market penetration, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	II-22
13. Manganese sulfate: Weighted-average net f.o.b. prices and total quantities of product 1 sold, and margins of underselling, by sources and by quarters, Jan. 1991-Sept. 1994 . . . . .	II-25
14. Manganese sulfate: Weighted-average net f.o.b. prices and total quantities of product 2 sold, and margins of underselling/(overselling), by sources and by quarters, Jan. 1991-Sept. 1994 . . . . .	II-26
15. Manganese sulfate: Weighted-average net f.o.b. prices and total quantities of product 3 sold, and margins of (overselling), by sources and by quarters, Jan. 1991-Sept. 1994 . . . . .	II-27
C-1. Manganese sulfate: Summary data concerning the U.S. market ( <b>IMPORT DATA BASED ON QUESTIONNAIRE RESPONSES (EXCEPT FOR MEXICO)</b> ), 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	C-3
C-2. Manganese sulfate: Summary data concerning the U.S. market ( <b>IMPORT DATA BASED ON OFFICIAL U.S. IMPORT STATISTICS</b> ), 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	C-4
C-3. Powdered manganese sulfate: Summary data concerning the U.S. market, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	C-5
C-4. Granular manganese sulfate: Summary data concerning the U.S. market, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	C-6
C-5. Manganese sulfate other than powdered and granular forms: Summary data concerning the U.S. market, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	C-6
D-1. Manganese sulfate: U.S. shipments of domestic product, U.S. imports, by sources, and apparent U.S. consumption, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	D-3
F-1. Financial data of Allied and AMT on their operations producing manganese sulfate, by firms, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	F-3
G-1. Manganese and certain other sulfates: U.S. imports, by sources, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	G-3
H-1. Manganese sulfate: Apparent U.S. consumption and market penetration, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994 . . . . .	H-3

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



**PART I**  
**DETERMINATION AND VIEWS OF THE COMMISSION**



UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-725 (Preliminary)

MANGANESE SULFATE FROM THE PEOPLE'S REPUBLIC OF CHINA

Determination

On the basis of the record<sup>1</sup> developed in the subject investigation, the Commission unanimously determines, pursuant to section 733(a) of the Tariff Act of 1930 (19 U.S.C. § 1673b(a)), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports from the People's Republic of China (China) of manganese sulfate, provided for in subheading 2833.29.50 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value (LTFV).<sup>2</sup>

Background

On November 30, 1994, a petition was filed with the Commission and the Department of Commerce by American MicroTrace Corporation, Virginia Beach, VA, alleging that an industry in the United States is materially injured and threatened with material injury by reason of LTFV imports of manganese sulfate from China. Accordingly, effective November 30, 1994, the Commission instituted antidumping investigation No. 731-TA-725 (Preliminary).

Notice of the institution of the Commission's investigation and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of December 8, 1994. (59 F.R. 63379). The conference was held in Washington, DC, on December 21, 1994, and all persons who requested the opportunity were permitted to appear in person or by counsel.

---

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

<sup>2</sup> The product covered by this investigation is manganese sulfate, including manganese sulfate monohydrate ( $MnSO_4 \cdot H_2O$ ) and any other forms whether or not hydrated, without regard to form, shape, or size, the addition of other elements, the presence of other elements as impurities, and/or the method of manufacture.



## VIEWS OF THE COMMISSION

Based on the record in this preliminary investigation, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of manganese sulfate from the People's Republic of China ("China") that are allegedly sold in the United States at less than fair value ("LTFV").<sup>1 2</sup>

### I. THE LEGAL STANDARD FOR PRELIMINARY DETERMINATIONS

The legal standard in preliminary antidumping duty investigations requires the Commission to determine, based upon the best information available at the time of the preliminary determination, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury by reason of the allegedly LTFV imports.<sup>3</sup> In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of material injury; and (2) no likelihood exists that any contrary evidence will arise in a final investigation."<sup>4</sup>

### II. LIKE PRODUCT AND DOMESTIC INDUSTRY

In determining whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of the subject imports, the Commission must first define the "like product" and the domestic "industry." Section 771(4)(A) of the Tariff Act of 1930 (the "Act") defines the relevant industry as the "domestic producers as a whole of a like product, or those producers whose collective output of the like product constitutes a major proportion of the total domestic production of that product."<sup>5</sup> In turn, the Act defines "like product" as a "product which is like, or in the absence of like, most similar in characteristics and uses with, the articles subject to an investigation."<sup>6</sup>

Our decision regarding the appropriate like product(s) in an investigation is essentially a factual determination, and we apply the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.<sup>7</sup> No single factor is dispositive, and the

---

<sup>1</sup> Whether there is a reasonable indication that the establishment of an industry in the United States is materially retarded is not an issue in this investigation.

<sup>2</sup> The petition seeking initiation of this investigation was filed prior to the effective date of the law implementing the Uruguay Round Trade Agreements. This investigation thus remains subject to the substantive and procedural rules of the pre-existing law. See Pub. L. 103-465, 108 Stat. 4809 (1994) at § 291.

<sup>3</sup> 19 U.S.C. § 1673b(a); see also American Lamb Co. v. United States, 785 F.2d 994 (Fed. Cir. 1986); Calabrian Corp. v. USITC, 794 F. Supp. 377, 381 (Ct. Int'l Trade 1992).

<sup>4</sup> American Lamb Co. v. United States, 785 F.2d at 1001; see also Torrington Co. v. United States, 790 F. Supp. 1161, 1165 (Ct. Int'l Trade 1992), aff'd, 991 F.2d 809 (Fed. Cir. 1993).

<sup>5</sup> 19 U.S.C. § 1677(4)(A).

<sup>6</sup> 19 U.S.C. § 1677(10).

<sup>7</sup> See Torrington Co. v. United States, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991) ("[E]very like product determination 'must be made on the particular record at issue' and the 'unique facts of each case.'"). In analyzing like product issues, the

(continued...)

Commission may consider other factors it deems relevant based upon the facts of a particular investigation. The Commission looks for "clear dividing lines among possible like products" and disregards minor variations.<sup>8</sup>

The imported merchandise subject to this investigation has been defined by the Department of Commerce as "manganese sulfate monohydrate, and any other forms whether or not hydrated, without regard to form, shape or size . . ."<sup>9</sup> Manganese sulfate is an inorganic chemical which is principally used as a source of manganese, an essential element required in small amounts by both plants and animals.<sup>10</sup> Agricultural and animal-feed applications for manganese sulfate account for ninety-five percent of the market for this chemical.<sup>11</sup>

The petitioner, American MicroTrace Corporation ("AMT"), contends that all manganese sulfate should be treated as a single like product.<sup>12</sup> For the reasons stated below, we have determined that all manganese sulfate is a single like product.

Manganese sulfate is produced and sold in three basic forms: large granular, fine granular, and powder.<sup>13</sup> The various forms in which manganese sulfate is produced are identical in chemical composition, sharing the same relative manganese content and solubility.<sup>14</sup> The primary difference is that the powder is quicker to dissolve in water due to its smaller particle size. Granular and powder forms of manganese sulfate are not interchangeable in all applications because the fertilizer and feed mixtures in which they are

---

<sup>7</sup> (...continued)

Commission generally considers six factors, including: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions; (5) common manufacturing facilities and production employees; and (6) when appropriate, price. Calabrian Corp., 794 F. Supp. at 382 n.4.

<sup>8</sup> Torrington, 747 F. Supp. at 748-49.

<sup>9</sup> 59 Fed. Reg. 66908 (Dec. 28, 1994).

<sup>10</sup> Crops that require manganese sulfate include citrus, soybeans, cucumbers, and cabbage. In animals, manganese is required in enzymes used in energy metabolism, in bone development, and in reproduction. CR at I-5, PR at II-4.

<sup>11</sup> CR at I-6 and I-15, n.36; PR at II-4, II-9. Use of manganese sulfate in agriculture is somewhat greater than in animal feed.

<sup>12</sup> No other party participated in the investigation. AlliedSignal, Inc. ("Allied"), the only other major U.S. producer of manganese sulfate, provided a partial response to the Commission's questionnaire. Allied commenced manufacture of manganese sulfate in early 1993 after purchasing production facilities from Koch Industries.

<sup>13</sup> Both powder and granules are made from a manganese sulfate slurry by spraying and drying in the case of powder and by partial drying and granulating in the case of granules. CR at I-9, PR at II-6; Conference Transcript at 12. For liquid applications, where rapid dissolving is preferred, generally either the powder or fine granular form is used. For applications where the manganese sulfate is to be blended as a solid with other fertilizers, it is essential that the particle size of the manganese sulfate (usually in granular form) be approximately equal to that of the other components of the fertilizer blend to assure that the distribution of fertilizers in the blend remains uniform. In animal feed applications, manganese sulfate is usually dispensed as either powder or fine granules. CR at I-6, PR at II-4; Conference Transcript at 53-54.

<sup>14</sup> The products sold by AMT and Allied differ slightly with respect to their relative manganese content and the solubility of the manganese that they contain. According to AMT, its product is 29 percent manganese sulfate and has a solubility of 96 percent, compared to Allied's product which is 32 percent manganese sulfate and 100 percent soluble. CR at I-7-8, PR at II-5.

respectively incorporated dictate that a particular configuration is more advantageous than the other.<sup>15 16</sup>

Channels of distribution for powder and granular forms of manganese sulfate are similar. In both instances most sales appear to be made to distributors or purchasers, such as blenders or premixers, that perform the function of distributors.<sup>17</sup> Consequently, the channels of distribution overlap to a substantial degree.

Although the manufacturing processes used by Allied and AMT are different, each manufacturer respectively produces all of its manganese sulfate using the same production plant and employees and all forms of the product are derived from the same sulfate slurry.<sup>18</sup>

According to AMT, any difference that customers perceive between the products manufactured by AMT and Allied can be addressed through the adjustment of blends to accommodate the different solubility and manganese concentration of the respective products.<sup>19</sup> Although a number of blenders commented that AMT's product is less suitable for animal feed use due to its lower solubility and manganese content,<sup>20</sup> AMT provided

---

<sup>15</sup> For example, powdered manganese sulfate is best used dissolved in water, such as for animal feed or fertilizer sprays. On the other hand, powders are more difficult to use in dry mixtures because the smaller particled powders tend to separate from the other ingredients in the mix making even distribution more difficult. The fine granular manganese sulfate may have the widest range of uses because it is small enough to dissolve easily, but retains a large enough particle size so that it can be blended with other materials and remain dispersed. Conference Transcript at 54-55.

<sup>16</sup> There are several other manganese compounds, including manganous oxide and manganese succrate, that while chemically and physically different from manganese sulfate can apparently be substituted for manganese sulfate for use in fertilizers, in particular. CR at I-10, PR at II-6-7. The very low solubility of manganous oxide, however, would require significantly larger quantities to provide the same amount of manganese. The record indicates none of the domestic producers of manganese sulfate produces the other manganese compounds. Based on the very limited substitutability of these other manganese compounds, their different chemical and physical properties, and the lack of any common production facilities, we find that the like product should be limited to manganese sulfate.

<sup>17</sup> For animal feed use, U.S. producers sell manganese sulfate to premixers, who mix the manganese sulfate with other micronutrients to make customized blends that are then sold directly to large animal feed manufacturers. For fertilizer use, manganese sulfate manufacturers generally sell to regional distributors that sell the product to regional fertilizer blenders.

<sup>18</sup> Conference Transcript at 55-56. Some product is \*\*\*.

<sup>19</sup> Petitioner's Postconference Brief at 5-8. AMT stated that all of its products have a 96-percent solubility, that manganese sulfate sold by Allied is 99 to 100 percent soluble, and that the solubility of the subject imports falls between that of AMT and Allied's products. AMT contends that customers adjust for the difference in solubility levels between Allied's products, the subject imports, and those sold by AMT by including somewhat greater quantities of AMT's product in their blends. AMT has stated that the lower price for its products compensates for the slightly greater quantity that is needed. Conference Transcript at 42-44.

With respect to pricing generally, the available information indicates that with the exception of sales during 1991, the finer granular manganese sulfate sold at only a small premium over the larger granular product. The amount of that premium decreased during the investigatory period, and actually disappeared in the interim period of January-September 1994. Allied was the only domestic producer selling powdered manganese sulfate and the limited price data available from Allied were for a level of trade that prevented useful comparisons with granular product prices. Consequently, the pricing data are inconclusive for purposes of our like product analysis.

<sup>20</sup> CR at I-8, PR at II-5.

information that indicates that a substantial portion of its manganese sulfate sales are made to animal feed blenders.<sup>21</sup>

We find one like product in this investigation based on common chemistries and physical characteristics, largely similar end uses, channels of distribution, production processes, facilities, and employees.

We further determine that the domestic industry consists of all U.S. producers of manganese sulfate. These are the petitioner AMT, Allied,<sup>22</sup> and a \*\*\*.<sup>23</sup> In accordance with our general practice, we include in the industry producers of all domestic production of the like product, whether captively consumed or produced under a tolling arrangement.<sup>24</sup> We will seek specific production, shipment, and financial information from \*\*\* in any final investigation.

### III. CONDITION OF THE DOMESTIC INDUSTRY

In assessing whether there is a reasonable indication that the domestic industry is materially injured or threatened with material injury by reason of allegedly LTFV imports, we consider all relevant economic factors that bear on the state of the industry in the United States.<sup>25</sup> These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, and research and development. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."<sup>26</sup>

We note several pertinent conditions of competition distinctive to the domestic manganese sulfate industry. First, demand for manganese sulfate is derived from the demand

---

<sup>21</sup> Petitioner's Postconference Brief at 3.

<sup>22</sup> Petitioner AMT argues that the Commission should exclude Allied from the domestic industry because it produces manganese sulfate as a byproduct of its production of anisaldehyde, and its inclusion in the industry might therefore obscure any material injury by reason of the subject merchandise. See Petitioner's Postconference Brief at 17. We include Allied in the domestic industry because there is no statutory authority for excluding a producer of a like product from the industry merely because the like product is produced as a byproduct or coproduct of another production process. See generally, Sandvik AB v. United States, 721 F. Supp. 1322, 1330 (Ct. Int'l Trade 1989) ("ITC may only exclude data from a member of the industry if that member is a related party within the meaning of 19 U.S.C. § 1677(4)(B) and the ITC has determined that 'appropriate circumstances' existed to exclude the data."). Furthermore, Allied has indicated that anisaldehyde and manganese sulfate are produced as coproducts. We do find, however, that the nature of Allied's production of manganese sulfate is a condition of competition for this industry that we consider below.

<sup>23</sup> The \*\*\*.

<sup>24</sup> See Fresh Garlic from the People's Republic of China, Inv. No. 731-TA-683 (Final), USITC Pub. 2825 at I-14 & n.67 (Nov. 1994). We note that the Commission generally has considered toll producers that engage in sufficient production-related activity to be part of the domestic industry. See Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide from the Netherlands, Inv. No. 731-TA-652 (Final), USITC Pub. 2783 (June 1994).

<sup>25</sup> 19 U.S.C. § 1677(7)(C)(iii).

<sup>26</sup> 19 U.S.C. § 1677(7)(C)(iii).

for fertilizer and animal feed products in which it is mixed.<sup>27</sup> Second, although Allied produces manganese sulfate as a coproduct with anisaldehyde, its production schedule and production volume appear to be determined by its manufacture of anisaldehyde, a product that is significantly higher in value than manganese sulfate. The degree to which Allied's data are affected by its coproduction of manganese sulfate with anisaldehyde is unclear in this preliminary investigation. We will further investigate in any final investigation whether its data reflect any insulation from the effects of subject imports, and the relevance that this may have for our final determination.<sup>28</sup>

The third condition of competition that we have considered is that non-subject imports from Mexico have held a substantial share of apparent domestic consumption in the United States throughout the period of investigation.<sup>29</sup>

Our discussion of the condition of the industry for calendar years 1991, 1992, and 1993 depends on data from the petitioner only, whereas discussion of the interim periods includes data from the industry. Allied submitted shipment, production and pricing data only for 1993 and the interim periods in 1993 and 1994. The inclusion of Allied data for 1993 would have distorted our analysis of industry developments over the full three year investigatory period. Thus, we have only included Allied's data in our analysis of the condition of the industry during the interim periods. Financial data provided by Allied were incomplete.<sup>30</sup>

The period of investigation was generally characterized by increasing U.S. consumption of manganese sulfate. The quantity and value of apparent U.S. consumption of manganese sulfate increased significantly from 1991 to 1992, and then remained stable at approximately 1992 levels in 1993.<sup>31</sup> Both the quantity and value of apparent U.S. consumption were higher in the first nine months of 1994 ("interim 1994") than they were in the first nine months of 1993 ("interim 1993").<sup>32</sup>

The domestic industry did not share fully in the increase in consumption as their U.S. shipments increased irregularly and slowly from 1991 to 1993, and at a substantially slower

---

<sup>27</sup> To some degree the seasonal nature of fertilizer requirements results in a concentration of larger shipments during periods of cultivation and a stock-piling of production in anticipation of growing seasons.

