UREA FROM THE GERMAN DEMOCRATIC REPUBLIC, ROMANIA, AND THE UNION OF SOVIET SOCIALIST REPUBLICS

Determinations of the Commission In Investigations Nos. 731-TA-338 through 340 (Preliminary) Under the Tariff Act of 1930, Together With the Information Obtained In the Investigations

USITC PUBLICATION 1891

SEPTEMBER 1986

United States International Trade Commission / Washington, DC 20436

UNITED STATES INTERNATIONAL TRADE COMMISSION

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Note.--Information which would disclose the confidential operations of individual concerns may not be published and therefore has been deleted from this report. Deletions are indicated by asterisks.

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC

Investigations Nos. 731-TA-338 through 340 (Preliminary)

UREA FROM THE GERMAN DEMOCRATIC REPUBLIC, ROMANIA, AND THE UNION OF SOVIET SOCIALIST REPUBLICS

Determinations

On the basis of the record 1/ developed in the subject investigations, the Commission determines, 2/ 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 German Democratic Republic (East Germany), Romania, and the Union of Soviet Socialist Republics (U.S.S.R.) of urea, provided for in item 480.30 3/ of the Tariff Schedules of the United States, which are alleged to be sold in the United States at less than fair value (LTFV).

Background

On July 16, 1986, a petition was filed with the Commission and the Department of Commerce by the Ad Hoc Committee of Domestic Nitrogen Producers 4/, alleging that an industry in the United States is materially

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1/ The record is defined in sec. 207.2(i) of the Commission's Rules of Practice and Procedure (19 CFR § 207.2(i)).
2/ Commissioner Stern did not participate in these investigations.
3/ The petition referred only to solid urea in Tariff Schedules of the United States (TSUS) item 480.30. When Commerce instituted its investigations effective Aug. 12, 1986, it also included Tariff Schedules of the United States Annotated (TSUSA) items 480.3000, 480.6550, and 480.8030 within the "scope" of its investigations (51 F.R. 28854). Commerce stated that merchandise classified in TSUSA items 480.6550 and 480.8030 would be subject to its investigations only if the predominant component was urea. Commerce, in a letter dated Aug. 26, 1986, informed the Commission that the scope of Commerce's investigations was being narrowed to include only solid urea in TSUS item 480.30.
4/ The Ad Hoc Committee of Domestic Nitrogen Producers is composed of the following: Agrico Chemical Co., Tulsa, OK; American Cyanamid Co., Wayne, NJ; CF Industries, Long Grove, IL; Farmland Industries, Inc., Kansas City, MO; First Mississippi Corp., Jackson, MS; Mississippi Chemical Corp., Yazoo City, MS; Terra Chemicals International, Sioux City, IA; and W.R. Grace & Co., New York, NY.

injured or threatened with material injury by reason of LTFV imports of solid urea from East Germany, Romania, and the U.S.S.R. Accordingly, effective July 16, 1986, the Commission instituted preliminary antidumping investigations Nos. 731-TA-338 (Preliminary) (East Germany), 731-TA-339 (Preliminary) (Romania), and 731-TA-340 (Preliminary) (U.S.S.R.).

Notice of the institution of the Commission's investigations 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 July 23, 1986 (51 F.R. 26477). The conference was held in Washington, DC, on August 8, 1986, and all persons who requested the opportunity were permitted to appear in person or by counsel.

VIEWS OF THE COMMISSION

We determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of urea from the German Democratic Republic (GDR), Romania, and the Union of Soviet Socialist Republics (USSR), which are allegedly being sold at less than fair value (LTFV).

These determinations are primarily based on the diminished performance of the domestic industry, the significant and increasing market penetration of the subject imports, and the adverse effect of those imports on the price of the domestic product during the period under investigation.

Like product/domestic industry

As a prerequisite to its material injury analysis, the Commission must first define the relevant domestic industry against which to assess the impact of unfairly traded imports. The term "industry" is defined in section 771(4)(A) of the Tariff Act of 1930 as "the domestic producers as a whole of a like product, or those producers whose collective output of the like product constitutes a major proportion of the total domestic production of that product." [1/] In turn, "like product" is defined as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation. . . ." [2/]

The article which is subject to these investigations is solid urea,

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1/ 19 U.S.C. § 1677(4)(A).
2/ 19 U.S.C. § 1677(10).

currently provided for under TSUS item 480.30. [3/] Urea is a high-nitrogen content fertilizer, which is produced by reacting ammonia with carbon dioxide. The general urea production process yields 70 to 87 percent urea in an aqueous solution, which may be purified and dried to solid urea or it may be used directly to make urea-ammonium nitrate solutions. [4/]

Solid urea is produced and sold in the United States in two forms, prills and granules. The subject imports are virtually all prilled urea. Approximately 45 percent of U.S. production of solid urea is in granular form and the other 55 percent is in prilled form. There are no material physical or chemical distinctions between the imported product and the domestic product. Prilled and granular urea are chemically identical. There are some physical differences between them, i.e., unit size, crushing strength and abrasion resistance. Generally, the prilled product is weaker and smaller in size than the granular. Both, however, are suitable for use alone or for blending with other solid fertilizers for field applications. Petitioner argues that domestic granular and prilled urea constitute a single like

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3/ Under TSUS item 480.30, aqueous solutions of solid urea are treated as if they were solid urea. Report of the Commission (Report) at A-4.

4/ Id. at A-4. Nitrogen solutions or mixtures of urea with other fertilizers (whether solid or liquid) are different products and are not urea, per se, nor are they products which are subject to these investigations. The petition refers only to solid urea under TSUSA item 480.3000. However, the original Department of Commerce (Commerce) notice of investigation also included both nitrogen solutions under TSUSA item 480.6550, and solid urea mixed with other fertilizers under TSUSA item 480.8030, but "only if the predominant component is urea." 51 F.R. 28854-8 (Aug. 12, 1986). Subsequently, Commerce advised the Commission that it was narrowing the scope of the investigations to include only solid urea. Letter from Gilbert B. Kaplan, Deputy Assistant Secretary for Import Administration , U.S. Department of Commerce, dated Aug. 26, 1986.

product, and respondents [5/] do not disagree with this argument. [6/] In light of the above factors, we find, for the purposes of these preliminary investigations, that there is one like product, consisting of solid urea as provided for in TSUS item 480.30 in any form, e.g., whether granular or prilled, and that the domestic industry consists of the producers of this like product. [7/]

Condition of the domestic industry [8/]

In examining the condition of the domestic industry, the Commission considers, among other factors, consumption, production, capacity, capacity utilization, sales, employment, and profitability of the domestic industry. [9/] No single factor is determinative of material injury and, in each investigation, the Commission must take into account the particular nature of the industry it is examining.

Apparent consumption of solid urea was 5.0 million short tons in 1983 rising to 6.0 million tons in 1984, about 20 percent, and then declining in 1985 to 5.2 million tons, a level just slightly higher than in 1983. Interim data for 1985 as compared with interim 1986 indicate that consumption of solid urea increased sharply from 2.8 million tons to 3.9 million tons; however, we

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5/ In this opinion, "respondents" refers to two importers, Occidental Petroleum Corp. and Cargill Inc., who jointly appeared at the conference and filed a joint post-conference brief.

6/ Respondents do, however, argue that product and quality differences (granular vs. prills; domestic vs. imported prill) account for price disparities between domestic and imported urea. See infra.

7/ If these investigations return to the Commission as final investigations, the Commission may further examine the issue of like product.

8/ See additional views of Chairman Liebeler on the condition of the domestic industry.