<sup>28</sup> We additionally observe that there is \*\*\* in the cost structures of the two principal domestic producers. In any final investigation, we will investigate further the domestic industry's cost structure and allocation of costs and will examine \*\*\*.

<sup>29</sup> Commissioner Rohr and Commissioner Newquist note that the statute directs the Commission to determine "whether there is a reasonable indication that an industry in the United States (A) is materially injured, or (B) threatened with material injury . . . by reason of imports of merchandise which is the subject of the investigation. . . ." 19 U.S.C. § 1673b(a)(1)(emphasis added).

<sup>30</sup> We expect to receive a complete response to our questionnaire from Allied in the final investigation and will use our full statutory authority to ensure that the record in any final investigation is as complete as possible and contains all obtainable information pertaining to Allied's operations.

<sup>31</sup> By quantity, apparent U.S. consumption increased by 36.5 percent from 1991 to 1992 and decreased by .6 percent from 1992 to 1993. By value, consumption increased by 39.9 percent from 1991 to 1992, and declined by 3.1 percent from 1992 to 1993. CR at C-3, table C-1, PR at C-3, table C-1.

<sup>32</sup> The quantity of apparent consumption was 5.5 percent higher and the value was 5.6 percent higher in interim 1994 than in interim 1993. CR at C-3, table C-1, PR at C-3, table C-1.

rate than domestic consumption.<sup>33</sup> Domestic shipments were substantially higher in interim 1994, however, than in interim 1993.<sup>34</sup>

Domestic production of manganese sulfate increased throughout the period of investigation.<sup>35</sup> Because production increased and capacity remained relatively stable throughout the period of investigation, capacity utilization increased.<sup>36</sup> Capacity utilization by the domestic industry, however, never approached full production levels. U.S. producers' inventories increased irregularly, but substantially, from 1991 to 1993.<sup>37</sup> Inventory levels were considerably higher in the 1994 interim period than in the interim period of 1993.<sup>38</sup>

The number of production and related workers, and the hours worked by such workers, were generally stable during the period of investigation, although they increased somewhat in 1993.<sup>39</sup> Total compensation paid rose from 1991 to 1993, but increased only marginally in the interim period comparison.<sup>40</sup> Productivity increased from 1991 to 1993 and also increased in the interim period comparison.<sup>41</sup>

Declines in sales revenues throughout the period of investigation were accompanied by a deterioration in both gross profit and operating income figures for the industry between 1991 and 1993.<sup>42</sup> Operating income declined from \$\*\*\* in 1991 to \*\*\* in 1993.<sup>43</sup> Although financial performance when measured in terms of either gross profit as a percentage of net sales or operating income improved slightly between the interim periods, net income as a percentage of net sales continued to decline between those periods.<sup>44</sup> The decline in net income occurred despite improvement in productivity<sup>45</sup> and a reduction in cost of goods sold.<sup>46</sup>

---

<sup>33</sup> The quantity of such shipments increased by \*\*\* percent and the value by \*\*\* percent from 1991 to 1993. CR at C-3, table C-1; PR at C-3, table C-1. By contrast, consumption increased 35.7 percent by quantity and 35.5 percent by value over the same period. Id.

<sup>34</sup> The quantity of shipments was \*\*\* percent higher and the value was \*\*\* percent higher. CR at C-3, table C-1; PR at C-3, table C-1.

<sup>35</sup> Production quantity increased by \*\*\* percent from 1991 to 1993 and was \*\*\* percent higher in interim 1994 than in interim 1993. Table 2, CR at I-23, PR at II-13.

<sup>36</sup> Table 2, CR at I-23, PR at II-13. Capacity utilization rose from \*\*\* percent in 1991 to \*\*\* percent in 1993. The interim 1994 capacity utilization figure of \*\*\* percent exceeded the interim 1993 figure of \*\*\* percent. Id.

<sup>37</sup> The increase was \*\*\* percent. Table 4, CR at I-26, PR at II-14.

<sup>38</sup> Inventory levels were \*\*\* percent higher in interim 1994 than in interim 1993. Table 4, CR at I-26, PR at II-14. Much of this increase appears attributable to fewer shipments by the petitioner.

<sup>39</sup> Table 5, CR at I-28, PR at II-15. The petitioner stated, however, \*\*\*.

<sup>40</sup> Total compensation increased by \*\*\* percent from 1991 to 1993, and was \*\*\* percent higher in interim 1994 than interim 1993. Table 5, CR at I-28, PR at II-15.

<sup>41</sup> Table 5, CR at I-28, PR at II-15.

<sup>42</sup> Our analysis of industry financial performance is limited to the data of the petitioner, which we estimate accounted for slightly less than one-half of domestic production and of sales during the period of investigation. Allied did not provide fully useable data on its financial performance, but we note that the limited gross profitability data provided by Allied showed a \*\*\* between interim periods in 1993 and 1994. CR at F-3, table F-1; PR at F-3, table F-1.

<sup>43</sup> Table 7, CR at I-32, PR at II-16.

<sup>44</sup> Table 7, CR at I-32, PR at II-16.

<sup>45</sup> Table 5, CR at I-28, PR at II-15.

<sup>46</sup> Id.

The deterioration in financial performance occurred while there was an increase in the domestic industry's capital expenditures during the investigatory period, including increases between the interim periods.<sup>47</sup> There were \*\*\* expenditures for research and development during the period under investigation.<sup>48 49</sup>

#### IV. REASONABLE INDICATION OF MATERIAL INJURY BY REASON OF ALLEGEDLY LTFV IMPORTS

In preliminary antidumping duty investigations, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured by reason of the imports under investigation.<sup>50</sup> In making this determination, the Commission must consider the volume of imports, their effect on prices for the like product, and their impact on domestic producers of the like product, but only in the context of U.S. production operations.<sup>51</sup>

Although the Commission may consider alternative causes of injury to the industry other than allegedly LTFV imports, it is not to weigh causes.<sup>52 53 54 55</sup>

---

<sup>47</sup> These expenditures increased by \*\*\* from 1991 to 1993, and were \*\*\* percent higher in interim 1994 than in interim 1993. CR at I-34, PR at II-16.

<sup>48</sup> CR at I-34, PR at II-16.

<sup>49</sup> As a result of declining sales revenue, shipment volume, and price levels, as well as a serious deterioration in operating income and profitability, Commissioner Rohr and Commissioner Newquist determine that there is a reasonable indication that the domestic industry is experiencing material injury.

<sup>50</sup> 19 U.S.C. § 1673b(a). The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant." 19 U.S.C. § 1677(7)(A).

<sup>51</sup> 19 U.S.C. § 1677(7)(B)(i). The Commission "may consider such other economic factors as are relevant to the determination," but shall "identify each [such] factor . . . and explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

<sup>52</sup> Commissioner Rohr and Commissioner Newquist further note that the Commission need not determine that imports are "the principal, a substantial, or a significant cause of material injury." S. Rep. No. 249, at 57, 74. Rather, a finding that imports are a cause of material injury is sufficient. See e.g., Metallwerken Nederland B.V. v. United States, 728 F. Supp. 730, 741 (CIT 1989); Citrosuco Paulista, 704 F. Supp. at 1101.

<sup>53</sup> Commissioner Crawford notes that the statute requires that the Commission determine whether a domestic industry is "materially injured by reason of" the LTFV imports. She finds that the clear meaning of the statute is to require a determination of whether the domestic industry is materially injured by reason of LTFV imports, not by reason of LTFV imports among other things. Many, if not most, domestic industries are subject to injury from more than one economic factor. Of these factors, there may be more than one that independently are causing material injury to the domestic industry. It is assumed in the legislative history that the "ITC will consider information which indicates that harm is caused by factors other than less-than-fair-value imports." S. Rep. No. 249, at 75. The legislative history makes it clear, however, that the Commission is not to weigh or prioritize the factors that are independently causing material injury. Id. at 74; H.R. Rep. No. 317, 96th Cong., 1st Sess. 46-47 (1979). The Commission is not to determine if the LTFV imports are "the principal, a substantial or a significant cause of material injury." S. Rep. No. 249, at 74. Rather, it is to determine whether any injury "by reason of" the allegedly subsidized and LTFV imports is material. That is, the Commission must determine if the subject imports are causing material injury to the domestic industry. "When determining the effect of imports on the domestic industry, the Commission (continued...)"

For the reasons discussed below, we find that there is a reasonable indication that the domestic manganese sulfate industry is materially injured by reason of allegedly LTFV imports from China.

In assessing the volume of subject imports, we observe that both the quantity of imports of manganese sulfate from China and the U.S. market penetration of those imports increased substantially during the period of investigation.<sup>56</sup> The volume of such imports increased nearly fourfold from 1,189 short tons in 1991 to 5,812 short tons in 1993, although it declined between the interim periods in 1993 and 1994.<sup>57</sup> The value of imports also increased, but at a slower rate, reflecting the decline in unit prices of the subject merchandise.<sup>58</sup> The rapid increase in import levels also resulted in a larger market share for the subject imports. Subject import penetration, in terms of quantity, increased from 7.6 percent in 1991 to 16.5 percent in 1992 and 22.6 percent in 1993, before declining slightly from 21.8 to 20.7 percent between the interim periods in 1993 and 1994.<sup>59</sup> Also, U.S. importers reported substantial current orders for manganese sulfate from China for the period from November 1994 to March 1995.<sup>60</sup>

The data in this preliminary investigation indicate that selling prices of both the subject imports and the domestic like product generally declined over the period of investigation, and that subject imports undersold the domestic like product in the majority of pricing comparisons.<sup>61</sup> The record indicates that manganese sulfate from China and the domestic like

---

<sup>53</sup> (...continued)  
must consider all relevant factors that can demonstrate if unfairly traded imports are materially injuring the domestic industry." S. Rep. No. 71, 100th Cong., 1st Sess. 116 (1987) (emphasis added).

<sup>54</sup> See, e.g., Citrosuco Paulista, S.A. v. United States, 704 F. Supp. 1075, 1101 (Ct. Int'l Trade 1988). Alternative causes may include the following:

[T]he volume and prices of imports sold at fair value, contraction in demand or changes in patterns of consumption, trade, restrictive practices of and competition between the foreign and domestic producers, developments in technology, and the export performance and productivity of the domestic industry.

S. Rep. No. 249, 96th Cong., 1st Sess. 74 (1979). Similar language is contained in the House Report. H.R. Rep. No. 317, 96th Cong., 1st Sess. 46-47 (1979).

<sup>55</sup> For Chairman Watson's interpretation of the statutory requirement regarding causation, see Certain Calcium Aluminate Cement Clinker from France, Inv. No. 731-TA-645 (Final), USITC Pub. 2772 at I-14 n.68 (May 1994).

<sup>56</sup> Tables 11 and 12, CR at I-41 and I-43, PR at II-21 and II-22.

<sup>57</sup> Table 11, CR at I-41, PR at II-21.

<sup>58</sup> Id.

<sup>59</sup> Table 12, CR at I-43, PR at II-22. The market share captured by subject imports in calendar years 1991, 1992, and 1993 is likely to be overstated as only petitioner's shipments are included in apparent domestic consumption for that portion of the investigatory period.

<sup>60</sup> CR at I-38, PR at II-19.

<sup>61</sup> Tables 13, 14, and 15, CR at I-48-I-50, PR at II-25-II-27. Comparisons were based on all three forms of manganese sulfate. Subject import prices were consistently lower than domestic prices for all comparisons of the large granular product. Imports of the subject merchandise also undersold domestic producers in five of seven comparisons for the fine granular product. Price comparisons for powder revealed uniform overselling by the subject imports. As only Allied sold domestically manufactured powder, however, and all of Allied's sales were \*\*\*, we give less weight to the overselling by the imports for the powder product.

product are generally substitutable in most applications for which the domestic industry sells in the U.S. market.<sup>62</sup> Both the frequency and magnitude of the underselling by the subject imports are significant, particularly in light of the fact that the higher manganese content of the subject imports normally would warrant a higher price.<sup>63</sup> Furthermore, prices for the subject imports, although fluctuating, declined for all three categories of manganese sulfate. We conclude that imports have depressed domestic prices of manganese sulfate to a significant degree.<sup>64 65</sup>

---

<sup>62</sup> For example, importers did not report any unusual problems in sourcing from China or with the overall quality of the subject imports. CR at I-37, PR at II-18.

<sup>63</sup> Commissioner Crawford rarely gives much weight to evidence of underselling since it usually reflects some combination of differences in quality, other nonprice factors, or fluctuations in the market during the period in which price comparisons were sought.

<sup>64</sup> To analyze the effect of the allegedly LTFV imports on domestic prices, Commissioner Crawford compares domestic prices that existed when the imports allegedly were dumped with what domestic prices would have been if imports had been priced fairly. In making this determination she considers a number of factors including the degree of substitutability between subject imports and the domestic like product, the capacity utilization of the domestic industry, and the presence of nonsubject imports.

The record in this preliminary investigation indicates that domestically produced manganese sulfate is a reasonably good substitute for the subject imports. This implies that if the dumping had not occurred, substantially less, if any, of the subject imports would have been sold and purchasers would have bought more of the domestic product. The ability of domestic producers to raise prices under these circumstances depends on several supply and demand factors. The demand for manganese sulfate is derived from the demand for the animal feed and fertilizer products in which it is used. Manganese sulfate accounts for a small portion of the value of these finished products, and there do not appear to be any good substitute products. This indicates that purchasers are not particularly sensitive to changes in price (i.e., a low demand elasticity), and would have been willing to pay a higher price for the product. This suggests that domestic producers would have been able to increase prices if the supply of subject imports were reduced. To determine if domestic producers would have been able to increase prices also requires examination of certain supply side considerations. Specifically, it is unlikely that domestic producers would have been able to increase prices if there was excess capacity in the market or if alternative nonsubject imports sources of supply existed, either of which would have exercised discipline in the marketplace and prevented a price increase, notwithstanding the willingness of purchasers to pay more if required to do so. In other words, price discipline may be imposed either by purchasers or competitors.

In this case, supply side considerations make it more likely that domestic producers would have been able to increase prices. AMT does not have sufficient unused capacity, inventory, or export shipments that could be redirected to replace subject imports supply. Allied's unused production capacity is irrelevant since Allied does not change its production quantity in response to changes in the price of manganese sulfate. Also, Allied appears to be a price taker in the market and is interested only in disposing of its production at the highest price the market will provide. Finally, although a significant amount of nonsubject imports from Mexico have been present in the market, rising unit values for Mexican product and the existence of only one Mexican producer suggest that Mexican supply is not responsive to changes in the U.S. price. In the absence of any significant information concerning Mexican ability to increase supplies to the U.S. market or the substitutability of Mexican product with the domestic product, Commissioner Crawford concludes that nonsubject import supply from Mexico would not be a significant impediment to increased domestic prices. In sum, insufficient domestic supply to fully meet the demand for subject imports, the apparent unwillingness of the Mexican producer to increase supply to the U.S. market, and the inelastic demand for manganese sulfate make it likely that the domestic industry would have been able to sustain significant price increases if the subject imports had not been dumped. Accordingly, Commissioner Crawford finds

(continued...)