9/ See 19 U.S.C. § 1677(7)(C)(iii).

note that this increase was supplied almost wholly by imports. 10/ We have considered domestic production and U.S. exports in conjunction with apparent consumption. Domestic production of solid urea rose from 4.2 million tons in 1983 to 5.1 million tons in 1984, but fell to less than 4.2 million tons in 1985; the increase in production from 1983 to 1984 was smaller than the increase in consumption, and 1985 production was slightly less than levels achieved in 1983. When production data for interim 1985 are compared with that for interim 1986, there is a decided break with consumption trends -- domestic production fell from 2.4 million tons to 2.1 million tons. U.S. exports, which mirrored consumption trends from 1983 to 1985, fell from 693 thousand tons to 257 thousand tons when comparing 1985 and 1986 interim periods. 11/

For firms responding to the Commission's questionnaires, capacity to produce solid urea (prills and granules) was 5.4 million tons in 1983; capacity utilization was 68 percent. In 1984, capacity increased slightly to 5.5 million tons, and capacity utilization rose to 77 percent. In 1985, capacity remained the same, but capacity utilization declined to 72 percent. 12/ Interim 1985 and interim 1986 figures indicate capacity remained stable at 2.7 million tons, but capacity utilization fell from 83 percent to 66 percent. 13/

U.S. producers' domestic shipments exclusive of intracompany transfers were 2.7 million tons in 1983, 2.8 million tons in 1984, and remained at 2.8 million tons in 1985. Producers' domestic shipments were virtually constant

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10/ Report at A-30, official statistics of the Department of Commerce.
11/ Id. at A-30, official statistics of the Department of Commerce.
12/ Id. at A-15.
13/ Id.

during interim 1985 as compared with interim 1986. [14/] The unit value per ton of U.S. producers' domestic shipments was $122 per ton in 1983, $144 per ton in 1984, and $134 per ton in 1985; however, the unit value per ton in interim 1986 was only $103 as compared with $140 per ton in interim 1985. [15/]

The data gathered by the Commission show that U.S. producers' inventories declined from 1982 to 1983 and then increased steadily from 1983 to 1985, both in absolute volume and as a percent of total production. Inventories rose from 314 thousand tons in 1983 (7.0 percent of production) to 531 thousand tons in 1984 (9.2 percent of production) and rose again in 1985 to 695 thousand tons (12.9 percent of production). Interim 1985 and 1986 data indicate a decrease in accumulated inventories, but we note that a decline in production also occurred in interim 1986. Producers may have been drawing down inventories during that period. [16/]

The number of employees producing urea increased 7.2 percent during 1983-85, but declined 6.9 percent in interim 1986 as compared with interim 1985. The number of hours worked by production and related workers increased 9.7 percent from 1983 to 1984 and then declined 1.3 percent from 1984 to 1985. Hours worked during interim 1986 were 8.5 percent below those in interim 1985.

The Commission gathered financial data on urea operations from 15 domestic producers who represent the bulk of U.S. production. In 1983, operating income as a share of net sales was 14.3 percent. Net sales in 1983 of roughly 3.4 million tons of urea were translated into sales of $476.4

14/ Id. at A-16.
15/ Id.
16/ Id. at A-17.

million; 8 firms reported operating losses. [17/] In 1984, operating income as a share of net sales had risen to 17.4 percent. For this year, net sales of roughly 4.4 million tons of urea were translated into sales of $685.3 million; 5 firms reported operating losses. [18/] In 1985, operating income as a share of net sales dropped to 11.1 percent. Net sales of roughly 4.1 million tons of urea were translated into sales of $595.3 million in 1985; 6 firms reported operating losses. [19/] Interim 1985 data indicate that operating income as a share of net sales was 17.5 percent. For full year data it was 11.1 percent, suggesting that the industry's performance began its sharp downturn during the last half of 1985. Net sales for interim 1985 were $403.3 million for 2.7 million tons of urea. Interim 1986 shows that operating income as a share of net sales dropped precipitously to only 1.0 percent. Net sales declined to $296.4 million for 2.5 million tons of urea. Comparing interim 1985 with interim 1986, the value of net sales declined 26.5 percent whereas volume declined only 5.4 percent. [20/]

In light of the information gathered by the Commission, we determine that that there is a reasonable indication that the domestic industry producing the like product is suffering material injury. [21/]

Cumulation

Under the Trade and Tariff Act of 1984, the Commission "shall

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17/ Id. at A-21.
18/ Id.
19/ Id.
20/ Id.
21/ Commissioner Eckes believes that the Commission is to make a finding regarding the question of material injury in each investigation. See Cellular Mobile Telephones and Subassemblies Thereof, Inv. No. 731-TA-207 (Final), USITC Pub. No. 1786 at 20-21 (Dec. 1985).

cumulatively assess the volume and effect of imports from two or more countries of like products subject to investigation if such imports compete with each other and with like products of the domestic industry in the United States market." 22/ Thus, the imports must: (1) compete with both the other imports and the domestic like product; (2) be marketed within a reasonably coincidental period; 23/ and (3) be subject to investigation. 24/ 25/

For the purposes of these preliminary investigations, we cumulate imports from all three countries subject to investigation. First, we determine that domestic urea and imports from the three countries subject to investigation compete with each other. In arriving at this determination, we find that the

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22/ 19 U.S.C. § 1677(7)(C)(iv).

23/ See H.R. Rep. No. 1156, 98th Cong., 2nd Sess. 173 (1984) (this requirement is expressed in the Conference agreement on the House and Senate version of the bill).

24/ Among the factors which the Commission has considered to reach a determination on cumulation are:

> -The degree of fungibility between imports from different countries and between imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;
> -The presence of sales or offers to sell in the same geographical markets of imports from different countries and the domestic like product;
> -The existence of common or similar channels of distribution for imports from different countries and the domestic like product;
> -Whether the imports are simultaneously present in the market.

The Commission has often noted that no single factor is determinative.

25/ H.R Rep. No. 725, 98th Cong., 2nd Sess. 37 (1984).

domestic and foreign products are substantially fungible, [26/] and are directed to the same customers.

Second, we determine that imports from the three countries were marketed within a reasonably coincident period. The record shows that domestic shipments and imports were simultaneously present in the market during the period under investigation. [27/] Further, the record indicates the presence of numerous sales of the imported urea from the GDR, Romania, and the USSR, indicating that the imports are being sold concurrently in the market place. [28/]

Finally, imports from the three countries are subject to current antidumping investigations.

Reasonable indication of material injury by reason of imports allegedly sold at LTFV from the GDR, Romania, and the USSR

When determining whether there is a reasonable indication of material injury by reason of alleged LTFV imports, the statute provides that the Commission shall consider, among other factors:

> (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. [29/]

For the following reasons, we conclude that there is a reasonable indication that the domestic industry is being materially injured by reason of imports allegedly sold at LTFV from the GDR, Romania, and the USSR.

26/ Report at A-24, A-31.
27/ There were no imports of urea from the GDR in 1983.
28/ Report at A-37-40.
29/ 19 U.S.C. § 1677(7)(B).

The combined volume of imports of solid urea from the GDR, Romania, and the USSR increased over the period of investigation. From 1983 to 1984, aggregate imports from these three countries increased from 523 thousand tons to 880 thousand tons. Imports decreased somewhat in 1985 to 844 thousand tons. However, they then more than doubled in interim (January-June) 1986 compared to the same period in 1985, moving from 394 thousand to 867 thousand tons. 30/ The market penetration of the imports under investigation increased over the period under investigation from 10.4 percent of consumption in 1983, to 14.7 percent of consumption in 1984, to 16.3 percent in 1985. In interim 1986, their penetration increased markedly, to 22.2 percent, compared to 14.0 percent for interim 1985. This indicates that not only have imports and import penetration been increasing, they have recently been increasing at a faster rate.

The decline in the condition of the domestic industry, which began after 1984, parallels the rise in imports. The decline in interim 1986 parallels the marked increase in imports during that period. This suggests that imports may be a cause of the decline. There are other factors which point to the same conclusion.

There is evidence of significant underselling. 31/ 32/ Respondents

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30/ Report at A-30.

31/ Id. at A-38-40.