The domestic industry's decline in shipments, market share, prices, and profitability all indicate that the subject imports have had an adverse impact on the domestic industry.<sup>66</sup> Commencement of shipments of granular manganese sulfate by the Chinese producers in 1993 aggravated the financial condition of the domestic industry as subject imports began to compete across the entire like product spectrum. These factors, particularly the increasing market penetration by subject imports and the domestic industry's declining market share,<sup>67</sup> had an increasingly deleterious effect on the domestic industry's ability to recover its costs of production. Operating income and profitability suffered as a result. Capital investments by the domestic industry and higher labor productivity were unable to alter the effect of declining sales revenue.<sup>68</sup>

---

<sup>64</sup> (...continued)

that the allegedly LTFV imports from China did have significant price effects on the domestic industry.

<sup>65</sup> In assessing the price effects of allegedly LTFV imports, Chairman Watson also considers the substitutability between subject imports and the domestic like product, price sensitivity of demand for the domestic like product, and the presence of price-restraining competitive factors. The record in this investigation indicates that domestically-produced manganese sulfate and subject imports are reasonably good substitutes. Demand for manganese sulfate appears to be relatively insensitive to price (i.e., price inelastic), as manganese sulfate accounts for a very small portion of the finished products in which it is used and there do not appear to be good substitutes for manganese sulfate. The record also indicates that the competitive role of Allied in the manganese sulfate market may be limited as a consequence of its production of manganese sulfate as a coproduct with anisaldehyde. Furthermore, although nonsubject imports from Mexico account for a sizable share of domestic consumption of manganese sulfate, the record indicates that there is only one Mexican producer exporting the product to the United States and that Mexican unit values rose from 1991 to 1993 and between the interim periods, suggesting that the ability of nonsubject imports to restrain price increases is limited. Given these considerations, Chairman Watson concludes that there likely were adverse price effects due to allegedly LTFV imports of manganese sulfate from the PRC.

<sup>66</sup> Vice Chairman Nuzum observes that the available record information also provides some support for an affirmative threat determination. Specific data relating to the foreign industry were not obtained, however, in this preliminary investigation. She will seek substantially more information on the Chinese manganese sulfate industry in any final investigation.

<sup>67</sup> Measured in terms of volume, domestic industry shipments declined from \*\*\* to \*\*\* percent of apparent consumption between 1991 and 1993, while shipments of the subject merchandise from China increased their market share from 7.6 to 22.6 percent. Table 12, CR at I-43, PR at II-22.

<sup>68</sup> In her analysis of material injury, Commissioner Crawford evaluates the impact on the domestic industry by comparing the state of the industry when the imports allegedly were dumped with what the state of the industry would have been without the dumping, that is, had imports been priced fairly. In assessing the impact of subject imports on the domestic industry, she considers, among other relevant factors, output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital and research and development as required by 19 U.S.C. § 1677(C)(iii). These factors either encompass or reflect the volume and price effects of the dumped imports, and so she gauges the impact of the dumping through those effects. In this regard, the impact on the domestic industry's prices and sales is critical, because the impact on other industry indicators (e.g. employment, wages, etc.) is derived from this impact.

Because subject imports and the domestic product appear to be reasonably good substitutes, purchasers likely would not have continued to buy subject imports had they been fairly priced. Purchasers would have switched from subject imports to alternative sources such as the domestic product and nonsubject imports. In the absence of additional information regarding the Mexican

(continued...)

## CONCLUSION

In light of the significantly increasing import volumes and market penetration through most of the period of investigation, declining domestic prices and significant underselling by the subject imports, and declining domestic shipments, market share and financial performance, we determine there is a reasonable indication that the domestic manganese sulfate industry is materially injured by reason of allegedly LTFV imports from China.

---

<sup>68</sup> (...continued)

producer's ability or desire to increase its shipments to meet increased demand, Commissioner Crawford makes no assumption that sales of nonsubject imports would have increased. Consequently, given the lack of supply response from Allied, only AMT's unused production capacity would have been available to supply the demand formerly supplied by the subject imports. Although AMT's unused capacity was substantially less than the volume of subject imports, AMT would have been able to increase significantly the quantity of its production and sales, and thus its revenues. An increase in sales, combined with the price increase it would have sustained, clearly would have made the domestic industry better off if the subject imports had been fairly traded. Accordingly, Commissioner Crawford concludes that there is a reasonable indication of material injury to the domestic industry by reason of the allegedly LTFV imports from China.



**PART II**  
**INFORMATION OBTAINED IN THE INVESTIGATION**



## INTRODUCTION

On November 30, 1994, a petition was filed with the U.S. International Trade Commission (Commission) and the U.S. Department of Commerce (Commerce) by American MicroTrace Corp. (AMT), Virginia Beach, VA. The petition alleges that imports of manganese sulfate<sup>1</sup> from the People's Republic of China (China) are being sold in the United States at less than fair value (LTFV), and that an industry in the United States is being materially injured and is threatened with further material injury by reason of such imports.

Accordingly, effective November 30, 1994, the Commission instituted a preliminary antidumping investigation under section 733 of the Tariff Act of 1930 (the act) to determine whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports of such merchandise into the United States.

The statute directs the Commission to make its preliminary determination within 45 days after receipt of the petition or, in this investigation, by January 17, 1995. Notice of the institution of this investigation and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of December 8, 1994.<sup>2</sup> Commerce published its notice of initiation in the Federal Register of December 28, 1994.<sup>3</sup> The Commission held a public conference in Washington, DC, on December 21, 1994, at which time all interested parties were allowed to present information and data for consideration by the Commission.<sup>4</sup> The Commission voted on this investigation on January 11, 1995.

A summary of the data collected in this investigation is presented in appendix C. The Commission has not previously conducted investigations concerning manganese sulfate.

### NATURE AND EXTENT OF THE ALLEGED SALES AT LTFV

In order to derive the estimated dumping margin for manganese sulfate imported from China, the petitioner compared the U.S. price of manganese sulfate with its foreign market value. The petitioner based U.S. price on three price quotes during the period June 1994 through September 1994 to U.S. customers. These sales were made on three different bases: c.i.f. New York, c.f.r. west coast ports, and f.o.b. China (Guangzhou/Huangpu). For those quotes that were on a delivered basis, the petitioner deducted estimated charges for ocean freight, marine insurance, and Chinese inland freight. For the f.o.b. China quote, the petitioner deducted Chinese inland freight only.

Because the petitioner alleged that, for purposes of this investigation, China was a state-controlled-economy country, the petitioner based foreign market value on the constructed value of such or similar merchandise in a non-state-controlled-economy country at a level of economic development comparable to that of China. Accordingly, the petitioner compared U.S. sales prices to foreign market value constructed by valuing the factors of production (i.e., materials and labor) used by the Chinese manufacturers based on factor cost information obtained from India, a country that the petitioner alleged was similar to China in terms of its economic development and was a

---

<sup>1</sup> The product covered by this investigation is manganese sulfate, including manganese sulfate monohydrate ( $\text{MnSO}_4 \cdot \text{H}_2\text{O}$ ) and any other forms whether or not hydrated, without regard to form, shape, or size, the addition of other elements, the presence of other elements as impurities, and/or the method of manufacture.

<sup>2</sup> 59 F.R. 63379.

<sup>3</sup> 59 F.R. 66908. Copies of the Commission's and Commerce's Federal Register notices are presented in appendix A.

<sup>4</sup> A list of the participants in the conference is presented in appendix B.

significant producer of manganese sulfate. To these totals the petitioner added factory overhead, actual selling, general, and administrative expenses, the statutory minimum for profit, and an amount for packing costs. Through these calculations, the petitioner obtained estimated LTFV margins ranging from 142.25 to 801.26 percent.<sup>5</sup>

## THE PRODUCT

### Description and Uses

Manganese sulfate is a pale pink inorganic chemical with the chemical formula  $MnSO_4$ . Manganese sulfate is principally used as a source of manganese, an essential element required in small amounts by both plants and animals. Because only small amounts of manganese are required, the material is referred to as an essential trace element, or as a micronutrient. In plants, manganese is used in photosynthesis, plant enzyme systems, nitrate assimilation, and iron metabolism. Crops that require manganese sulfate include citrus, soybeans, cucumbers, and cabbage.

In animals, manganese is required in enzymes used in energy metabolism, in bone development, and in reproduction. Manganese sulfate is used as a poultry feed additive, reportedly to increase the hardness of eggshells.

Agricultural and animal-feed applications for manganese sulfate account for the preponderance of the market for this chemical.<sup>6</sup> Manganese sulfate is also used in industrial applications, including industrial water treatment, in the production of bricks, in catalysts, in pigments, in making paint driers, and in the production of organomanganese fungicides. High-purity manganese sulfate is used for medical and other specialized chemical applications.

In most commercial applications, manganese sulfate is in the monohydrate form, i.e., the manganese sulfate molecule is combined with a single molecule of water to form the monohydrate,  $MnSO_4 \cdot H_2O$ . Manganese sulfate can be produced and sold in three basic forms: large granular, fine granular, and powder. For liquid applications, where rapid dissolving is preferred, generally either the powder or the fine granular form is used. For applications where the manganese sulfate is to be blended as a solid with other fertilizers, it is essential that the particle size of the manganese sulfate (usually in granular form) be approximately equal to that of the other components of the fertilizer blend to assure that the distribution of fertilizers in the blend remains uniform. In dry fertilizer applications, manganese sulfate is generally used in granular rather than powder form, whereas in dry animal feed applications it is usually dispensed either as powder or fine granules.

Although manganese compounds are found in nature, they are commonly in the form of manganese dioxide and manganese carbonate ores. Because these chemicals are insoluble, plants and animals cannot readily absorb the manganese contained in the compounds. In contrast, manganese sulfate (although not readily extractable from ores) is a soluble compound, and thus the manganese in this chemical can be more readily used by plants and animals as a micronutrient. Because manganese is required in only small quantities, it typically is employed as an additive that is blended with other fertilizers or with animal feed. Impurities in the manganese sulfate product include various trace elements that are found in the ore, such as boron, cadmium, and arsenic. These impurities, however, are not present in sufficient amounts to pose a health risk to plants and animals.

---

<sup>5</sup> For the individual quotes used, the margins were, respectively, 142.25 percent for the f.o.b. China quote, 388.64 percent for the c.f.r. west coast quote, and 801.26 percent for the c.i.f. New York quote. The petitioner also asserted that the estimated dumping margins were understated because it had made no attempt to adjust for direct and indirect selling expenses incurred in connection with the U.S. sales.

<sup>6</sup> Mannsville Chemical Product Corp., Chemical Products Synopsis, July 1992.

According to the petitioner, AMT, the manganese sulfate that it produced until its manganese sulfate operations were shut down in September 1994 was all produced from manganous oxide.<sup>7</sup> The AMT product has typically contained 29 percent total manganese by weight; however, this has included some unreacted insoluble material, and thus the soluble manganese sulfate content of the material has been somewhat lower (about 27.8 percent).<sup>8</sup>

Manganese sulfate imported from China has a higher manganese content (about 31 percent) than the material produced by AMT, and it contains a lower percentage of insoluble materials. The higher manganese content of the Chinese material may be attributable either to a higher grade of ore used to make the manganese sulfate or to a more extensive purification process, or to a combination of both.<sup>9</sup> The manganese content of the product produced by AlliedSignal, Inc. (Allied), Morristown, NJ, the other domestic producer, is also significantly higher (about 32 percent) than the material produced by AMT.

According to one industry source, the solubility of manganese sulfate supplied by major suppliers to the U.S. market (including the Chinese material), other than the manganese sulfate produced by AMT, is over 99 percent.<sup>10</sup> AMT notes that the manganese sulfate offered by Allied is almost 100-percent soluble whereas the solubility of the manganese sulfate imported from China is between that of AMT's product (96 percent) and Allied's product.<sup>11</sup> According to several industry sources, the lower solubility of the manganese sulfate produced by AMT prevents that company from being a major player in the liquid fertilizer and liquid feed sector, a market that accounts for a substantial share of manganese sulfate consumption.<sup>12</sup>

Industry sources also noted that the preponderance of the manganese sulfate from China is in powder form, although some granular material at substantially higher prices has also been exported. According to one distributor, the fact that most of the Chinese material is in powder form is a significant disadvantage for the Chinese material because of problems associated with powder, such as dust.<sup>13</sup>

Although the Chinese material is of a relatively high manganese assay, purchasers have reported discrepancies between the published specifications and the actual product. Purchasers have also on occasion reported other quality problems, such as debris in the product.<sup>14</sup> According to the petitioner, however, the quality of the Chinese product has been improving.<sup>15</sup> Some distributors report that they typically screen the Chinese product before passing it on to the end users.

---

<sup>7</sup> Petition, pp. 7-8, 19, 24; supplement to petition, Dec. 14, 1994, p. 6; transcript of the conference (transcript), pp. 44, 46; staff conversation with Al Davis, Vice President, Engineering & Regulatory Affairs, AMT, Dec. 16, 1994.

<sup>8</sup> Assuming that the total manganese content of the manganese sulfate produced by AMT is 29.0 percent, the solubility of the product is  $(27.8 \div 29.0) \times 100 = 96$  percent; thus, 4 percent of the product consists of insoluble materials.

<sup>9</sup> Staff conversation with Al Davis, Vice President, Engineering & Regulatory Affairs, AMT, Dec. 16, 1994.

<sup>10</sup> \*\*\*.

<sup>11</sup> Postconference brief of AMT at 7.

<sup>12</sup> Staff conversation with \*\*\*. AMT noted that \*\*\*. Staff conversation with Perry J. Hohman, AMT, Jan. 5, 1995.

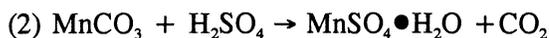
<sup>13</sup> As shown below in appendix C of this report, however (tables C-3, C-4), since 1992 imports of granular manganese sulfate from China have been substantial. In 1993, for example, imports of granular manganese sulfate from China exceeded imports of the powdered form.

<sup>14</sup> Transcript, p. 26.

<sup>15</sup> Ibid.

## Manufacturing Process

Manganese sulfate is typically produced by the reaction of sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) either with manganous oxide (MnO) or with manganese carbonate (MnCO<sub>3</sub>) in an agitated reactor, as shown in the chemical reactions displayed below.



AMT uses the first procedure shown above to produce powdered and granular manganese sulfate from manganous oxide that it purchases.<sup>16</sup> To produce a powder, the manganese sulfate, which first appears as a wet slurry, is simply dried in a rotary or spray dryer. To produce manganese sulfate in granular form, the manganese sulfate slurry is normally sprayed in a granulator. In this apparatus, the droplets of manganese sulfate are circulated and partially dried until they condense as moist granules. Upon further drying in a rotary dryer, hard granules are formed.

According to one industry source, the Chinese production process is similar to the process used by AMT. The principal difference is that in the Chinese production process all the steps in the production process--including the conversion of the ore, manganese dioxide, into manganous oxide and the conversion of manganous oxide into manganese sulfate--are carried out at the same production site.<sup>17</sup>

Manganese sulfate is also produced as a byproduct or coproduct.<sup>18</sup> Allied produces manganese sulfate as a coproduct of anisaldehyde production. In Allied's production process, manganese sulfate is produced from crude manganese dioxide (MnO<sub>2</sub>) ore by reducing the manganese dioxide with an organic reagent in the presence of sulfuric acid. The product is then filtered and spray-dried.<sup>19</sup>

## Substitute Products

Manganous oxide is a substitute, albeit an imperfect one, for manganese sulfate in both animal feed applications and plant applications.<sup>20</sup> Although manganous oxide is only slightly soluble, especially in acidic soils, the manganese ion eventually will dissolve. Some studies have indicated that because of the insolubility of manganous oxide relative to manganese sulfate, a user must purchase significantly more manganous oxide than manganese sulfate in order to achieve the same beneficial effect.

Another substitute for manganese sulfate is manganese oxysulfate. In this product, manganese oxide is sulfated with sulfuric acid and granulated; the product can be considered to be a mix of manganous oxide and manganese sulfate. Manganese succrate, a third possible substitute, is produced from roasted ore (MnO) by reacting the manganous oxide with a binder followed by granulation.

---

<sup>16</sup> AMT did not sell the powdered form of manganese sulfate during the period examined.

<sup>17</sup> \*\*\*.

<sup>18</sup> Manganese sulfate was produced as a byproduct of hydroquinone manufacture by Eastman Chemical Co. (Eastman), a division of the Kodak Corp. Production of the chemical ceased in 1986.

<sup>19</sup> Staff conversation with Jack Boss, Allied, Dec. 21, 1994.

<sup>20</sup> According to the petitioner, manganous oxide cannot be used in agricultural applications because of its insolubility. Manganous oxide can be used in animal feed applications but is less efficient than manganese sulfate. Transcript, p. 30. Other industry sources report, however, that although manganese sulfate may be superior to manganous oxide in many agricultural applications, manganous oxide can be and is used in agricultural applications, such as citrus crops. See U.S. Bureau of Mines, Chemical Industry Applications of Industrial Minerals and Metals, prepared by Thomas Jones, Sept. 1993.

Manganese sucrate is especially useful in alkaline soils, because the presence of the sucrate binder prevents the manganese ion from being oxidized; should oxidation occur, the manganese would not be readily available to the plant.

### U.S. Tariff Treatment

Manganese sulfate is classified under subheading 2833.29.50 of the Harmonized Tariff Schedule of the United States (HTS), a basket category that includes certain other sulfate salts in addition to manganese sulfate.<sup>21</sup> U.S. imports of products classified under this subheading from countries entitled to the column-1-general (most-favored-nation (MFN)) treatment, including China, are subject to an ad valorem duty rate of 3.7 percent unless they are eligible for special duty treatment; the Chinese product receives no special tariff treatment.<sup>22</sup>

### THE U.S. MARKET

#### U.S. Producers

In its petition, AMT identified itself and Allied as the only firms currently producing manganese sulfate in the United States. AMT alleged in the petition that it currently accounts for approximately \*\*\* percent of U.S. production of manganese sulfate. Based on Allied's questionnaire response, it held a \*\*\*-percent share of U.S. production in 1993, with AMT accounting for the remainder. There is no indication on the record that there were additional producers of this product during the period examined.<sup>23</sup> Until the mid-1980s, however, Eastman was the major domestic source of manganese sulfate.<sup>24</sup> In 1986, Eastman discontinued manufacturing hydroquinone by this process, and sold its inventories and trade name to Sulfamex, a Mexican firm.

Of the two producers reporting data, AMT reported \*\*\*, whereas Allied reported shipments of \*\*\*. AMT indicated that it produces powdered manganese sulfate, but does not sell it commercially; rather it consumes the product internally in the production of granular manganese sulfate.<sup>25</sup> AMT has, however, announced plans to begin producing and marketing a line of powdered manganese sulfate with 29.5-percent manganese content.<sup>26</sup>

Manganese sulfate has been produced at AMT's Fairbury, NE, plant since 1979. Prior to 1988, however, the plant was owned and operated by Eagle Picher, a large chemical conglomerate. In 1988, AMT purchased the Fairbury plant and continued to produce both manganese sulfate and zinc sulfate at that location.<sup>27</sup> Such production continued uninterrupted until September 1994, when

---

<sup>21</sup> Sulfates of magnesium, aluminum, chromium, nickel, copper, zinc, barium, cobalt, iron, and vanadium are classified in other 8-digit HTS numbers.

<sup>22</sup> U.S. imports of manganese sulfate from countries that receive special tariff treatment, with the exception of India, enter free of duty.

<sup>23</sup> Prior to 1993, Allied's facilities for producing manganese sulfate were operated by Koch Industries, Wichita, KS. Accordingly, although three firms produced manganese sulfate during the period examined, such product was produced in only two facilities.

<sup>24</sup> Eastman produced manganese sulfate as a byproduct of its production of hydroquinone (a high-volume chemical used in photography), and sold it under the trade name Techmagnum.

<sup>25</sup> Field visit with AMT, Dec. 13, 1994. AMT indicated that its customers would accept granular product for applications normally using the powdered product. Postconference brief of AMT, pp. 4-5.

<sup>26</sup> AMT outlined these plans in a letter to selected customers informing them that \*\*\*. Postconference brief of AMT, p. 5.

<sup>27</sup> Upon purchasing the Fairbury plant, AMT \*\*\*. Field visit with AMT, Dec. 13, 1994.

AMT discontinued, at least temporarily, manganese sulfate production. AMT continues, however, to produce zinc sulfate in Fairbury, as well as at a smaller plant in Bartlesville, OK.<sup>28</sup> AMT serves a national market from its Fairbury facility.<sup>29</sup>

Allied's production of manganese sulfate dates from January 1993, when it purchased the manganese sulfate production operations of Koch Industries.<sup>30</sup> Allied currently produces powdered and granular manganese sulfate in its Pittsburg, KS, facility and also \*\*\*. Allied indicated that \*\*\*.

### U.S. Importers

The petition identified 9 firms that allegedly imported manganese sulfate from China during the period examined. Imports of manganese sulfate enter the United States under HTS subheading 2833.29.50, a basket category for sulfate chemicals. The Commission sent importers' questionnaires to 41 firms importing more than \$50,000 each under this subheading in either fiscal year 1991, fiscal year 1992, the fourth quarter of 1992, calendar year 1993, or January-August 1994, according to the Customs Net Import File (CNIF). The Commission sent importer questionnaires to all firms named in the petition (only 5 of which were listed in the CNIF), as well as to the 2 firms to whom it had sent producer questionnaires, for a total of 47 firms.

The Commission received usable data on imports of manganese sulfate from 12 companies. Twenty-two firms reported that they did not import any of the products covered by the questionnaire.<sup>31</sup> Eleven firms reported imports of powdered manganese sulfate, and five firms reported imports of granular manganese sulfate. Eleven firms reported imports of manganese sulfate from China, and one firm from other sources.<sup>32</sup> Companies responding to the Commission's questionnaire accounted for 95 percent, by value, of 1993 imports from China, based on official Commerce data.

There is no indication on the record that imports from China are geographically concentrated in any particular region of the United States.<sup>33</sup> One importer, \*\*\*, reported that it imports manganese sulfate for use in a manufacturing facility that produces various fertilizer products.<sup>34</sup> Other importers were primarily resellers and distributors of chemical fertilizer and animal feed products.<sup>35</sup>

---

<sup>28</sup> AMT claims to be \*\*\* of zinc sulfate in the United States. Until it ceased production of manganese sulfate, zinc sulfate comprised over \*\*\* percent of AMT's total production. Field visit with AMT, Dec. 13, 1994.

<sup>29</sup> Postconference brief of AMT at 10.

<sup>30</sup> As noted below in the section of this report entitled "Consideration of the Question of Material Injury to an Industry in the United States," Allied could not provide data on the manganese sulfate operations of Koch Industries prior to its acquisition of those operations; i.e., for calendar years 1991 and 1992. Data presented in that section regarding Allied are limited to calendar year 1993 and the 9-month periods January-September 1993 and January-September 1994. Staff contacted Koch Industries with a producer questionnaire, but did not receive a response to that inquiry.

<sup>31</sup> Thus, 13 firms either did not respond to the questionnaire or provided data that were unusable. One of these firms, \*\*\*, reported data on imports from China that were subsequently found to duplicate reported data from another firm; accordingly, its response was not used. Of the 13 nonresponding companies, only 1, \*\*\*, is known to be a significant importer of the subject merchandise from China.

<sup>32</sup> This firm \*\*\*.

<sup>33</sup> Transcript, pp. 34-35; postconference brief of AMT, pp. 12-13.

<sup>34</sup> This facility \*\*\*.

<sup>35</sup> One firm, \*\*\*, reported that it had to exit the animal feed market in mid-1994 because of lower prices of imported inputs.

Several importers reporting data are subsidiaries of, or related to, larger domestic or foreign companies. These firms, and their related companies, are presented in the tabulation below:

<u>Firm</u>	<u>Parent company</u>	<u>Percent ownership</u>
*** . . . . .	***	100
*** . . . . .	***	100
*** . . . . .	***	100
*** . . . . .	***	100

### Channels of Distribution

Manganese sulfate is a low-value, relatively heavy, commodity product shipped in large quantities. As a result, transportation, storage, and distribution costs are significant. Manganese sulfate is shipped in bulk or is packed in 25-kilogram bags or 1-ton supersacks and shipped by truck, rail, and barge.

Channels of distribution of manganese sulfate are slightly different for each of the two main end uses (animal feed premixes and fertilizer blends).<sup>36</sup> For animal feed use, U.S. producers and importers sell manganese sulfate to a premixer, who mixes the manganese sulfate with other micronutrients to make customized blends that are then sold directly to large animal feed manufacturers such as Purina or Cargill.<sup>37</sup> These premixers keep in stock quantities of all the micronutrients, including manganese sulfate, which they ship separately to smaller feed premixers or to feed manufacturers who modify their feed mixtures in-house. There are believed to be fewer than 10 large regional premixers. Large premixers include \*\*\*.<sup>38</sup> The demand for manganese sulfate in animal feed is generally stable over the entire year, but increases slightly in the winter months.

For fertilizer use, U.S. manganese sulfate manufacturers generally sell to regional distributors that sell the product to regional fertilizer blenders.<sup>39</sup> Imported Chinese manganese sulfate is reportedly sold directly to wholesalers or is stored in regional warehouses. There are a large number of fertilizer blenders that blend small quantities of micronutrients with the major fertilizer products (e.g., phosphorus, nitrogen, and potassium) and sell this blend within a radius of about 100 miles. The regional distributor often acts as a middleman for the U.S. manganese sulfate producer, carrying credit and supplying the latest technical and product information. These distributors may sell micronutrients from more than one supplier. For large blenders (e.g. regional cooperatives), the regional distributor may place an order and have the manganese sulfate delivered directly from the manufacturer to the blender.

Unlike the animal feed market, the market for fertilizer micronutrients is seasonal; thus, it is critical to build inventories at various points along the distribution chain. Market participants consistently noted regional availability as a significant factor in selling manganese sulfate. AMT

---

<sup>36</sup> The combined sales of manganese sulfate for animal feed and agriculture account for approximately 95 percent of total sales. Use of manganese sulfate in agriculture is somewhat larger than use in animal feed; within agricultural uses, citrus crops are the largest consumer.

<sup>37</sup> Manganese sulfate is sold to the animal feed industry only in powder or fine granular form.

<sup>38</sup> \*\*\*.

<sup>39</sup> Manganese sulfate is sold to the agriculture industry only as a granular or fine granular product.

stores \*\*\*, while Allied \*\*\*.<sup>40</sup> Importers of manganese sulfate from China reportedly store their material in California, Florida, in the Gulf region, and on the east coast.

### Apparent U.S. Consumption

The Commission received data on U.S. shipments of domestic product from both U.S. producers of manganese sulfate for at least part of the period examined. As noted previously, however, Allied reported data only for calendar year 1993 and for the interim periods January-September 1993 and January-September 1994. The Commission also received data on U.S. shipments of imports from virtually all firms importing the subject merchandise from China. Although coverage of subject imports is substantially complete, the Commission did not receive meaningful data on U.S. shipments of imports from nonsubject sources, particularly Mexico. A calculation of apparent consumption based exclusively on questionnaire data, therefore, would be significantly understated.<sup>41</sup>

Accordingly, apparent consumption presented in this section is based in part on data compiled in response to Commission questionnaires and in part on official U.S. import statistics. In particular, data on U.S. producers' shipments, shipments of imports from China, and shipments of imports from nonsubject sources other than Mexico are based on questionnaire responses. On the other hand, because of the lack of questionnaire data on imports from Mexico, data on shipments of imports from Mexico are based on official U.S. import statistics. Further, in order to show trends more accurately, data for Allied are not included for 1993. Appendix D presents an alternative calculation of apparent consumption, with import data exclusively based on official U.S. import statistics.

Apparent consumption of manganese sulfate, in terms of volume, increased strongly between 1991 and 1992, and then declined somewhat in 1993 (table 1). Consumption resumed its increase in January-September 1994 when compared with consumption in the corresponding 1993 period. The overall increase in the 3 full calendar years was primarily attributable to growth in imports, as U.S. shipments did not show steady growth. By contrast, the increase when the interim periods are compared was primarily affected by increases in U.S. shipments; U.S. shipments of imports actually declined slightly in January-September 1994 when compared to those in January-September 1993.

AMT testified that the demand for manganese sulfate is essentially derived from the demand for plant fertilizer and animal feed products.<sup>42</sup> AMT indicated that demand over the period examined has been relatively constant.<sup>43</sup> According to AMT, there is a persistent global oversupply of manganese sulfate, which may account for the fact that there are few worldwide producers of the

---

<sup>40</sup> Mexico is allegedly the largest foreign supplier of manganese sulfate to the U.S. market. Mexican manganese sulfate is reportedly stored in Mobile, AL, Fresno, CA, and Laredo, TX.

<sup>41</sup> AMT estimated at the conference that total U.S. consumption of manganese sulfate has amounted to around 25,000 short tons for the last several years, of which the two domestic producers supplied some 10,000 tons, Mexico from 11,000 to 14,000 tons, and other imports the remainder. AMT added that until 5 years ago Mexico was the only significant source of imported manganese sulfate; transcript, pp. 17-18, 20, 33, 38.

Further, in the petition AMT stated that U.S. demand for manganese sulfate has been level at approximately 30,000 tons per year for at least the last 4 years, with the two U.S. producers, AMT and Allied, in 1991 supplying roughly \*\*\* percent of U.S. demand. AMT noted that the domestic producers' share of the U.S. market has fallen off substantially since then, accounting for only about \*\*\* percent of U.S. consumption in 1993. Petition, p. 20.

<sup>42</sup> Field visit with AMT, Dec. 13, 1994. AMT estimated that the aggregate annual U.S. demand for manganese sulfate (25,000 tons) was distributed as follows: animal feed, 10,000 tons; citrus, 8,000 tons, other fertilizer, 5,000 tons; and industrial and other uses, 2,000 tons; postconference brief of AMT, p. 3.

<sup>43</sup> Transcript, p. 9. AMT commented that world demand may be increasing overall to the extent that agricultural tillage practices are improving in Third World countries. Transcript, p. 32.

product.<sup>44</sup> Nor have there been any inroads into the manganese sulfate market by potential substitute products; in AMT's view, there are no practical substitutes for manganese sulfate, at least in terms of alternate sources of manganese, because only manganese sulfate is soluble enough to be used as plant fertilizer.

Table 1  
Manganese sulfate: U.S. shipments of domestic product, U.S. shipments of imports, by sources, and apparent U.S. consumption, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994<sup>1</sup>

Item	1991	1992	1993	Jan.-Sept.--	
				1993	1994
<i>Quantity (short tons)</i>					
Producers' U.S. shipments . . . . .	***	***	***	***	***
Importers' U.S. shipments:					
China . . . . .	***	***	***	***	***
Mexico . . . . .	11,009	13,708	12,747	9,467	9,329
Other sources . . . . .	***	***	***	***	***
Total . . . . .	***	***	***	***	***
Apparent consumption . . . . .	***	***	***	***	***
<i>Value (1,000 dollars)</i>					
Producers' U.S. shipments . . . . .	***	***	***	***	***
Importers' U.S. shipments:					
China . . . . .	***	***	***	***	***
Mexico . . . . .	5,311	7,106	6,497	4,870	5,003
Other sources . . . . .	***	***	***	***	***
Total . . . . .	***	***	***	***	***
Apparent consumption . . . . .	***	***	***	***	***

<sup>1</sup> Data on U.S. producer shipments for 1991-93 are limited to shipments by AMT; interim period data include shipments by both AMT and Allied. Allied reported U.S. shipments in 1993 of \*\*\* short tons, valued at \$\*\*\*.

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

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

<sup>44</sup> Transcript, p. 33.

## CONSIDERATION OF MATERIAL INJURY TO AN INDUSTRY IN THE UNITED STATES

Section 771(7)(B) of the act (19 U.S.C. 1677(7)(B)) provides that in making its determination in this investigation the Commission--

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

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

Section 771(7)(C) of the act (19 U.S.C. 1677(7)(C)) further provides that--

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

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

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

Available information on the volume of imports (item (B)(I) above) is presented in the section of this report entitled "U.S. Imports." Information on the other factors specified is presented in this section, and (except as noted) is based on the questionnaire responses of two firms (AMT and Allied) that accounted for 100 percent of U.S. production of manganese sulfate during 1993. As indicated previously, Allied reported data only for calendar year 1993 and for the interim periods January-September 1993 and January-September 1994. As a result, total industry trends are not discernible except through a comparison of the interim periods and any discussion in this section concerning industry performance during the period 1991-93 is limited to data provided by AMT.