32/ Chairman Liebeler and Vice Chairman Brunsdale note that title VII requires the Commission to "consider whether there has been significant price undercutting by the imported merchandise as compared with the price of like products of the United States . . . " 19 U.S.C. § 1677(7)(C)(ii)(I). They believe, however, that information generally collected by the Commission about "underselling" does not have much bearing on "price undercutting". Accordingly, both Chairman Liebeler and Vice Chairman Brunsdale do not generally consider the "underselling margins" set forth in the Commission reports to be particularly persuasive evidence of price undercutting or probative of the issue of causation. For a more general discussion of underselling, see Memorandum from Director, Office of Economics, EC-J-010 (Jan. 7, 1986) at 8-22.

have argued that price disparities between domestic and imported urea are due to product and quality differences (granular vs. prill; domestic vs. imported prill). Virtually all of the imported product is prill, while about half the domestic product is granular and the other half prill. Granular urea is reported to command a somewhat higher price than prill. However, as the comparison between domestic and imported prill below shows, there are disparities which cannot be accounted for by the price of granular urea. As to quality differences between domestic and imported urea, the information available indicates that they are negligible for many applications. 33/

The relevant price comparison is for prilled urea shipped by barge, since virtually all of the imports are of prilled urea, and most of that is sold in barge shipments on the Gulf Coast. During the period from January 1985 to July 1986, average f.o.b. sales prices for the first full week of each month for both domestic and the imported urea generally declined. With few exceptions, the price of the imported prilled urea was less than that of the domestic product, indicating that the downward price spiral is at least in part the result of such underselling. Since urea is a commodity for which the most important purchase factor is price, such underselling would also be expected to result in lost sales, and there is some evidence that lost sales have occurred.

Respondents have argued that other factors, particularly the decline in natural gas prices and resultant decrease in the cost of production have been responsible for the decline in domestic urea prices. The price comparison above suggests otherwise. Furthermore, the decline in domestic price was

33/ Report at A-31.

accompanied by a decline in profit margin, again suggesting that the decline in prices was due to necessary efforts to remain competitive despite decreased costs of production. 34/ 35/

Based on the foregoing considerations, we determine that there is a reasonable indication that the domestic industry is materially injured by reason of allegedly LTFV sales of urea imports from the German Democratic Republic, Romania, and the Union of Soviet Socialist Republics.

34/ Id. at A-21-22.

35/ Vice Chairman Brunsdale notes that there is evidence on record to suggest that there may be a world market for urea, and that the GDR, Romania, and the USSR considered together account for only a small share of world production. If there is such a world market, then any offsetting duty would increase imports from other countries by the same amount it decreased imports for the three countries under investigation; consequently, the offsetting duty would not have any effect on domestic prices or production. See Iron Ore Pellets form Brazil, Inv. No. 701-TA-235 (Final), USITC Pub. No. 1880 at 15 n.74 (1986) (Views of Vice Chairman Brunsdale); Tubeless Steel Disc Wheels from Brazil, Inv. No. 731-TA-335 (Final), USITC Pub. No. 1872 at 16 (1986) (Additional views of Vice Chairman Brunsdale). In the event that these cases return for final determinations, the Vice Chairman intends to consider this issue further and she invites the parties to address it.

ADDITIONAL VIEWS OF CHAIRMAN LIEBELER

Inv. No. 731-TA-338 through 340 (Preliminary)
Urea from the German Democratic Republic,
Romania, and the Union of Soviet Socialist Republics

I determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of solid urea from the German Democratic Republic (GDR), Romania, and the Union of Soviet Socialist Republics (USSR) allegedly being sold at less than fair value (LTFV).[1]

Like product and domestic industry

I join with the majority in their definitions of the like product and the domestic industry.

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[1] Material retardation is not an issue because the industry is well established.

Condition of the Industry

In evaluating the condition of the domestic industry I have considered, among other factors, consumption, production, capacity utilization, sales, employment and profitability.

Apparent U.S. consumption of solid urea was 5.0 million short tons in 1983, 6.0 million short tons in 1984 and 5.2 million short tons in 1985. Interim data show an increase in consumption from 2.8 to 3.9 million tons from 1985 to 1986. U.S. production of solid urea rose from 4.2 million tons in 1983 to 5.1 million tons in 1984 but fell to less than 4.2 million tons in 1985. The interim production figures show that production fell from 2.4 million tons in 1985 to 2.1 million tons in 1986.[2] Capacity utilization fell by over 10 percent from 1984 to 1985.[3] Sales followed a trend similar to the production, capacity utilization and shipments trends, increasing from 3.4 million tons in 1983 to 4.4 million tons in 1985, then decreasing to 4.1 million tons in 1985. The interim sales figures were down from 2.7

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[2] Report at A-13.

[3] While the capacity utilization rates have fallen since 1984, I note that the levels of utilization for 1985 and the interim period of 1986 are still quite high and are higher than the 1983 rates. Report at A-13.

million tons in 1985 to 2.5 million tons in 1986.[4] Employment increased 7.2 percent during 1983-1985 but declined 6.8 percent in interim 1986 compared to interim 1985. The number of hours worked by production and related workers producing urea increased 9.7 percent from 1983 to 1984, then decreased 1.3 percent from 1984 to 1985. Hours worked were 8.5 percent lower in interim 1986 than during interim 1985.[5]

Fifteen U.S. producers, 80 percent of U.S. production in 1985, supplied usable income and loss data for urea production. Gross profits on urea operations increased slightly from 1983 to 1984 and dropped over 24 percent in 1985. The interim 1986 figures show a substantial decrease in profitability, with gross profits falling 60 percent from interim 1985. The number of firms reporting operating losses decreased from 1983 to 1984 then increased in 1985. A substantial increase in the number of firms reporting operating losses on their urea operations is indicated by the interim figures which show 5 firms reporting losses in 1985 and 8 firms reporting losses in 1986. The profitability of the industry has decreased considerably over the period under investigation.

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[4] Report at A-21.

[5] Report at A-19.

Therefore, I concur with the majority in determining that there is a reasonable indication that the domestic industry producing the like product is experiencing financial difficulties.

Cumulation

Petitioners urge us to cumulate the imports of solid urea from the GDR, Romania, and the USSR.[6]

The Trade and Tariff Act of 1984 (1984 Act) made several changes in the provisions of Title VII of the Tariff Act of 1930, including the addition of specific provisions on cumulation. Section 612(a)(2)(a) of the 1984 Act amended Title VII by adding a subsection at the end of subparagraph C, section 771(7)(C)(iv):

> (iv) Cumulation-For purposes of clauses (i) and (ii), the Commission shall cumulatively assess the volume and effect of imports from two or more countries of like products subject to investigation if such imports compete with each other and with like products of the domestic industry in the United States market.[7]

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[6] Petition at 57.

[7] 19 U.S.C. { 1677 (7)(c)(iv)(Supp. 1985).

I determine that domestic urea and imports from the three countries subject to investigation compete with each other and with the domestic like product. Although it has been suggested that imports may be of lower quality than the domestic product,[8] I have concluded that for the purposes of these preliminary investigations that the domestic and foreign products are very substitutable, and are directed to the same customers. Therefore I have cumulated the imports of solid urea from the GDR, Romania and the USSR.

Material Injury by Reason of Imports

In order for a domestic industry to prevail in a preliminary investigation, the Commission must determine that there is a reasonable indication that the dumped or subsidized imports cause or threaten to cause material injury to the domestic industry producing the like product. First, the Commission must determine whether the domestic industry producing the like product is materially injured or is threatened with material injury. Second,

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[8] See Report at A-31 and text accompanying note 25 infra for further discussion of factors influencing quality of the domestic and imported product.

the Commission must determine whether any injury or threat thereof is by reason of the dumped or subsidized imports. Only if the Commission finds a reasonable indication of both injury and causation, will it make an affirmative determination in the investigation.

Before analyzing the data, however, the first question is whether the statute is clear or whether one must resort to the legislative history in order to interpret the relevant sections of the antidumping law. In general, the accepted rule of statutory construction is that a statute, clear and unambiguous on its face, need not and cannot be interpreted using secondary sources. Only statutes that are of doubtful meaning are subject to such statutory interpretation.[9]

The statutory language used for both parts of the two-part analysis is ambiguous. "Material injury" is defined as "harm which is not inconsequential, immaterial, or unimportant."[10] This definition leaves unclear what

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[9] Sands, Sutherland Statutory Construction { 45.02 (4th Ed.)

[10] 19 U.S.C. sec. 1977(7)(A)(1980).

is meant by harm. As for the causation test, "by reason of" lends itself to no easy interpretation, and has been the subject of much debate by past and present commissioners. Clearly, well-informed persons may differ as to the interpretation of the causation and material injury sections of title VII. Therefore, the legislative history becomes helpful in interpreting title VII.

The ambiguity arises in part because it is clear that the presence in the United States of additional foreign supply will always make the domestic industry worse off. Any time a foreign producer exports products to the United States, the increase in supply, ceteris paribus, must result in a lower price of the product than would otherwise prevail. If a downward effect on price, accompanied by a Department of Commerce dumping or subsidy finding and a Commission finding that financial indicators were down were all that were required for an affirmative determination, there would be no need to inquire further into causation.

But the legislative history shows that the mere presence of LTFV imports is not sufficient to establish causation. In the legislative history to the Trade Agreements Acts of 1979, Congress stated:

> [T]he ITC will consider information which indicates that harm is caused by factors other than the less-than-fair-value imports.[11]

The Finance Committee emphasized the need for an exhaustive causation analysis, stating, "the Commission must satisfy itself that, in light of all the information presented, there is a sufficient causal link between the less-than-fair-value imports and the requisite injury."[12]

The Senate Finance Committee acknowledged that the causation analysis would not be easy: "The determination of the ITC with respect to causation, is under current law, and will be, under section 735, complex and difficult, and is matter for the judgment of the ITC."[13] Since the domestic industry is no doubt worse off by the presence of any imports (whether LTFV or fairly traded) and Congress has directed that this is not enough upon which to base an affirmative determination, the Commission must delve further to find what condition Congress has attempted to remedy.

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11 Report on the Trade Agreements Act of 1979, S. Rep. No. 249, 96th Cong. 1st Sess. 75 (1979).

12 Id.

13 Id.

In the legislative history to the 1974 Act, the Senate Finance Committee stated:

> This Act is not a 'protectionist' statute designed to bar or restrict U.S. imports; rather, it is a statute designed to free U.S. imports from unfair price discrimination practices. * * * The Antidumping Act is designed to discourage and prevent foreign suppliers from using unfair price discrimination practices to the detriment of a United States industry.[14]

Thus, the focus of the analysis must be on what constitutes unfair price discrimination and what harm results therefrom:

> [T]he Antidumping Act does not proscribe transactions which involve selling an imported product at a price which is not lower than that needed to make the product competitive in the U.S. market, even though the price of the imported product is lower than its home market price.[15]

This "complex and difficult" judgment by the Commission is aided greatly by the use of economic and financial analysis. One of the most important assumptions of traditional microeconomic theory is that firms attempt

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14 Trade Reform Act of 1974, S. Rep. 1298, 93rd Cong. 2d Sess. 179.

15 Id.

to maximize profits.[16] Congress was obviously familiar with the economist's tools: "[I]importers as prudent businessmen dealing fairly would be interested in maximizing profits by selling at prices as high as the U.S. market would bear."[17]

An assertion of unfair price discrimination should be accompanied by a factual record that can support such a conclusion. In accord with economic theory and the legislative history, foreign firms should be presumed to behave rationally. Therefore, if the factual setting in which the unfair imports occur does not support any gain to be had by unfair price discrimination, it is reasonable to conclude that any injury or threat of injury to the domestic industry is not "by reason of" such imports.

In many cases unfair price discrimination by a competitor would be irrational. In general, it is not rational to charge a price below that necessary to sell

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16 See, e.g., P. Samuelson & W. Nordhaus, Economics 42-45 (12th ed. 1985); W. Nicholson, Intermediate Microeconomics and Its Application 7 (3d ed. 1983).

17 Trade Reform Act of 1974, S. Rep. 1298, 93rd Cong. 2d Sess. 179.

one's product. In certain circumstances, a firm may try to capture a sufficient market share to be able to raise its price in the future. To move from a position where the firm has no market power to a position where the firm has such power, the firm may lower its price below that which is necessary to meet competition. It is this condition which Congress must have meant when it charged us "to discourage and prevent foreign suppliers from using unfair price discrimination practices to the detriment of a United States industry."[18]

In Certain Red Raspberries from Canada, I set forth a framework for examining what factual setting would merit an affirmative finding under the law interpreted in light of the cited legislative history.[19]

> The stronger the evidence of the following . . . the more likely that an affirmative determination will be made: (1) large and increasing market share, (2) high dumping margins, (3) homogeneous products, (4) declining prices and (5) barriers to entry to other foreign producers (low elasticity of supply of other imports).[20]

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18 Trade Reform Act of 1974, S. Rep. 1298, 93rd Cong. 2d Sess. 179.

19 Inv. No. 731-TA-196 (Final), USITC Pub. 1680, at 11-19 (1985) (Additional Views of Vice Chairman Liebeler).

20 Id. at 16.

The statute requires the Commission to examine the volume of imports, the effect of imports on prices, and the general impact of imports on domestic producers.[21] The legislative history provides some guidance for applying these criteria. The factors incorporate both the statutory criteria and the guidance provided by the legislative history. Each of these factors is evaluated in turn.

Causation analysis

Import penetration data are relevant because unfair price discrimination has as its goal, and cannot take place in the absence of, market power. The market penetration of imports of solid urea from the GDR, Romania and the USSR increased over the period under investigation from 10.4 percent of consumption in 1983 to 14.7 percent of consumption in 1984 and 16.3 percent in 1985. The import penetration has increased from 14.0 percent over the first quarter of 1985 to 22.2 percent in the same

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[21] 19 U.S.C. 1677(7)(B)-(C) (1980 & cum. supp. 1985).

period of 1986.[22] Thus, imports of urea from the countries under investigation represent a large and growing market share and the first indicator suggests that unfair price discrimination conditions may exist.

The second factor is a high margin of dumping or subsidy. The higher the margin, ceteris paribus, the more likely it is that the product is being sold below the competitive price[23] and the more likely it is that the domestic producers will be adversely affected. In a preliminary investigation, the Commerce Department has not yet had time to calculate any margins. I therefore rely on the margins alleged by petitioner. Using "standard" and "factors of production" methods of the constructed value, the petitioner alleges LTFV margins of between 167 and 279 percent.[24] These margins are very high and would further suggest the presence of unfair price discrimination.

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[22] Report at A-30.

[23] See text accompanying note 15, supra.

[24] Report at A-7. Petitioners allege the following dumping margins using the constructed value and factor analysis methods respectively: For the GDR 167 percent and 196 percent; for Romania 211 percent and 245 percent; for ***e USSR 241 percent and 279 percent.

The third factor is the homogeneity of the products. The more homogeneous the products, the greater will be the effect of any allegedly unfair practice on domestic producers. There is some evidence suggesting that the domestic and imports differ in terms of quality. The quality of urea depends on two factors: the size and uniformity of the prills or granules, and resistance to caking. Purchasers of both domestic urea and imports from the subject countries have reported that although the domestic material is preferred or required for certain applications, the imported material is chemically identical to and can be used for many of the same applications as domestic urea.[25] I ask that the quality differences between the domestic and imported product be further investigated in the event that this case reaches a final.

As to the fourth factor, evidence of declining domestic prices, ceteris paribus, might indicate that domestic producers were lowering their prices to maintain market share. Weighted-average f.o.b. sales prices of

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[25] Report at A-31.

domestic prilled urea sold during the first full week of each month, shipped by barge, decreased approximately 35 percent over the period from January 1985 to July 1986. Prices for truck and rail shipments of domestic urea decreased by 35 percent from $156 to $102 per short ton over the same period.[26] This factor therefore is not inconsistent with unfair price discrimination.