## U.S. Production, Capacity, and Capacity Utilization

Between 1991 and 1993, AMT reported no changes in capacity to produce manganese sulfate, while production increased steadily, by \*\*\* percent (table 2). As a result, capacity utilization moved upward, from \*\*\* percent in 1991 to \*\*\* percent in 1993. When the interim January-September periods of 1993 and 1994 are compared, data submitted by AMT and Allied show increases in both capacity and production, of \*\*\* and \*\*\* percent respectively. Because production increased at a greater rate than capacity, capacity utilization grew slightly, from \*\*\* to \*\*\* percent.

Table 2

Manganese sulfate: U.S. end-of-period capacity, production, and capacity utilization, by firms, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

Although the products marketed by the two firms are similar, the production processes used by AMT and Allied to manufacture manganese sulfate differ fundamentally. Allied produces manganese sulfate as a coproduct of its production of anisaldehyde, whereas AMT's manganese sulfate output results from a deliberate production decision.<sup>45</sup> AMT operates its plant \*\*\*. AMT reported that \*\*\*.<sup>46</sup>

AMT commented that there is a slight degree of seasonality in production of manganese sulfate in that production follows the fertilizer market, which is strong in the early spring and weak in the autumn months.<sup>47</sup> AMT reported \*\*\*. AMT procures its manganous oxide feedstock from \*\*\*. According to AMT, manganous oxide prices have been relatively flat for the past few years.<sup>48</sup>

## U.S. Producers' Domestic Shipments

Both AMT and Allied reported data on their domestic shipments of manganese sulfate. Neither producer reported any export shipments or company transfers.<sup>49</sup> \*\*\* of AMT's shipments were of granular product, as were \*\*\* percent of Allied's shipments.<sup>50</sup> Separate data on powdered and granular manganese sulfate are presented in appendix C.

The quantity of AMT's domestic shipments of manganese sulfate first moved upward from 1991 to 1992, then declined somewhat, by \*\*\* percent, in 1993 (table 3). When the interim-period data are examined, the sum of both producers' domestic shipments, in volume terms, increased markedly, by \*\*\* percent. Individual shipment trends varied, however, when the interim January-September periods are compared, with AMT's shipments \*\*\* and Allied's shipments \*\*\*. Value-based data show identical patterns. Unit values of domestic shipments \*\*\* for AMT, and remained fairly constant between the interim periods. Allied's unit values \*\*\* from January-September 1993 to the corresponding period of 1994.

---

<sup>45</sup> These technologies have remained unchanged in recent years; transcript, p. 14.

<sup>46</sup> AMT noted that \*\*\*. Field visit with AMT, Dec. 13, 1994.

<sup>47</sup> Transcript, p. 67.

<sup>48</sup> Transcript, p. 52.

<sup>49</sup> AMT identified South Asia as an emerging export market, but alleged that it was unable to be competitive in that market because of low price levels. Transcript, p. 28.

<sup>50</sup> AMT summarized the approximate percentage of its sales accounted for by each of the major applications as follows: animal feed, \*\*\* percent; citrus, \*\*\* percent; other fertilizer, \*\*\* percent; and industrial and other uses, \*\*\* percent. Postconference brief of AMT, p. 3.

Table 3  
Manganese sulfate: U.S. producers' domestic shipments, by firms, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

### U.S. Producers' Inventories

Both responding producers reported data on their end-of-period inventories of manganese sulfate during the period examined (table 4). With regard to these data, during the period 1991 through 1993, AMT's end-of-period inventories first declined in 1992, then rebounded in 1993, but still remained at a fairly low level with regard to preceding-period shipments. When the January-September periods of 1993 and 1994 are compared, however, inventories as a ratio to preceding-period shipments for both producers rose overall to a periodic high of \*\*\* percent. Inventory levels for both responding producers were higher as of September 30, 1994, than at the same point the previous year. Allied's inventories \*\*\*.

Table 4  
Manganese sulfate: End-of-period inventories of U.S. producers, by firms, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

Because production of manganese sulfate fluctuates on a seasonal basis, inventories of manganese sulfate fluctuate as well. AMT noted that inventories are highest in the second half of the year, as inventory levels increase in anticipation of the spring fertilizer buying season.<sup>51</sup> AMT \*\*\*.<sup>52</sup> \*\*\*.

### U.S. Employment, Wages, and Productivity

AMT and Allied provided data on the number of production and related workers (PRWs) engaged in the production of manganese sulfate, the total hours worked by such workers, and the wages and total compensation paid to such workers during the period examined (table 5). For AMT, all these indicators rose steadily between 1991 and 1993; hourly wages, hourly compensation, and productivity also rose overall, although unit labor costs showed no clear trend. A comparison of the 9-month interim periods of 1993 and 1994, based on data from both AMT and Allied, shows small declines in total employment, hours worked, and wages paid, while total compensation increased. Labor productivity was sharply higher in January-September 1994 than in the corresponding period of 1993, while unit labor costs decreased.

---

<sup>51</sup> Transcript, p. 67.

<sup>52</sup> Field visit with AMT, Dec. 13, 1994.

Table 5

Average number of production and related workers producing manganese sulfate, hours worked, wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs, by firms, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

AMT characterized the manufacturing process for manganese sulfate as \*\*\*.<sup>53</sup> Workers in AMT's plant are primarily skilled; AMT estimated that the training process for machine operators takes from 12 to 18 months.<sup>54</sup> AMT's production employees are not represented by any union. Neither AMT nor Allied \*\*\*. AMT, however, noted that \*\*\*.<sup>55</sup>

**Financial Experience of U.S. Producers**

Financial information was provided on manganese sulfate operations, in addition to overall establishment operations, only by the petitioner.<sup>56</sup> These data, representing \*\*\* percent of U.S. production of manganese sulfate in 1993, are presented in this section. The other U.S. producer, Allied, provided limited financial data for 1993, interim 1993, and interim 1994.

**Overall Establishment Operations**

Income-and-loss data on AMT's overall establishment operations are presented in table 6. In addition to the product under investigation, AMT indicated in its questionnaire response that it produces various forms of zinc sulfate in its overall establishment operations. AMT's manganese sulfate net sales in 1993 were \*\*\* percent of its overall establishment net sales.

Table 6

Income-and-loss experience of AMT on the overall operations of its establishments wherein manganese sulfate is produced, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

**Operations on Manganese Sulfate**

Income-and-loss data for AMT's manganese sulfate operations are presented in table 7 and shown in figure E-1 in appendix E. AMT experienced \*\*\*.<sup>57</sup> Also, \*\*\*.

<sup>53</sup> Field visit with AMT, Dec. 13, 1994.

<sup>54</sup> Transcript, p. 35.

<sup>55</sup> Field visit with AMT, Dec. 13, 1994.

<sup>56</sup> AMT has fiscal periods ending June 30.

<sup>57</sup> Staff conversation with Perry Hohman, Vice President-Finance, AMT, Dec. 19, 1994.

Table 7

Income-and-loss experience of AMT on its operations producing manganese sulfate, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

Allied provided \*\*\* financial data on manganese sulfate. An Allied representative indicated that data for 1991 and 1992 were not available because \*\*\*.<sup>58</sup> Allied considers manganese sulfate a \*\*\* of the plant operations.<sup>59</sup> The partial financial data of Allied are presented separately and combined with AMT's data in appendix F.

**Investment in Productive Facilities**

The value of property, plant, and equipment and total assets for AMT are presented in table 8.

Table 8

Value of assets and return on assets of AMT's establishment wherein manganese sulfate is produced, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

**Capital Expenditures**

Capital expenditures reported by AMT are presented in table 9.

Table 9

Capital expenditures reported by AMT, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

**Research and Development Expenses**

AMT indicated \*\*\* for research and development during the period of investigation.

**Capital and Investment**

The Commission requested the U.S. producers to describe any actual or potential negative effects of imports of manganese sulfate from China on their existing development and production efforts, growth, investment, and ability to raise capital. Their responses are shown in appendix E.

---

<sup>58</sup> The same representative indicated that it did not provide \*\*\*. Staff phone conversations with \*\*\*.

<sup>59</sup> \*\*\*.

## CONSIDERATION OF THREAT OF MATERIAL INJURY TO AN INDUSTRY IN THE UNITED STATES

Section 771(7)(F)(i) of the act (19 U.S.C. 1677(7)(F)(i)) provides that--

In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the merchandise, the Commission shall consider, among other relevant economic factors<sup>60</sup>--

(I) If a subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the subsidy is an export subsidy inconsistent with the Agreement),

(II) any increase in production capacity or existing unused capacity in the exporting country likely to result in a significant increase in imports of the merchandise to the United States,

(III) any rapid increase in United States market penetration and the likelihood that the penetration will increase to an injurious level,

(IV) the probability that imports of the merchandise will enter the United States at prices that will have a depressing or suppressing effect on domestic prices of the merchandise,

(V) any substantial increase in inventories of the merchandise in the United States,

(VI) the presence of underutilized capacity for producing the merchandise in the exporting country,

(VII) any other demonstrable adverse trends that indicate the probability that the importation (or sale for importation) of the merchandise (whether or not it is actually being imported at the time) will be the cause of actual injury,

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

---

<sup>60</sup> Section 771(7)(F)(ii) of the act (19 U.S.C. 1677(7)(F)(ii)) provides that "Any determination by the Commission under this title that an industry in the United States is threatened with material injury shall be made on the basis of evidence that the threat of material injury is real and that actual injury is imminent. Such a determination may not be made on the basis of mere conjecture or supposition."

(IX) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both), and

(X) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the like product.<sup>61</sup>

Information on the volume, U.S. market penetration, and pricing of imports of the subject merchandise (items (III) and (IV) above) is presented in the section entitled "Consideration of the Causal Relationship Between Imports of the Subject Merchandise and the Alleged Material Injury;" and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts (item (X)) is presented in appendix E. Available information on U.S. inventories of the subject products (item (V)); foreign producers' operations, including the potential for "product-shifting" (items (II), (VI), and (VIII) above); any other threat indicators, if applicable (item (VII) above); and any dumping in third-country markets, follows. Other threat indicators have not been alleged or are otherwise not applicable.

#### U.S. Importers' Inventories

Of the 11 firms reporting imports of manganese sulfate from China, only 5 reported end-of-period inventories of those imports (table 10). End-of-period inventories of imports from China increased markedly from only \*\*\* tons at the end of 1991 to \*\*\* tons at yearend 1993; these imports also increased strongly as a ratio to preceding-period U.S. shipments. When the interim January-September periods are compared, however, both the absolute level of inventories of subject imports and their ratio to shipments declined. Reported inventories of imports from nonsubject sources were minuscule throughout the period examined, although coverage for product from Mexico is incomplete.

Importers did not report any unusual problems in sourcing from China during the period examined, or with the overall quality of the product. Some importers, however, noted shipping problems such as broken bags and improper particle sizing that made them reluctant to deal with China in the future.<sup>62</sup> AMT alleged that most importers generally do not order direct for the customer, but rather hold substantial stocks.<sup>63</sup>

In its questionnaire the Commission requested importers to list any expected deliveries of manganese sulfate from China after September 30, 1994. Data received in response to this request are presented in the following tabulation:

---

<sup>61</sup> Section 771(7)(F)(iii) of the act (19 U.S.C. 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other GATT member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

<sup>62</sup> E.g., phone conversation with \*\*\*, Dec. 19, 1994.

<sup>63</sup> Transcript, p. 25.

<u>Importer</u>	<u>Quantity (metric tons)</u>	<u>Expected delivery</u>
***	***	Feb. 1995
***	***	Dec. 1994
***	***	Jan. 1995
***	***	Nov. 1994
***	***	Mar. 1995
***	***	Jan. 1995
Total	1,646	

Table 10  
Manganese sulfate: End-of-period inventories of U.S. importers, by sources, 1991-93, Jan.-Sept. 1993,  
and Jan.-Sept. 1994

<u>Item</u>	1991	1992	1993	<u>Jan.-Sept.--</u>	
				1993	1994
	<u>Quantity (short tons)</u>				
China	***	269	***	***	787
Other sources	***	***	***	***	***
Total	***	***	***	***	***
	<u>Ratio to U.S. shipments of imports (percent)</u>				
China	***	30.7	***	***	23.0
Other sources	***	***	***	***	***
Average	***	***	***	***	***

<sup>1</sup> Not applicable.

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information. Part-year inventory ratios are annualized.

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

#### **Ability of Foreign Producers to Generate Exports and the Availability of Export Markets other than the United States**

In its petition, AMT alleged that there are at least six firms producing manganese sulfate in China, four of which are divisions of the China National Chemicals Import Export Corp., in Beijing, Changsha, Dalian, and Nanjing.<sup>64</sup> In addition, AMT listed a firm in Hong Kong, Hunan Chemicals and Medicines Company, Ltd., that it alleged was offering manganese sulfate produced in China for

<sup>64</sup> Petition, p. 10. As noted above in the section of this report entitled "The Product," Chinese producers of manganese sulfate apparently use similar production processes to those employed by AMT; transcript, p. 13.

export to the United States.<sup>65</sup> None of the named firms was represented by counsel; as a result, the Commission did not receive data pertaining to their specific operations. The Commission also requested the U.S. Embassy in Beijing and the U.S. Consulate in Hong Kong to provide data on these firms' operations. No information was supplied in response to this request. Finally, the Commission attempted to obtain information on the industry in China from officials at the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) in Beijing; it was unsuccessful in this attempt.<sup>66</sup>

## **CONSIDERATION OF THE CAUSAL RELATIONSHIP BETWEEN IMPORTS OF THE SUBJECT MERCHANDISE AND THE ALLEGED MATERIAL INJURY**

### **U.S. Imports**

As noted above in the section of this report entitled "U.S. Importers," imports of manganese sulfate are provided for under a basket tariff category (HTS item No. 2833.29.50) that also provides for sulfates of all other metals not specially enumerated in heading 2833. As a result, import data presented below are based on responses to Commission questionnaires. The Commission received data from virtually all major importers of manganese sulfate from China during the period examined. By contrast, data on imports from nonsubject sources of manganese sulfate reported in response to Commission questionnaires constitute only 1 percent, by value, of total imports from those sources in 1993, based on official statistics.<sup>67</sup> Most of these imports, however, except product from Mexico, are believed to consist of products other than manganese sulfate.<sup>68</sup>

Imports of manganese sulfate from China increased sharply, both in terms of quantity and value, between 1991 and 1993, rising nearly fourfold (table 11). Such imports reversed direction in January-September 1994 compared to January-September 1993, however, falling by 30 percent in terms of volume. Unit values fell consistently during the period examined. Reported imports of manganese sulfate from other sources were limited to imports by one firm, \*\*\*. As seen in the table, unit values for this product are \*\*\* those associated with the subject imports.<sup>69</sup>

In its questionnaire the Commission also requested importers to provide information on their company transfers, domestic shipments, and export shipments of imported merchandise. The vast majority of importers reported sales as domestic shipments, with only one firm, \*\*\*, reporting any export shipments and one additional firm, \*\*\*, reporting company transfers. The Commission also requested U.S. producers to respond to its importer questionnaire. Neither AMT nor Allied imported the subject merchandise during the period examined.

---

<sup>65</sup> AMT indicated that it is unaware of any production operations in Hong Kong. Transcript, p. 16.

<sup>66</sup> These officials had supplied information to the Commission in past investigations involving China.

<sup>67</sup> Data on imports of powdered and granular manganese sulfate are also based on responses to Commission questionnaires, and are presented in appendix C. Data on imports of manganese sulfate, based on official U.S. import statistics, are presented in appendix G. Import data presented in appendix G for China and Mexico are believed to consist virtually exclusively of imports of manganese sulfate.

<sup>68</sup> AMT indicated at the conference that, except for minor quantities of highly-priced pharmaceutical-grade material, the only additional foreign source of manganese sulfate represented by imports under HTS item No. 2833.29.50 was Mexico. Transcript, p. 23. As noted above in the section of this report entitled "Apparent U.S. Consumption," the Commission did not receive questionnaire data on imports from Mexico.

<sup>69</sup> AMT indicated that minor quantities of specialized pharmaceutical-grade manganese sulfate have been imported from Europe, primarily for use in vitamin supplements. Transcript, p. 23.