The fifth factor is barriers to entry (foreign supply elasticity). If there are barriers to entry (or low foreign elasticity of supply) it is more likely that a producer can gain market power. In 1985 the GDR, Romania and the USSR accounted for 16.3 percent of US imports of urea.[27] Imports from all other countries accounted for more than 50 percent of apparent U.S. consumption of urea in the first quarter of 1986. This suggests that the supply curve of urea facing the U.S. is fairly elastic.

These factors must be considered in each case to reach a sound determination. Four of the factors in this case

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[26] In the event that this investigation reaches a final, it would be helpful for the commission to have domestic price information covering the entire period under investigation.

[27] Report at A-30.

are consistent with finding a reasonable indication of material injury by reason of allegedly dumped imports of urea from the GDR, Romania and the USSR. The high elasticity of supply facing the domestic market is not sufficient to outweigh the increasing market share and declining domestic prices in these preliminary investigations.

Conclusion

Therefore, I conclude that there is a reasonable indication that an industry in the United States is materially injured by reason of allegedly dumped imports of urea from the GDR, Romania and the USSR.

INFORMATION OBTAINED IN THE INVESTIGATIONS

Introduction

On July 16, 1986, a petition was filed with the U.S. International Trade Commission and the U.S. Department of Commerce by counsel on behalf of the Ad Hoc Committee of Domestic Nitrogen Producers. 1/ The petition alleges that an industry in the United States is materially injured and is threatened with material injury by reason of imports from the German Democratic Republic (East Germany), Romania, and the Union of Soviet Socialist Republics (U.S.S.R.) of solid urea, provided for in item 480.30 2/ of the Tariff Schedules of the United States (TSUS), which are allegedly being sold in the United States at less than fair value (LTFV).

Accordingly, effective July 16, 1986, the Commission instituted preliminary antidumping investigations Nos. 731-TA-338 (Preliminary) (East Germany), 731-TA-339 (Preliminary) (Romania), and 731-TA-340 (Preliminary) (U.S.S.R.) 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 the alleged LTFV imports of urea into the United States.

Notice of the institution of the Commission's investigations and of a 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 July 23, 1986 (51 F.R. 26477). 3/ The conference was held on August 8, 1986. 4/ The statute directs that the Commission make its determinations in these cases within 45 days after receipt of the petition, or by September 2, 1986.

These are the first Commission investigations concerning urea.

1/ The Ad Hoc Committee of Domestic Nitrogen Producers is composed of the following: Agrico Chemical Co., Tulsa, OK; American Cyanamid Co., Wayne, NJ; CF Industries, Long Grove, IL; Farmland Industries, Inc., Kansas City, MO; First Mississippi Corp., Jackson, MS; Mississippi Chemical Corp., Yazoo City, MS; Terra Chemicals International, Sioux City, IA; and W.R. Grace & Co., New York, NY.

2/ The petition referred only to solid urea in Tariff Schedules of the United States (TSUS) item 480.30. When Commerce instituted its investigations effective Aug. 12, 1986, it also included Tariff Schedules of the United States Annotated (TSUSA) items 480.3000, 480.6550, and 480.8030 within the "scope" of its investigations (51 F.R. 28854). Commerce stated that merchandise classified in TSUSA items 480.6550 and 480.8030 would be subject to its investigations only if the predominant component was urea. Commerce, in a letter dated Aug. 26, 1986, informed the Commission that the scope of Commerce's investigations was being narrowed to include only solid urea in TSUS item 480.30.

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

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

The Product

Description and uses

Urea ($CO(NH_2)_2$) is a major source of nitrogen in fertilizer applied to fields in the United States. According to Commerce data, approximately 95 percent of the urea consumed in the United States is as fertilizer; the rest is used to make urea-formaldehyde resins (used as plastics and adhesives), as a protein supplement in animal feeds, and for several other miscellaneous applications (table 1).

Table 1.--Urea: Percentage distribution of U.S. production, by end uses, 1985

End use	Percent
Fertilizer:	
Solutions	36.5
Solid	58.7
Other:	
Feed 1/	1.3
All other 2/	3.5
Total	100.0

1/ Principally cattle feed.
2/ Principally adhesives and plastics.

Source: Compiled from Current Industrial Reports, Inorganic Fertilizer Materials and Related Products, Report M28B, U.S. Department of Commerce, Bureau of the Census (January 1985-December 1985).

Urea is one of the most widely used nitrogenous fertilizers, accounting for approximately 20 percent of all nitrogen consumed as fertilizer in the United States. The remainder of nitrogen nutrient added to the soil is through other nitrogenous fertilizers such as ammonia (from which urea is made), ammonium nitrate, ammonium sulfate, or urea-ammonium nitrate (UAN) solutions. Farmers, the final consumers for most urea, purchase fertilizers on the basis of plant nutrient content, and urea, which contains 46 percent nitrogen, has the highest nitrogen content of all the solid fertilizers.

Nitrogen, such as that contained in urea, is one of the three key chemical elements essential for plant growth. It is a major and indispensable constituent of protein and nitrogen stimulates the entire vegetative cycle of a plant. As the so-called "growth element," nitrogen is needed to ensure proper development of growing plant tissues, such as buds, tips of shoots, developing leaflets, and fruits. Nitrogen is also critical during the seed-forming stage of plant growth. Nitrogen, therefore, is often the limiting factor in plant or crop growth.

At normal atmospheric temperatures and pressures, urea is a white crystalline solid with a faint ammoniacal odor. It is classified as a nontoxic compound and is stable at room temperature and atmospheric pressure. Solid urea is marketed in two forms, prills (small spherical particles) and granules. Urea prills differ from granules only in method of formation, entity size, and strength--chemically they are identical. Both the prilled and granular forms of solid urea are approximately 99 percent pure and differ from one another only in physical properties such as unit size, crushing strength, and abrasion resistance.

Generally, the prilled product is weaker and smaller in particle size than the granular. Both are suitable for use alone or for blending with other solid fertilizers for field applications. About 35 percent of the urea produced in the United States is used by urea producers for further processing into other fertilizer products, such as UAN solutions, and about 60 percent is used as solid fertilizer.

Importers of urea from East Germany, Romania, and the U.S.S.R. sell mostly prilled urea in the United States. Approximately 45 percent of U.S. production of solid urea is in granular form and the other 55 percent is in prilled form.

Production process

Urea was first isolated by Rouelle in 1773 by crystallization from urine. The first synthesis of urea occurred in 1828 when Wohler prepared urea from ammonia and cyanuric acid. 1/ Wohler's synthesis became a milestone in science, as urea became the first organic compound to be synthesized from inorganic materials and disproved the "vital-force" theory that only living organisms could produce organic compounds.

The currently used method of urea synthesis has been understood in principle since 1868, yet commercial production started much later. Germany, in 1922, was the first country to institute commercial urea production; the United States followed in 1932, and England in 1935. Initial doubt about agronomic suitability and expensive and cumbersome production processes hindered acceptance of urea as a fertilizer. Today, however, efficient urea production processes and urea's high nitrogen content combine to make it a popular nitrogenous fertilizer.

Urea is produced from liquid ammonia (NH_3) and gaseous carbon dioxide (CO_2) at high temperature and pressure. Both ammonia and carbon dioxide are obtained from the ammonia production process, as carbon dioxide is a by-product of ammonia synthesis. These two feed components are delivered to a high-pressure reactor where, simultaneously, ammonium carbamate is formed (reaction(1)) and about one-half of the carbamate is converted to urea and water (reaction (2)). The reactions occur as follows:

1/ United Nations, "Development and Transfer of Technology Series No. 13," Fertilizer Manual, 1980, pp. 109-121.

(1) $2NH_3$ + CO_2 = $NH_2CO_2NH_4$
ammonia carbon dioxide ammonium carbamate

(2) $NH_2CO_2NH_4$ = $CO(NH_2)_2$ + H_2O
ammonium carbamate Urea water

The unconverted carbamate is then decomposed to ammonia and carbon dioxide by high-pressure stripping, and recycled to the reactor along with fresh ammonia and carbon dioxide. This general urea production process yields 70- to 87-percent urea in an aqueous solution. The urea reactor solution is purified by removal of excess ammonia and carbon dioxide and then is suitable for direct use in the production of UAN solutions. The purified urea reactor solution may also be concentrated to urea melt by further water evaporation and heating, then finished or solidified in essentially pure form as either prills or granules.

The prilling process involves spraying molten urea droplets from the top of a high cylindrical tower downward through a countercurrent airstream. As the droplets fall and cool they form into spherical particles called prills.

In the granulation process, molten urea is sprayed onto a cascading bed of urea granules and recycled fines in a rotating cylindrical granulation drum. Molten urea solidifies as a coating on the granules and fines, building them up layer by layer to give a hard urea granule. Prilled or granular urea is screened and the "overs" and "unders" are recycled into the urea production process.

The general urea production process may incorporate process variations, modifications, or improvements that affect yield, energy utilization, and environmental concerns. The technology is available throughout the world in "turn-key" plants. A flowchart of a urea production plant is shown in figure 1.

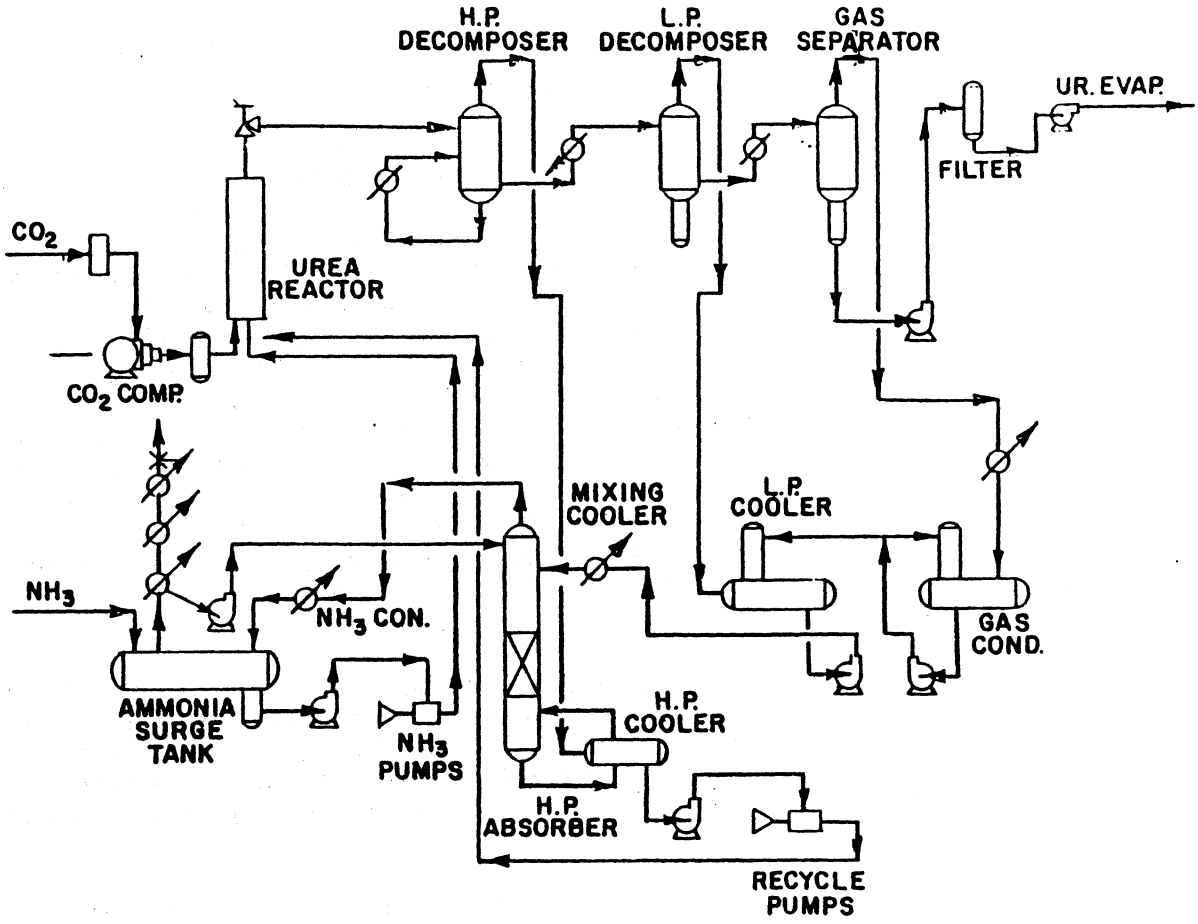
U.S. tariff treatment

Imports of urea are classified in TSUS item 480.30, irrespective of whether the urea is in solid form or alone in an aqueous solution. 1/

Tariff Schedules of the United States Annotated (TSUSA) item 480.6550 provides for nitrogen solutions; and TSUSA item 480.8030 provides for chemically compounded or mixed fertilizers containing two or more major plant foods (nitrogen, phosphorus, and potassium).

1/ TSUS schedule 4, headnote 2(b) states that the term "compounds," as used in that schedule, includes a solution of a single compound in water. Urea is a compound as defined in TSUS schedule 4 headnote 2(a).

Figure 1.--Flow chart of the urea production process.



Source: Agrico Chemical Co.

As a practical matter, urea imported under TSUSA items 480.6550 or 480.8030 would enter in the form of mixtures. 1/ The urea content, if any, of imports under TSUSA items 480.6550 or 480.3030 is unknown.

Imports under TSUS items 480.30, 480.65, and 480.80 have been duty free since 1930, regardless of country of origin.

Nature and Extent of Alleged Sales at LTFV

Petitioner states that it is unable to obtain actual sales prices of urea imported from East Germany, Romania, and the U.S.S.R. and, consequently, bases its U.S. price on official U.S. Department of Commerce statistics of import unit values. Petitioner provided its computed inland freight costs in East Germany, Romania, and the U.S.S.R. based on inland freight charges for comparable distances in countries for which data are available. These computed inland freight costs for East Germany, Romania, and the U.S.S.R. were deducted from the f.o.b. unit import prices for urea from each country to obtain ex-factory prices. Petitioner states that it has no information concerning other charges or expenses incident to transporting urea from East Germany, Romania, and the U.S.S.R. and, therefore, notes that Commerce should investigate such expenses and adjust the Petitioner's computed U.S. prices accordingly.

Petitioner alleges that significant portions of urea entered into the United States from the U.S.S.R., and possibly East Germany and Romania, are countertrade transactions. In addition, petitioner alleges that in countertrade arrangements, transportation costs may not represent "arms length" costs and that certain importers may be selling urea below their acquisition costs.

Petitioner submits that the Federal Republic of Germany (West Germany) is an appropriate surrogate country for each of the "state-controlled-economy" countries, East Germany, Romania, and the U.S.S.R. Petitioner further alleges that urea prices, as the basis for foreign-market values, are not appropriate in these investigations because world urea market prices are artificially depressed by exports from nonmarket-economy (NME) producers.

1/ TSUS schedule 4, headnote 3(a) states that the term "mixtures," as used in that schedule, means substances consisting of two or more ingredients (i.e., elements or compounds), whether occurring as such in nature, or whether artificially produced (i.e., brought about by mechanical, physical, or chemical means), which do not bear a fixed ratio to one another and which, however thoroughly commingled, retain their individual chemical properties and are not chemically united. The fact that the ingredients of a product are incapable of separation or have been commingled in definite proportions does not in itself affect the classification of such product as a mixture. Further, TSUS schedule 4, headnote 3(b) states that the term "mixture," as used in that schedule, includes solutions, except solutions defined as compounds in headnote 2(b) of this schedule.