Table 11  
Manganese sulfate: U.S. imports, by sources, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

Item	1991	1992	1993	Jan.-Sept.--	
				1993	1994
<i>Quantity (short tons)</i>					
China . . . . .	1,189	3,737	5,812	5,482	3,852
Other sources . . . . .	***	***	***	***	***
Total . . . . .	***	***	***	***	***
<i>Value (1,000 dollars)</i>					
China . . . . .	417	1,174	1,689	1,594	991
Other sources . . . . .	***	***	***	***	***
Total . . . . .	***	***	***	***	***
<i>Unit value (per short ton)</i>					
China . . . . .	\$351	\$314	\$291	\$291	\$257
Other sources . . . . .	***	***	***	***	***
Average . . . . .	428	344	313	309	283

Note.--Unit values are calculated using data of firms supplying both numerator and denominator information.

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

### U.S. Market Penetration by Imports

As the Commission received usable data from the two known U.S. producers of manganese sulfate, reported U.S. shipments are believed to constitute virtually 100 percent, by quantity, of U.S. shipments of such merchandise during 1993 and the interim periods. Similarly, reported shipments of imports of manganese sulfate from China comprise a substantial majority of total imports of the subject merchandise from China according to official U.S. import statistics. Because questionnaire coverage of imports from Mexico (a significant nonsubject source) was very low, however, data on the penetration of the U.S. market for manganese sulfate by imports, as presented in table 12, are based on a combination of information submitted in response to Commission questionnaires (for U.S. producers' shipments and shipments of imports from China) and official U.S. import statistics (for imports from Mexico). An alternative calculation of market penetration, using official U.S. import statistics exclusively, is presented in appendix H.

The share of imports from China in the quantity of apparent U.S. consumption increased substantially from 8 percent in 1991 to 23 percent in 1993, with the larger part of the increase coming between 1991 and 1992. The Chinese market share declined by 1 percentage point when the January-September periods of 1993 and 1994 are compared. In value terms, the Chinese share of the market for manganese sulfate also increased between 1991 and 1993, gaining 12 percentage points over the period. The decline in subject import market share when the 9-month interim periods are compared was nearly 1.5 percentage points.

Table 12

Manganese sulfate: Apparent U.S. consumption and market penetration, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994<sup>1</sup>

Item	1991	1992	1993	Jan.-Sept.--	
				1993	1994
<i>Quantity (short tons)</i>					
Apparent consumption . . . . .	***	***	***	***	***
<i>Value (1,000 dollars)</i>					
Apparent consumption . . . . .	***	***	***	***	***
<i>Share of the quantity of U.S. consumption (percent)</i>					
Producers' U.S. shipments . . . . .	***	***	***	***	***
Importers' U.S. shipments:					
China . . . . .	7.6	16.5	22.6	21.8	20.7
Mexico . . . . .	***	***	***	***	***
Other sources . . . . .	***	***	***	***	***
Total . . . . .	***	***	***	***	***
<i>Share of the value of U.S. consumption (percent)</i>					
Producers' U.S. shipments . . . . .	***	***	***	***	***
Importers' U.S. shipments:					
China . . . . .	6.1	11.9	17.5	17.4	16.0
Mexico . . . . .	***	***	***	***	***
Other sources . . . . .	***	***	***	***	***
Total . . . . .	***	***	***	***	***

<sup>1</sup> Data on U.S. producer shipments for 1991-93 are limited to shipments by AMT; interim period data include shipments by both AMT and Allied. Allied reported U.S. shipments in 1993 of \*\*\* short tons, valued at \$\*\*\*. With these numbers included, consumption in 1993 was \*\*\* short tons, valued at \$\*\*\*; market shares based on quantity and value were \*\*\* and \*\*\* percent for U.S. producers, \*\*\* and \*\*\* percent for shipments of imports from China, and \*\*\* and \*\*\* percent for shipments of imports from Mexico.

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

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

## Prices

### Marketing Practices

There are two domestic manufacturers of manganese sulfate, AMT and Allied. AMT sells \*\*\*. It appears that AMT \*\*\*. The vast majority of its sales are of \*\*\*. AMT does not \*\*\*. Allied, the other domestic producer, sells \*\*\*. Allied sells \*\*\*. Importers sell through brokers, distributors, or a combination of the two, primarily to animal feed premixers.<sup>70</sup> Manganese sulfate, along with other micronutrients, is mixed in small quantities with much larger quantities of either primary animal feed or primary fertilizer components. Manganese sulfate accounts for a small portion of the value of the finished animal feed or fertilizer.

The demand for manganese sulfate is a derived demand based on the demand for animal feed and fertilizer. These are both mature sectors of the economy, where demand is expected to grow very slowly in the future. Demand for fertilizer is seasonal, but predictable, while demand for animal feed is generally constant throughout the year. Although most market participants state that recent demand for manganese sulfate has been flat, a chemical trade journal reported that in 1990, U.S. consumption of manganese sulfate was one-half of its 1980 level.<sup>71</sup> Further, the supply of manganese sulfate was disrupted in the 1980s, when Eastman, the major domestic supplier of manganese sulfate at that time, exited the industry.

AMT quotes prices \*\*\*. The company offers a price list and a \*\*\* discount to distributors, with delivery in 30 days. Both AMT and Allied sold \*\*\* of their products on a spot basis with no particular contractual conditions. In addition, both AMT and Allied sold \*\*\*, and \*\*\* of AMT's sales were \*\*\*. AMT considers inland transportation costs to be important, accounting for \*\*\* of its delivered costs.<sup>72</sup>

Imported manganese sulfate is sold to fertilizer blenders through distributors, or to animal feed premixers either through distributors or directly. Both fertilizer and animal feed companies are located throughout the United States; however, some of the largest markets for manganese sulfate are in the citrus industry, which is concentrated in Florida. The Chinese imported product may be shipped directly from China or distributed from storage facilities in the United States.<sup>73</sup>

Average lead times for product shipped from China were 2 to 3 months, while lead times for shipments from U.S. storage facilities required from \*\*\*.<sup>74</sup> Transportation costs were reported to account for \*\*\*. Many importers, however, reported only ocean transportation costs. All but one respondent stated that transportation was an important cost factor. Responses varied as to whether the buyer or the seller paid the transportation costs. The majority of imported manganese sulfate was sold in 25-kilogram bags or in 1-ton supersacks. A standard volume was 22 short tons, which represents one container or truck trailer.

Importers sold their manganese sulfate on the spot market or under very short contracts, which were renegotiated every few months. Only one Chinese importer reported supplying a price list.

---

<sup>70</sup> There is a hazy distinction between some brokers and distributors. At one extreme, some brokers simply buy Chinese manganese sulfate for a domestic consumer and take a percentage of the sale. At the other extreme, full-service distributors provide a number of commercial services for the domestic consumer (e.g., carrying credit). There also appear, however, to be distributors who act more like middlemen, offering few commercial services. Some distributors buy Chinese manganese sulfate through brokers.

<sup>71</sup> "Chemical Profile: Manganese Sulfate," *Chemical Marketing Reporter*, Apr. 12, 1990.

<sup>72</sup> Allied \*\*\*.

<sup>73</sup> One importer stated that it ships all its product from Canton, MO.

<sup>74</sup> AMT noted that \*\*\*.

While sales terms varied from importer to importer, receipt of a pre-shipment sample verifying content and purity was always required.

### Questionnaire Price Data

The Commission requested U.S. producers and importers to provide U.S. f.o.b. prices for their largest sale, total sales quantities, and total sales values in each quarter between January 1991 and September 1994 for the following three products:

Product 1: Manganese sulfate monohydrate ( $\text{MnSO}_4 \bullet \text{H}_2\text{O}$ ), 29 to 32 percent manganese, 95 to 99 percent soluble manganese, granular or prilled form (particle size approximately -6 +16 Tyler).

Product 2: Manganese sulfate monohydrate ( $\text{MnSO}_4 \bullet \text{H}_2\text{O}$ ), 29 to 32 percent manganese, 95 to 99 percent soluble manganese, fine granular or prilled form (particle size approximately -20 +40 Tyler).

Product 3: Manganese sulfate monohydrate ( $\text{MnSO}_4 \bullet \text{H}_2\text{O}$ ), 29 to 32 percent manganese, 95 to 99 percent soluble manganese, powder (standard) form.

The 2 U.S. producers and 10 importers of the Chinese product provided pricing data. In 1993, reported pricing data accounted for 100 percent of U.S. shipments of U.S.-produced manganese sulfate and 100 percent of U.S. shipments of Chinese manganese sulfate. Weighted-average f.o.b. prices of U.S.-produced and imported Chinese manganese sulfate are presented in tables 13-15 and figures 1 and 2.

For product 1, Chinese producers' prices were lower than U.S. producers' prices in all 6 quarters for which prices were reported by margins ranging from 10.0 to 18.5 percent. For product 2, Chinese producers' prices were lower than prices of the U.S. product in 5 instances by margins of 2.7 to 12.0 percent and were higher than prices of the U.S. product in 2 instances with margins ranging from 0.5 to 5.0 percent. For product 3, the Chinese product was priced considerably higher than the U.S.-produced product, with margins ranging from 16.3 to 50.8 percent. Allied, however, was \*\*\*. \*\*\*.

### Exchange Rates

Quarterly data reported by the International Monetary Fund indicate that the nominal value of the Chinese yuan depreciated by 9.9 percent in relation to the U.S. dollar during the period January-March 1991 through October-December 1993, then depreciated sharply beginning in October-December 1993 to end, in July-Sept. 1994, 36.4 percent below the initial-period value (figure 3). The sharp drop in the nominal exchange rate at the beginning of 1994 is the result of changes in the way the People's Bank of China sets the exchange rate.<sup>75</sup> Producer price index information for China is unavailable; thus, real exchange rates cannot be calculated.

---

<sup>75</sup> International Monetary Fund, *International Financial Statistics*, Dec. 1994, p. 165.

Table 13

Manganese sulfate: Weighted-average net f.o.b. prices and total quantities of product 1 sold, and margins of underselling, by sources and by quarters, Jan. 1991-Sept. 1994

Period	United States		China		
	Price	Quantity	Price	Quantity	Margin
	<i>Per short ton</i>	<i>Short tons</i>	<i>Per short ton</i>	<i>Short tons</i>	<i>Percent</i>
1991:					
Jan.-Mar . . . . .	\$***	***	(1)	(1)	(2)
Apr.-June . . . . .	***	***	(1)	(1)	(2)
July-Sept . . . . .	***	***	(1)	(1)	(2)
Oct.-Dec . . . . .	***	***	(1)	(1)	(2)
1992:					
Jan.-Mar . . . . .	***	***	(1)	(1)	(2)
Apr.-June . . . . .	***	***	(1)	(1)	(2)
July-Sept . . . . .	***	***	(1)	(1)	(2)
Oct.-Dec . . . . .	***	***	(1)	(1)	(2)
1993:					
Jan.-Mar . . . . .	***	***	(1)	(1)	(2)
Apr.-June . . . . .	***	***	\$***	***	13.9
July-Sept . . . . .	***	***	***	***	23.5
Oct.-Dec . . . . .	***	***	***	***	10.0
1994:					
Jan.-Mar . . . . .	***	***	***	***	17.5
Apr.-June . . . . .	***	***	***	***	18.0
July-Sept . . . . .	***	***	***	***	18.5

<sup>1</sup> No sales reported.

<sup>2</sup> Margin not calculated.

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

Table 14

Manganese sulfate: Weighted-average net f.o.b. prices and total quantities of product 2 sold, and margins of underselling/(overselling), by sources and by quarters, Jan. 1991-Sept. 1994

Period	United States		China		Margin
	Price	Quantity	Price	Quantity	
	<i>Per short ton</i>	<i>Short tons</i>	<i>Per short ton</i>	<i>Short tons</i>	
1991:					
Jan.-Mar . . . . .	\$***	***	(1)	(1)	(2)
Apr.-June . . . . .	***	***	(1)	(1)	(2)
July-Sept . . . . .	***	***	(1)	(1)	(2)
Oct.-Dec . . . . .	***	***	(1)	(1)	(2)
1992:					
Jan.-Mar . . . . .	***	***	(1)	(1)	(2)
Apr.-June . . . . .	***	***	(1)	(1)	(2)
July-Sept . . . . .	***	***	(1)	(1)	(2)
Oct.-Dec . . . . .	***	***	(1)	(1)	(2)
1993:					
Jan.-Mar . . . . .	***	***	\$***	***	11.3
Apr.-June . . . . .	***	***	***	***	2.7
July-Sept . . . . .	***	***	***	***	(0.5)
Oct.-Dec . . . . .	***	***	***	***	3.5
1994:					
Jan.-Mar . . . . .	***	***	***	***	(5.0)
Apr.-June . . . . .	***	***	***	***	9.7
July-Sept . . . . .	***	***	***	***	12.0

<sup>1</sup> No sales reported.

<sup>2</sup> Margin not calculated.

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

Table 15

Manganese sulfate: Weighted-average net f.o.b. prices and total quantities of product 3 sold, and margins of (overselling), by sources and by quarters, Jan. 1991-Sept. 1994

Period	United States		China		Margin
	Price	Quantity	Price	Quantity	
	<i>Per short ton</i>	<i>Short tons</i>	<i>Per short ton</i>	<i>Short tons</i>	
1991:					
Jan.-Mar . . . . .	(1)	(1)	\$***	***	(2)
Apr.-June . . . . .	(1)	(1)	***	***	(2)
July-Sept . . . . .	(1)	(1)	***	***	(2)
Oct.-Dec . . . . .	(1)	(1)	***	***	(2)
1992:					
Jan.-Mar . . . . .	(1)	(1)	***	***	(2)
Apr.-June . . . . .	(1)	(1)	***	***	(2)
July-Sept . . . . .	(1)	(1)	***	***	(2)
Oct.-Dec . . . . .	(1)	(1)	***	***	(2)
1993:					
Jan.-Mar . . . . .	\$***	***	***	***	(39.2)
Apr.-June . . . . .	***	***	***	***	(40.3)
July-Sept . . . . .	***	***	***	***	(50.8)
Oct.-Dec . . . . .	***	***	***	***	(35.6)
1994:					
Jan.-Mar . . . . .	***	***	***	***	(20.3)
Apr.-June . . . . .	***	***	***	***	(16.3)
July-Sept . . . . .	***	***	***	***	(17.2)

<sup>1</sup> No sales reported.

<sup>2</sup> Margin not calculated.

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

Figure 1

Manganese sulfate: Weighted-average net f.o.b. prices of products 1 and 2, by sources and by quarters, Jan. 1991-Sept. 1994

\* \* \* \* \*

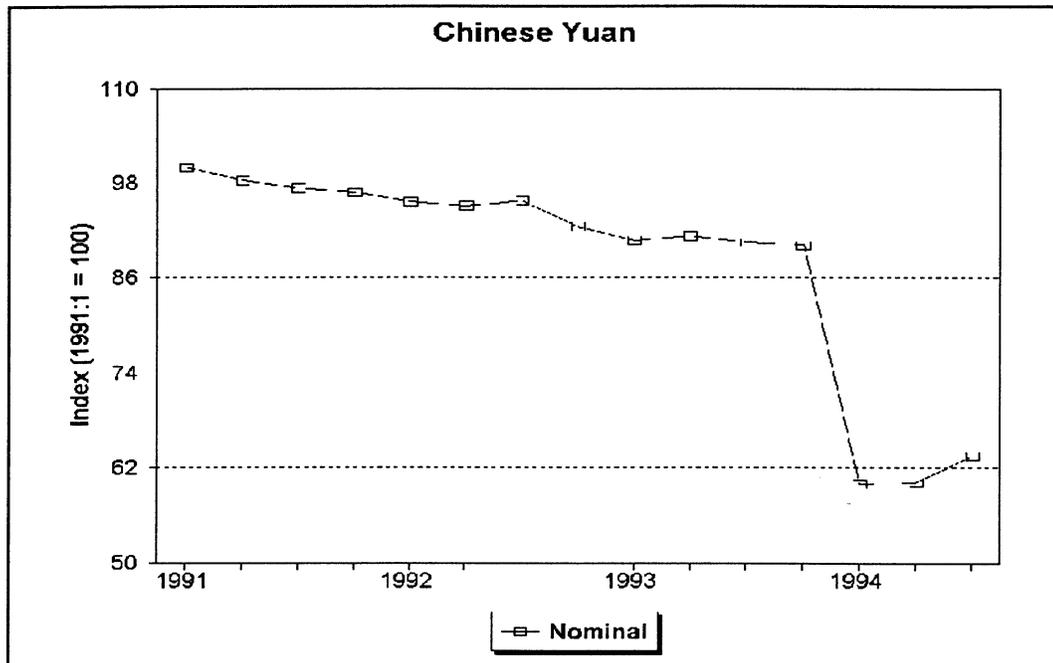
Figure 2

Manganese sulfate: Weighted-average net f.o.b. prices of product 3, by sources and by quarters, Jan. 1991-Sept. 1994

\* \* \* \* \*

Figure 3

Exchange rates: Indexes of nominal exchange rates between the U.S. dollar and Chinese yuan, by quarters, Jan. 1991-Sept. 1994



Source: International Monetary Fund, *International Financial Statistics*, Dec. 1994, p. 165.