Petitioner, therefore, calculated foreign-market value using "standard" and "factors of production" methods of constructed value. Petitioner's results from these calculations, along with alleged LTFV margins, are presented in the following tabulation. 1/

East Germany:	Foreign market value (per ton)	U.S. price (per ton)	LTFV margin (percent)
Constructed value..	$177.16	$66.42	166.73
Factors analysis...	196.38	66.42	195.66

Romania:	Foreign market value (per ton)	U.S. price (per ton)	LTFV margin (percent)
Constructed value..	$177.16	$56.98	210.92
Factors analysis...	196.38	56.98	244.65

U.S.S.R.:	Foreign market value (per ton)	U.S. price (per ton)	LTFV margin (percent)
Constructed value..	$177.16	$51.88	241.48
Factors analysis...	196.38	51.88	278.53

The U.S. Market

U.S. producers

In 1985, the domestic urea industry comprised about 30 companies, operating urea plants at 38 locations with a total operating design capacity of 8.1 million short tons per year. The U.S. producers ranged from small chemical or fertilizer companies to large integrated multinational oil and chemical corporations, with some of the largest urea producers being farmers' cooperatives. The names and domestic production locations of the U.S. urea producers are presented in table 2. Because of recent closures and changes in ownership, present plant capacity proved difficult to verify.

Questionnaire responses were received from 16 firms that accounted for 84.2 percent of the 1985 urea capacity reported in table 2. The eight members of the Ad Hoc Committee of Domestic Nitrogen Producers accounted for 48.0 percent of total urea capacity.

Most domestic urea plants are located in close proximity to ammonia feedstock plants, and most ammonia plants are located in those States that have supplies of natural gas. In 1985, for example, 30 percent of the urea production capacity was located in Louisiana, 14 percent in Oklahoma, and 12 percent in Alaska. According to Tennessee Valley Authority statistics for 1985, the 10 largest U.S. urea producers accounted for about 76 percent of U.S. productive capacity.

1/ Petition, pp. 18-41.

Table 2.--Urea: U.S. producers, location of production facilities, and annual production capacity, 1985 1/

Producer	Location	Capacity Urea 1,000 short tons	Share Percent
Agrico Chemical Co.....	Blytheville, AR	350	4.3
	Donaldsonville, LA	270	3.3
	Verdigris, OK	500	6.2
Air Products & Chemical Corp.....	Pace Junction, FL	23	.3
American Cyanamid.....	Fortier, LA	145	1.8
Arcadian Corp.....	Geismar, LA	306	3.8
	LaPlatte, NE	132	1.6
Atlas Chemical.....	Joplin, MO	70	.9
Bordon Chemical Co.....	Geismar, LA	215	2.7
CF Industries, Inc.....	Donaldsonville, LA	885	10.8
Chevron Chemical Co....	Kennewick, WA	70	.9
Columbia Nitrogen.....	Augusta, GA	410	5.1
Cominco.....	Borger, TX	85	1.1
Farmland Industries....	Fort Dodge, IA	70	.9
	Enid, OK	340	4.2
	Lawrence, KS	240	3.0
Goodpasture, Inc.....	Dimmitt, TX	24	.3
Grace, W.R.....	Woodstock, TN	385	4.8
Hawkeye Chemical Co....	Clinton, IA	61	.8
Kaichem International..	North Bend, OH	80	1.0
Kaiser Ag. Chemicals...	Pryor, OK	180	2.2
Mississippi Chemical Corp.....	Yazoo City, MS	153	1.9
N-ReN Corp.....	East Dubuque, IL	125	1.5
	Pryor, OK	27	.3
Olin Corp.....	Lake Charles, LA	170	2.1
Phillips PAC Chem.....	Kennewick, WA	43	.5
Phillips Petroleum.....	Beatrice, NE	58	.7
Reichhold Chemicals....	St. Helens, OR	110	1.4
Simplot, J.R.....	Pocatello, ID	50	.6
Standard Oil Co.....	Lima, OH	390	4.8
Tennessee Valley Authority.....	Muscle Shoals, AL	102	1.3
Terra Chemicals.....	Port Neal, IA	255	3.2
	Woodward, OK	83	1.0
Triad Chemical.....	Donaldsonville, LA	420	5.2
Unocal.....	Kenai, AK	1,000	12.3
	Brea, CA	120	1.5
U.S.S. Agri-Chemical...	Cherokee, AL	96	1.2
Wycon Chemical Co.....	Cheyenne, WY	50	.6
Total.....		8,093	100.0

1/ App. C contains a list of U.S. urea producers' plant locations and capacities during 1977-85, along with projections to 1990.

Source: National Fertilizer Development Center, Tennessee Valley Authority, Muscle Shoals, AL.

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

The efficiency requirement that most urea plants operate continuously at near capacity must be balanced against the seasonal nature of the fertilizer market, which is the principal end-user market for urea. Process operation at less than 80 percent of rated capacity allows retention of undesirable biuret impurities in the finished product. Testimony at the Commission's conference indicated that producers have some flexibility to operate urea plants at less than full capacity. 1/ However, urea plants are designed specifically for the production of urea and cannot be used to produce any other chemical. Once a urea plant is shut down, it is costly to maintain and to restart production.

U.S. importers

Questionnaires were sent to all firms that were alleged or believed to be importers of urea from East Germany, Romania, or the U.S.S.R. Fourteen firms responded that they imported urea from East Germany, Romania, or the U.S.S.R. during at least part of the period January 1983-June 1986. These firms are listed in the following tabulation:

Importer	Location
*	*
*	*
*	*
*	*
*	*
*	*
*	*

These importers are, for the most part, international or multinational trading companies that deal in a wide range of products in addition to urea. The quantities of urea imported from East Germany, Romania, and the U.S.S.R. by these firms during January-June 1986 are listed in table 3.