### Lost Sales and Revenues

AMT alleged that during the period examined, it lost \*\*\* of manganese sulfate sales due to imported Chinese product.<sup>76</sup> In its questionnaire response, AMT listed over \*\*\* short tons of material either lost or subject to lost revenues due to imports from China. This quantity reportedly represented sales of agricultural manganese sulfate to three U.S. companies: \*\*\*.<sup>77</sup> AMT did not provide details concerning the initial rejected price quotations or total delivered values. AMT's questionnaire response stated that \*\*\*.

\*\*\*, sales manager and director of micronutrients for \*\*\*, denied that his company stopped selling AMT product due to the presence of low-priced Chinese product. \*\*\* noted that \*\*\*. \*\*\* stated that purity and soluble manganese content are important attributes for animal feed. Animal feed premixers regularly make up micronutrient premixes in 50-pound bags, and the higher the available manganese content, the less manganese sulfate required to achieve a desired percentage. If the manganese content is too low, the blender might not be able to make up a 50-pound bag that has room for the required amounts of the other micronutrients. Referring to the differences in end use for granular versus powder, \*\*\* stated that \*\*\*.

<sup>76</sup> Postconference brief of AMT, p. 23.

<sup>77</sup> AMT alleged that \*\*\*.

\*\*\*, president of \*\*\*, also denied replacing AMT's product with Chinese product. \*\*\* company is \*\*\*. \*\*\* said that \*\*\*. In fact, he said that \*\*\*. \*\*\* also stated that manganese availability was a significant factor. For example, 8 percent filler (e.g. 92 percent soluble manganese) can add to shipping costs. Furthermore, the higher purity product is increasingly available on the market, and customers are becoming accustomed to this product.

\*\*\*, president of \*\*\*, stated that \*\*\* company has lost sales to Chinese imports. \*\*\* is a wholesaler/distributorship that \*\*\*.<sup>78</sup> \*\*\* also stated that Florida soil needs more micronutrients than soils in other regions of the country (such as in the Chesapeake Bay area), and therefore farmers use considerable fertilizer each year, making price an important factor. \*\*\* offers commercial services to his customers, such as \*\*\*. \*\*\* believed that the Chinese product was sold through a broker in large batches of 300 tons or so. In his opinion, \*\*\*. \*\*\* noted that when manganese sulfate is sold on a percent-manganese-per-ton basis, Chinese product is selling at almost \$\*\*\* less per ton than the Mexican or AMT product that he sells. For example, \*\*\* sells its product at \*\*\*, while the Chinese product, having a higher manganese content, sells for \*\*\*.<sup>79</sup>

In addition, the staff contacted two large fertilizer blenders, \*\*\*. \*\*\* stated that manganese sulfate accounts for less than \*\*\* percent of \*\*\* business on a dollar basis, and that service and reliability are as important as price when purchasing manganese sulfate. \*\*\* buys from \*\*\* and AMT, with \*\*\* largest purchases coming from \*\*\*.<sup>80</sup> \*\*\*. \*\*\* annually buys \*\*\* and has noticed no price declines in recent years. According to \*\*\*, \*\*\*.

\*\*\* also stated that manganese sulfate accounts for an extremely small portion of his company's sales.<sup>81</sup> They pay list price minus a percentage, and sell manganese sulfate for \*\*\*. In the past few years, the company has sold about \*\*\* annually.

---

<sup>78</sup> \*\*\*.

<sup>79</sup> \*\*\* calculated the price per manganese unit of his products as \*\*\*. Similarly, the Chinese product, having 32 percent manganese, should cost comparably more, as seen in the following calculation: \*\*\*.

<sup>80</sup> \*\*\*.

<sup>81</sup> \*\*\* stated that \*\*\* is \*\*\*. The company's total revenues in 1993 were approximately \*\*\*, while its sales of manganese sulfate were \*\*\*.



**APPENDIX A**  
**FEDERAL REGISTER NOTICES**



preliminary antidumping investigations in 45 days, or in this case by January 17, 1995.

For further information concerning the conduct of this investigation and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and B (19 CFR part 207).

**EFFECTIVE DATE:** November 30, 1994.

**FOR FURTHER INFORMATION CONTACT:** Jonathan Seiger (202-205-3183), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000. Information can also be obtained by calling the Office of Investigations' remote bulletin board system for personal computers at 202-205-1895 (N,8,1).

**SUPPLEMENTARY INFORMATION:**

**Background**

This investigation is being instituted in response to a petition filed on November 30, 1994, by American MicroTrace Corporation, Virginia Beach, VA.

*Participation in the investigation and public service list.*—Persons (other than petitioners) wishing to participate in the investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in §§ 201.11 and 207.10 of the Commission's rules, not later than seven (7) days after publication of this notice in the **Federal Register**. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to this investigation upon the expiration of the period for filing entries of appearance.

*Limited disclosure of business proprietary information (BPI) under an administrative protective order (APO) and BPI service list.*—Pursuant to § 207.7(a) of the Commission's rules, the

monohydrate (MnSO<sub>4</sub>·H<sub>2</sub>O), whether in powder or granular form, generally used as a source of manganese for agriculture and livestock, as well as for industrial uses. This investigation covers all manganese sulfate, without regard to form, shape, or size, and without regard to the addition of other elements, the presence of other elements as impurities, and/or method of manufacture.

---

[Investigation No. 731-TA-725  
(Preliminary)]

**Manganese Sulfate from the People's Republic of China**

**AGENCY:** United States International Trade Commission.

**ACTION:** Institution and scheduling of a preliminary antidumping investigation.

**SUMMARY:** The Commission hereby gives notice of the institution of preliminary antidumping investigation No. 731-TA-725 (Preliminary) under section 733(a) of the Tariff Act of 1930 (19 U.S.C. § 1673b(a)) to determine whether there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from the People's Republic of China of manganese sulfate, provided for in subheading 2833.29.50 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value.<sup>1</sup> The Commission must complete

<sup>1</sup> For purposes of this investigation, "manganese sulfate" is defined as manganese sulfate

Secretary will make BPI gathered in this preliminary investigation available to authorized applicants under the APO issued in the investigation, provided that the application is made not later than seven (7) days after the publication of this notice in the *Federal Register*. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

*Conference.*—The Commission's Director of Operations has scheduled a conference in connection with this investigation for 9:30 a.m. on December 21, 1994, at the U.S. International Trade Commission Building, 500 E Street SW., Washington, DC. Parties wishing to participate in the conference should contact Jonathan Seiger (202-205-3183) not later than December 16, 1994, to arrange for their appearance. Parties in support of the imposition of antidumping duties in this investigation and parties in opposition to the imposition of such duties will each be collectively allocated one hour within which to make an oral presentation at the conference. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the conference.

*Written submissions.*—As provided in §§ 201.8 and 207.15 of the Commission's rules, any person may submit to the Commission on or before December 27, 1994, a written brief containing information and arguments pertinent to the subject matter of the investigation. Parties may file written testimony in connection with their presentation at the conference no later than three (3) days before the conference. If briefs or written testimony contain BPI, they must conform with the requirements of §§ 201.6, 207.3, and 207.7 of the Commission's rules.

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

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

By order of the Commission

Issued: December 2, 1994.

Donna R. Koehnke,  
Secretary.

[FR Doc. 94-30209 Filed 12-7-94; 8:45 am]

BILLING CODE 7020-02-P

**Initiation of Investigation***The Petition*

On November 30, 1994, we received a petition filed in proper form by American MicroTrace Corporation (the petitioner). On December 1 and 14, 1994, the petitioner submitted additional information supporting their allegation. In accordance with 19 CFR 353.12, the petitioner alleges that manganese sulfate from the People's Republic of China (PRC) is being, or is likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Tariff Act of 1930, as amended (the Act), and that these imports materially injure, or threaten material injury to, a United States industry.

The petitioner also alleges that critical circumstances, as defined under 19 CFR 353.16, exist with respect to manganese sulfate from the PRC.

The petitioner has stated that it has standing to file the petition because it is an interested party, as defined under section 771(9)(C) of the Act, and because the petition is filed on behalf of the U.S. industry producing the product subject to this investigation. If any interested party, as described under paragraphs (C), (D), (E), or (F) of section 771(9) of the Act, wishes to register support for, or opposition to, this petition, it should file a written notification with the Assistant Secretary for Import Administration.

*Scope of Investigation*

The product covered by this investigation is manganese sulfate, including manganese sulfate monohydrate ( $MnSO_4 \cdot H_2O$ ), and any other forms whether or not hydrated, without regard to form, shape, or size, the addition of other elements, the presence of other elements as impurities, and/or the method of manufacture. The subject merchandise is currently classifiable under subheading 2833.29.50 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS subheading is provided for

---

[A-570-841]

**Initiation of Antidumping Duty Investigation: Manganese Sulfate From the People's Republic of China**

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

**EFFECTIVE DATE:** December 28, 1994.

**FOR FURTHER INFORMATION CONTACT:**

Mark Wells or Louis Apple, Office of Antidumping Investigations, Import Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC, 20230; telephone (202) 482-3003 or (202) 482-1769, respectively.

convenience and customs purposes, our written description of the scope of this proceeding is dispositive.

#### United States Price and Foreign Market Value

##### United States Price

The petitioner based United States price (USP) on f.o.b, c.i.f, and c.f.r. price quotes from Chinese exporters of the subject merchandise. In calculating USP, petitioner deducted: foreign inland freight, ocean freight, and marine insurance. The petitioner based inland freight on the distance from the PRC producers of the subject merchandise to the PRC port of export and valued freight transportation using Indian surrogate data.

##### Foreign Market Value

#### A. Non-Market Economy Determination

The petitioner contends that the PRC is a non-market economy (NME) country within the meaning of section 771(18)(A) of the Act. The Department has determined in previous investigations that the PRC is an NME, and the presumption of NME status continues for purposes of initiation of this investigation. See e.g., *Final Determination of Sales at Less than Fair Value: Certain Paper Clips from the PRC*, 59 FR 51168 (October 7, 1994).

In accordance with section 773(c) of the Act, foreign market value (FMV) in NME cases is based on NME producers' factors of production, valued in a market economy country. Consistent with Department practice (see *Initiation of Antidumping Duty Investigation: Glycine from the PRC*, 59 FR 38435 (July 28, 1994)) absent evidence that a particular NME country government determines which of its factories shall produce for export to the United States, we intend, for purposes of this investigation, to base FMV only on those factories that produced manganese sulfate sold to the United States during the period of investigation (POI).

In the course of this investigation, parties will have the opportunity to address this NME determination and provide relevant information and argument related to the issues of the PRC's NME status and granting of separate rates to individual exporters.

#### B. FMV Calculations

The petitioner based the factors of production on the production process used by PRC producers of the subject merchandise and valued these factors with publicly available published information from the surrogate country, India. For purposes of this initiation, we have accepted India as a surrogate

country because in past cases the Department has determined that its economy is at a level of development comparable to the PRC and petitioner has provided evidence that, in this case, it is a significant producer of comparable merchandise, as required by section 773(c)(4) of the Act.

Pursuant to section 773(c)(1) of the Act, petitioner added to the material costs, energy, labor and a percentage for factory overhead, all based on published information from India. Petitioner then added a percentage for selling, general and administrative expenses also based on published information from India, as well as an amount for packing. Finally, petitioner added the statutory minimum of eight percent for profit.

Petitioner has alleged, based on information submitted in the petition, dumping margins ranging from 142.25 percent to 801.26 percent. We will carefully reexamine these margins if the use of best information available becomes an issue in this investigation.

#### Initiation of Investigation

We have examined the petition on manganese sulfate and have found that it meets the requirements of section 732(b) of the Act. Therefore, we are initiating an antidumping duty investigation to determine whether imports of manganese sulfate from the PRC are being, or are likely to be, sold in the United States at less than fair value.

Additionally, we have examined petitioner's allegation that critical circumstances exist with respect to manganese sulfate from the PRC and have determined they have met the requirements of 19 CFR 353.16. Therefore, we are also initiating an investigation as to whether critical circumstances exist with respect to imports of manganese sulfate from the PRC.

#### International Trade Commission (ITC) Notification

Section 732(d) of the Act requires us to notify the ITC of this action and we have done so.

#### Preliminary Determination by the ITC

The ITC will determine by January 17, 1995, whether there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury, by reason of imports of manganese sulfate from the PRC. A negative ITC determination will result in a termination of the investigation; otherwise, the investigation will proceed according to statutory and regulatory time limits.

This notice is published pursuant to section 732(c)(2) of the Act and 19 CFR 353.13(b).

Dated: December 20, 1994.  
Susan G. Esserman,  
Assistant Secretary for Import  
Administration.

[FR Doc. 94-31961 Filed 12-27-94; 8:45 am]  
BILLING CODE 3510-DS-M

**APPENDIX B**  
**CALENDAR OF THE PUBLIC CONFERENCE**



CALENDAR OF PUBLIC CONFERENCE

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

Subject : MANGANESE SULFATE FROM THE PEOPLE'S REPUBLIC OF CHINA  
Inv. No. : 731-TA-725 (Preliminary)  
Date and Time : December 21, 1994 - 9:30 a.m.

The session was held in connection with the investigation in the Main Hearing Room (room 101) of the U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C.

In support of imposition of antidumping duties:

Shearman & Sterling  
Washington, D.C.  
On behalf of

American MicroTrace Corporation

Clifford C. Braun, President  
Perry J. Hohman, Vice President for Finance and Administration  
Michael L. Barry, Vice President for Quality and Technology  
Albert C. Davis, Vice President of Engineering

Jeffrey M. Winton )--OF COUNSEL  
Shavit Matias )



**APPENDIX C**  
**SUMMARY DATA**



Table C-1  
Manganese sulfate: Summary data concerning the U.S. market (IMPORT DATA BASED ON QUESTIONNAIRE RESPONSES (EXCEPT FOR MEXICO)), 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

(Quantity=short tons; value=1,000 dollars; unit values and unit labor costs are per short ton; period changes=percent, except where noted)

Item	Reported data				Period changes				
	1991	1992	1993	Jan.-Sept.-- 1993	1994	1991-93	1991-92	1992-93	Jan.-Sept. 1993-94
<b>U.S. consumption quantity:</b>									
Amount	***	***	***	***	***	+35.7	+36.5	-0.6	+5.5
Producers' share <sup>1</sup>	***	***	***	***	***	-4.7	-2.7	-2.0	+4.4
Importers' share: <sup>1</sup>									
China	7.6	16.5	22.6	21.8	20.7	+15.0	+8.9	+6.1	-1.1
Mexico	***	***	***	***	***	-10.4	-6.2	-4.2	-3.2
Other sources	***	***	***	***	***	0	-0.1	+0.1	0
Total	***	***	***	***	***	+4.7	+2.7	+2.0	-4.4
<b>U.S. consumption value:</b>									
Amount	***	***	***	***	***	+35.5	+39.9	-3.1	+5.6
Producers' share <sup>1</sup>	***	***	***	***	***	-4.3	-2.3	-2.0	+3.1
Importers' share: <sup>1</sup>									
China	6.1	11.9	17.5	17.4	16.0	+11.4	+5.8	+5.6	-1.4
Mexico	***	***	***	***	***	-7.1	-3.2	-3.9	-1.5
Other sources	***	***	***	***	***	-0.1	-0.5	+0.4	0
Total	***	***	***	***	***	+4.3	+2.3	+2.0	-3.1
<b>U.S. importers' imports from--</b>									
<b>China:</b>									
U.S. shipments quantity	***	***	***	***	***	+304.5	+196.7	+36.3	+0.4
U.S. shipments value	***	***	***	***	***	+288.9	+173.5	+42.2	-3.3
Unit value	\$378	\$348	\$363	\$359	\$346	-3.9	-7.8	+4.3	-3.6
Ending inventory qty	***	269	***	***	787	(2)	***	***	***
<b>Mexico:</b>									
U.S. imports quantity	11,009	13,708	12,747	9,467	9,329	+15.7	+24.5	-7.1	-1.5
U.S. imports value	5,311	7,106	6,497	4,870	5,003	+22.3	+33.7	-8.6	+2.7
Unit value	\$482	\$518	\$510	\$514	\$536	+5.8	+7.4	-1.6	+4.2
<b>Other sources:</b>									
U.S. shipments quantity	***	***	***	***	***	***	***	***	***
U.S. shipments value	***	***	***	***	***	***	***	***	***
Unit value	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Ending inventory qty	***	***	***	***	***	(2)	(2)	***	(2)
<b>All sources:</b>									
U.S. shipments quantity	12,232	17,274	17,602	13,746	13,624	+43.9	+41.2	+1.8	-0.9
U.S. shipments value	5,924	8,518	8,459	6,547	6,640	+42.7	+43.7	-0.7	+1.4
Unit value	\$484	\$493	\$481	\$476	\$487	-0.7	+1.8	-2.5	+2.3
<b>U.S. producers'--</b>									
EOP capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization <sup>1</sup>	***	***	***	***	***	***	***	***	***
<b>U.S. shipments:</b>									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	\$***	\$***	\$***	\$***	\$***	***	***	***	***
<b>Export shipments:</b>									
Quantity	***	***	***	***	***	***	***	***	***
Exports/shipments <sup>1</sup>	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventory/US shipments <sup>1</sup>	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked	***	***	***	***	***	***	***	***	***
Total compensation	***	***	***	***	***	***	***	***	***
Hourly total compensation	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***	***
Unit labor costs	\$***	\$***	\$***	\$***	\$***	***	***	***	***
<b>Net sales--</b>									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit sales value	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***
Gross profit (loss)	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***
Operating income (loss)	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***
Unit COGS	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Unit SG&A expenses	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Unit op. income (loss)	\$***	\$***	\$***	\$***	\$***	***	***	***	***
COGS/sales <sup>1</sup>	***	***	***	***	***	***	***	***	***
Op. income (loss)/sales <sup>1</sup>	***	***	***	***	***	***	***	***	***

<sup>1</sup> "Reported data" are in percent and "period changes" are in percentage points.

<sup>2</sup> An increase of 1,000 percent or more.

<sup>3</sup> Not applicable.

Note.--Period changes are derived from the unrounded data. Period changes involving negative period data are positive if the amount of the negativity decreases and negative if the amount of the negativity increases. Because of rounding, figures may not add to the totals shown. Unit values and other ratios are calculated using data of firms supplying both numerator and denominator information. Part-year inventory ratios are annualized.

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

Table C-2  
Manganese sulfate: Summary data concerning the U.S. market (IMPORT DATA BASED ON OFFICIAL U.S. IMPORT STATISTICS),  
1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

(Quantity=short tons; value=1,000 dollars; unit values and unit labor costs are per short ton; period changes=percent, except where noted)

Item	Reported data			Jan.-Sept.--		Period changes			
	1991	1992	1993	1993	1994	1991-93	1991-92	1992-93	Jan.-Sept. 1993-94
<b>U.S. consumption quantity:</b>									
Amount	***	***	***	***	***	+49.2	+34.5	+10.9	-4.3
Producers' share <sup>1</sup>	***	***	***	***	***	-5.5	-2.1	-3.4	+6.5
Importers' share: <sup>1</sup>									
China	***	***	***	***	***	+12.3	+7.3	+5.0	-4.9
Other sources	***	***	***	***	***	-6.8	-5.3	-1.6	-1.6
Total	***	***	***	***	***	+5.5	+2.1	+3.4	-6.5
<b>U.S. consumption value:</b>									
Amount	***	***	***	***	***	+61.2	+33.8	+20.4	-1.1
Producers' share <sup>1</sup>	***	***	***	***	***	-4.7	-1.0	-3.7	+3.0
Importers' share: <sup>1</sup>									
China	***	***	***	***	***	+4.9	+4.1	+0.8	-4.3
Other sources	***	***	***	***	***	-0.2	-3.1	+2.9	+1.3
Total	***	***	***	***	***	+4.7	+1.0	+3.7	-3.0
<b>U.S. importers' imports from--</b>									
<b>China:</b>									
Imports quantity	1,641	3,957	5,696	4,693	3,395	+247.1	+141.1	+43.9	-27.7
Imports value	597	1,374	1,776	1,504	885	+197.5	+130.2	+29.3	-41.2
Unit value	\$364	\$347	\$312	\$321	\$261	-14.3	-4.6	-10.2	-18.7
Ending inventory qty	***	269	***	***	787	(2)	***	***	***
<b>Other sources:</b>									
Imports quantity	12,664	15,787	17,098	13,124	12,203	+35.0	+24.7	+8.3	-7.0
Imports value	8,381	10,788	13,486	10,515	10,576	+60.9	+28.7	+25.0	+0.6
Unit value	\$662	\$683	\$789	\$801	\$867	+19.2	+3.2	+15.4	+8.2
Ending inventory qty	***	***	***	***	***	(2)	(2)	***	(2)
<b>All sources:</b>									
Imports quantity	14,304	19,744	22,795	17,817	15,598	+59.4	+38.0	+15.5	-12.5
Imports value	8,978	12,161	15,263	12,019	11,461	+70.0	+35.5	+25.5	-4.6
Unit value	\$628	\$616	\$670	\$675	\$735	+6.7	-1.9	+8.7	+8.9
<b>U.S. producers<sup>2</sup>--</b>									
EOP capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization <sup>1</sup>	***	***	***	***	***	***	***	***	***
<b>U.S. shipments:</b>									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	\$***	\$***	\$***	\$***	\$***	***	***	***	***
<b>Export shipments:</b>									
Quantity	***	***	***	***	***	***	***	***	***
Exports/shipments <sup>1</sup>	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventory/US shipments <sup>1</sup>	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked	***	***	***	***	***	***	***	***	***
Total compensation	***	***	***	***	***	***	***	***	***
Hourly total compensation	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***	***
Unit labor costs	\$***	\$***	\$***	\$***	\$***	***	***	***	***
<b>Net sales--</b>									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit sales value	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***
Gross profit (loss)	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***
Operating income (loss)	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***
Unit COGS	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Unit SG&A expenses	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Unit op. income (loss)	\$***	\$***	\$***	\$***	\$***	***	***	***	***
COGS/sales <sup>1</sup>	***	***	***	***	***	***	***	***	***
Op. income (loss)/sales <sup>1</sup>	***	***	***	***	***	***	***	***	***

<sup>1</sup> "Reported data" are in percent and "period changes" are in percentage points.

<sup>2</sup> An increase of 1,000 percent or more.

<sup>3</sup> Not applicable.

Note.--Period changes are derived from the unrounded data. Period changes involving negative period data are positive if the amount of the negativity decreases and negative if the amount of the negativity increases. Because of rounding, figures may not add to the totals shown. Unit values and other ratios are calculated from the unrounded figures, using data of firms supplying both numerator and denominator information. Part-year inventory ratios are annualized.

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

Table C-3

Powdered manganese sulfate: Summary data concerning the U.S. market, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

(Quantity=*short tons*; value=*1,000 dollars*; unit values and unit labor costs are *per short ton*; period changes=*percent, except where noted*)

Item	Reported data					Period changes			
	1991	1992	1993	Jan.-Sept.-- 1993	1994	1991-93	1991-92	1992-93	Jan.-Sept. 1993-94
U.S. consumption quantity:									
Amount	***	3,566	***	***	***	+66.5	***	***	+52.8
Producers' share <sup>1</sup>	***	***	***	***	***	0	0	0	-2.6
Importers' share: <sup>1</sup>									
China	***	***	***	***	***	+0.6	+1.7	-1.1	+3.0
Other sources	***	***	***	***	***	-0.6	-1.7	+1.1	-0.4
Total	***	***	***	***	***	0	0	0	+2.6
U.S. consumption value:									
Amount	***	1,413	***	***	***	+68.6	***	***	+23.9
Producers' share <sup>1</sup>	***	***	***	***	***	0	0	0	-1.0
Importers' share: <sup>1</sup>									
China	***	***	***	***	***	+5.9	+13.7	-7.8	+2.8
Other sources	***	***	***	***	***	-5.9	-13.7	+7.8	-1.7
Total	***	***	***	***	***	0	0	0	+1.0
U.S. importers' imports from--									
China:									
U.S. shipments quantity	1,189	***	1,991	1,734	2,774	+67.5	***	***	+60.0
U.S. shipments value	449	1,228	818	727	943	+82.1	+173.5	-33.4	+29.6
Unit value	\$378	\$***	\$411	\$420	\$340	+8.8	***	***	-19.0
Ending inventory qty	***	***	***	1,178	626	(2)	+178.3	+542.5	-46.9
Other sources:									
U.S. shipments quantity	***	***	***	***	***	***	***	***	***
U.S. shipments value	***	***	***	***	***	***	***	***	***
Unit value	\$***	\$***	\$***	\$***	\$***	***	***	***	***
Ending inventory qty	***	***	***	***	***	***	***	***	***
All sources:									
U.S. shipments quantity	***	3,566	***	***	***	+66.5	***	***	+58.9
U.S. shipments value	***	1,413	***	***	***	+68.6	***	***	+25.7
Unit value	\$501	\$396	\$508	\$498	\$394	+1.3	-21.0	+28.2	-20.9
U.S. producers'--									
Average capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization <sup>1</sup>	(3)	(3)	(3)	***	***	(3)	(3)	(3)	***
U.S. shipments:									
Quantity	***	0	***	***	***	***	***	***	***
Value	***	0	***	***	***	***	***	***	***
Unit value	(3)	(3)	(3)	\$***	\$***	(3)	(3)	(3)	***
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Exports/shipments <sup>1</sup>	-	-	-	***	***	-	-	-	***
Value	***	***	***	***	***	***	***	***	***
Unit value	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Ending inventory quantity	-	-	-	***	***	-	-	-	***
Inventories/shipments	-	-	-	***	***	-	-	-	***
Production workers	-	-	-	(4)	(4)	-	-	-	(4)
Hours worked	-	-	-	(4)	(4)	-	-	-	(4)
Total compensation	-	-	-	(4)	(4)	-	-	-	(4)
Hourly total compensation	-	-	-	(4)	(4)	-	-	-	(4)
Productivity ( <i>short tons per 1,000 hours</i> )	-	-	-	(4)	(4)	-	-	-	(4)
Unit labor costs	-	-	-	(4)	(4)	-	-	-	(4)

<sup>1</sup> "Reported data" are in percent and "period changes" are in percentage points.<sup>2</sup> An increase of 1,000 percent or more.<sup>3</sup> Not applicable.<sup>4</sup> Not available.

Note.--Period changes are derived from the unrounded data. Because of rounding, figures may not add to the totals shown. Unit values and other ratios are calculated using data of firms supplying both numerator and denominator information. Part-year inventory ratios are annualized.

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

Table C-4

Granular manganese sulfate: Summary data concerning the U.S. market, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

Table C-5

Manganese sulfate other than powdered and granular forms: Summary data concerning the U.S. market, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*

**APPENDIX D**  
**ESTIMATES OF APPARENT U.S. CONSUMPTION USING**  
**OFFICIAL U.S. IMPORT STATISTICS**



Table D-1

Manganese sulfate: U.S. shipments of domestic product, U.S. imports, by sources, and apparent U.S. consumption, 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994<sup>1</sup>

Item	1991	1992	1993	Jan.-Sept.--	
				1993	1994
<i>Quantity (short tons)</i>					
Producers' U.S. shipments . . . . .	***	***	***	***	***
U.S. imports from--					
China . . . . .	1,641	3,957	5,696	4,693	3,395
Mexico . . . . .	11,009	13,708	12,747	9,467	9,329
Other sources . . . . .	1,655	2,079	4,352	3,657	2,874
Total . . . . .	14,304	19,744	22,795	17,817	15,598
Apparent consumption . . . . .	***	***	***	***	***
<i>Value (1,000 dollars)</i>					
Producers' U.S. shipments . . . . .	***	***	***	***	***
U.S. imports from--					
China . . . . .	597	1,374	1,776	1,504	885
Mexico . . . . .	5,311	7,106	6,497	4,870	5,003
Other sources . . . . .	3,070	3,681	6,989	5,645	5,573
Total . . . . .	8,978	12,161	15,263	12,019	11,461
Apparent consumption . . . . .	***	***	***	***	***

<sup>1</sup> Data on U.S. producer shipments for 1991-93 are limited to shipments by AMT; interim period data include shipments by both AMT and Allied. Allied reported U.S. shipments in 1993 of \*\*\* short tons, valued at \$\*\*\*.

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

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



**APPENDIX E**

**IMPACT OF IMPORTS ON U.S. PRODUCERS' GROWTH,  
INVESTMENT, ABILITY TO RAISE CAPITAL, AND EXISTING  
DEVELOPMENT AND PRODUCTION EFFORTS**



Response of U.S. producers to the following questions:

1. Since January 1, 1991 has your firm experienced any actual negative effects on its growth, investment, ability to raise capital, or existing development and production efforts, including efforts to develop a derivative or more advanced version of the product, as a result of imports of manganese sulfate from China?

\* \* \* \* \*

2. Does your firm anticipate any negative impact of imports of manganese sulfate from China?

\* \* \* \* \*

3. Has the scale of capital investments undertaken been influenced by the presence of imports of manganese sulfate from China?

\* \* \* \* \*

Figure E-1  
Manganese sulfate: Income and loss

\* \* \* \* \*



**APPENDIX F**  
**FINANCIAL DATA OF ALLIED AND AMT**



Table F-1

Financial data of Allied and AMT on their operations producing manganese sulfate, by firms, fiscal years 1991-93, Jan.-Sept. 1993, and Jan.-Sept. 1994

\* \* \* \* \*



**APPENDIX G**  
**OFFICIAL U.S. IMPORT STATISTICS**



Table G-1  
Manganese and certain other sulfates:<sup>1</sup> U.S. imports, by sources, 1991-93, Jan.-Sept. 1993, and  
Jan.-Sept. 1994

Item	1991	1992	1993	Jan.-Sept.--	
				1993	1994
<i>Quantity (short tons)</i>					
China . . . . .	1,641	3,957	5,696	4,693	3,395
Mexico . . . . .	11,009	13,708	12,747	9,467	9,329
Other sources . . . . .	1,655	2,079	4,352	3,657	2,874
Total . . . . .	14,304	19,744	22,795	17,817	15,598
<i>Value (1,000 dollars)</i>					
China . . . . .	597	1,374	1,776	1,504	885
Mexico . . . . .	5,311	7,106	6,497	4,870	5,003
Other sources . . . . .	3,070	3,681	6,989	5,645	5,573
Total . . . . .	8,978	12,161	15,263	12,019	11,461
<i>Unit value (per short ton)</i>					
China . . . . .	\$364	\$347	\$312	\$321	\$261
Mexico . . . . .	482	518	510	514	536
Other sources . . . . .	1,855	1,771	1,606	1,544	1,939
Average . . . . .	628	616	670	675	735

<sup>1</sup> Sulfates of magnesium, aluminum, chromium, nickel, copper, zinc, barium, cobalt, iron, and vanadium are classified in other HTS numbers.

Note.--Because of rounding, figures may not add to the totals shown; unit values are calculated from unrounded figures.

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



**APPENDIX H**  
**MARKET PENETRATION BY U.S. IMPORTS USING**  
**OFFICIAL U.S. IMPORT STATISTICS**



Table H-1  
Manganese sulfate: Apparent U.S. consumption and market penetration, 1991-93, Jan.-Sept. 1993, and  
Jan.-Sept. 1994

\* \* \* \* \*