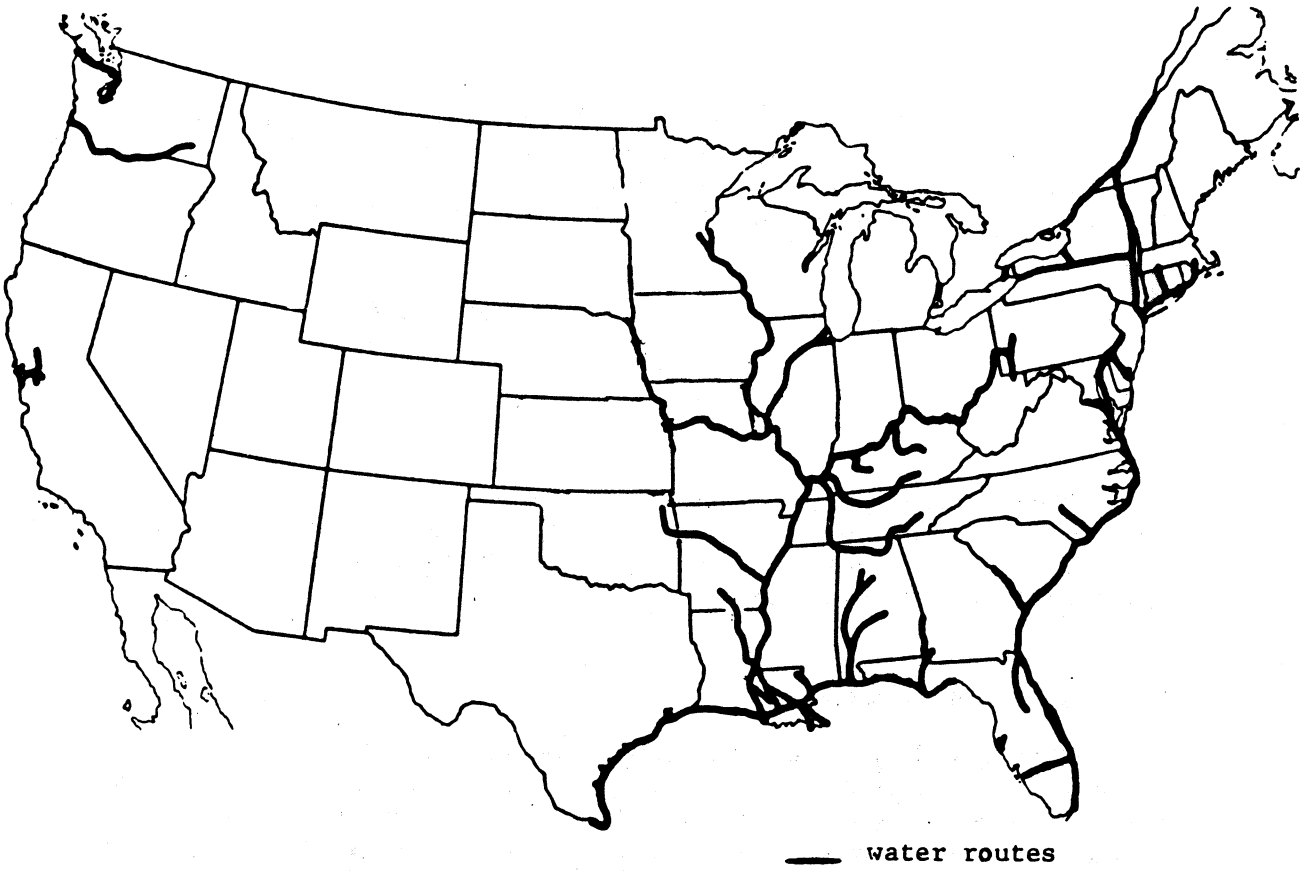
Channels of distribution

Virtually all forms of transportation that are used to move large quantities of product, except pipeline, are used to move urea to markets. As barge transportation is a relatively low-cost means of transportation for areas that have access to waterways, large tonnages of urea move by barge up the Mississippi River and along other inland waterways (see fig. 2). A standard barge contains approximately 1,500 short tons of urea.

A standard railroad car is able to transport 95 to 99 tons of urea and most highway transport trucks haul from 20 to 27 tons of urea per trip. Urea may move from the production facility to waterway-accessible storage depots and be sold by the producer from these depots. Movement from depot to dealer, co-op, retail outlet, distributor, or farm customers will proceed by truck or rail.

1/ Transcript of conference at pp. 86 and 97.

Figure 2.-- Urea: U.S. water transportation routes.



Source: The Tennessee Valley Authority.

Table 3.--Urea: U.S. importers of urea from East Germany, Romania, and the U.S.S.R. and quantity of imports from those countries during January-June 1986

(In thousands of short tons)

Importer	Imports			
	East Germany	Romania	U.S.S.R.	Total
* * *	*	*	*	*
Total.....	127	84	397	608

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

There are several levels of distribution from the urea plant or import vessel to the farm level because most plants or points of importation are distant from the principal crop producing areas. Some producers have extensive distribution systems and others sell to large wholesale dealers. These large wholesale dealers sell to smaller dealers who then sell at retail (i.e., the farm level). Importers mostly sell to large wholesale dealers.

Apparent U.S. consumption

Table 4 shows the quantity, in thousands of short tons, of U.S. production, exports, imports, and apparent consumption of urea during January 1983-June 1986. As shown, U.S. apparent consumption of urea increased 22.4 percent from 1983 to 1984 before falling 9.5 percent from 1984 to 1985. Apparent consumption during January-June 1986 was 21.5 percent above that during the corresponding period of 1985.

Ratios, as percentages, of imports to apparent consumption are also shown in table 4. Combined imports from East Germany, Romania, and the U.S.S.R. increased, as a percentage of apparent consumption, from 7.7 percent in 1983 to 10.5 percent in 1984 and 11.2 percent in 1985. The ratio of imports from East Germany, Romania, and the U.S.S.R. to apparent consumption during January-June 1986 was 17.1 percent, compared with 9.4 percent during January-June 1985. Likewise, the ratio of total imports to apparent consumption jumped to 40.9 percent during January-June 1986, compared with 27.1 percent during January-June 1985.

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

U.S. production, capacity, and capacity utilization

The Commission, in its producers' questionnaires, asked for capacity and production data for all forms of urea, for prilled urea, and for granulated urea. Questionnaire responses were received from 16 producers that,

Table 4.--Urea: U.S. production, exports, imports, and apparent consumption, 1983-85, January-June 1985, and January-June 1986

Urea	1983	1984	1985	January-June-- 1985	1986
Production: 1/					
1,000 short tons..	6,013	7,433	6,556	3,732	3,254
Exports.....do....	1,099	1,270	1,154	693	257
Imports:					
East Germany.....do....	0	69	59	0	142
Romania.....do....	136	393	330	130	210
U.S.S.R.....do....	387	418	455	264	515
Import subtotal...do....	523	880	844	394	867
All other imports...do....	1,396	1,320	1,322	737	1,204
Total imports..do....	1,919	2,200	2,165	1,131	2,071
Apparent consumption 1/ 2/					
1,000 short tons..	6,833	8,363	7,567	4,170	5,068
Ratio of imports to apparent consumption:					
East Germany.....percent..	-	0.8	0.8	-	2.8
Romania.....do....	2.0	4.7	4.4	3.1	4.1
U.S.S.R.....do....	5.7	5.0	6.0	6.3	10.2
East Germany, Romania, and the U.S.S.R. percent..	7.7	10.5	11.2	9.4	17.1
All imports.....do....	28.1	26.3	28.6	27.1	40.9

1/ On a dry, 100-percent urea basis.
2/ Calculated as production less exports plus imports.

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

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

collectively, accounted for 82.3 percent of the total domestic urea production in 1985 as reported in official statistics of the U.S. Department of Commerce (table 5). Respondents to the Commission's questionnaires included all of the major urea producers, except * * *. A good number of small to medium size firms also returned completed questionnaires.

The National Fertilizer Development Center of the Tennessee Valley Authority (TVA) stated in a letter that it does not run a commercial plant and the questionnaire was not applicable to their urea plant.

Total U.S. urea production increased 23.6 percent from 1983 to 1984 and then dropped 11.8 percent from 1984 to 1985 (table 5). Production during January-June 1986 was 12.8 percent below that during the corresponding period of 1985. Production of solid (prilled or granulated) urea, for fertilizer

Table 5.--Urea: U.S. production, capacity, and capacity utilization, 1983-85, January-June 1985, and January-June 1986

Item	1983	1984	1985	January-June-- 1985	1986
Production: 1/					
For fertilizer use:					
Solutions 2/					
1,000 short tons..	1,809	2,361	2,392	1,356	1,161
Solid.....do....	3,822	4,536	3,851	2,213	1,912
For other uses:					
Feed 3/.....do....	282	301	87	43	52
All other 3/.....do....	99	235	226	120	129
Total.....do....	6,013	7,433	6,556	3,732	3,254
Capacity 1/.....do....	7,901	7,943	8,093	4/ 4,047	4/ 3,747
Capacity utilization percent..	76.1	93.6	81.0	92.2	86.9

1/ On a dry, 100-percent urea basis.
2/ Solutions produced as intermediate in nitrogen solutions.
3/ Solid and solutions.
4/ One-half of annual capacity.

Source: Production data compiled from official statistics of the U.S. Department of Commerce. Capacity data compiled by the National Fertilizer Development Center, Tennessee Valley Authority, Muscle Shoals, AL.

use, increased 18.7 percent from 1983 to 1984 and then fell 15.1 percent from 1984 to 1985. Production of solid fertilizer urea during January-June 1986 was 13.6 percent below that during the corresponding period of 1985.

Production of urea in solution (for captive production of nitrogen solutions), for fertilizer use, increased sharply (30.5 percent) from 1983 to 1984 and increased slightly (1.3 percent) from 1984 to 1985. However, production of urea for use in nitrogen fertilizer solutions fell by 14.4 percent during January-June 1986 compared with that in the corresponding period of 1985. Production of urea for other uses (primarily cattle feed supplements, plastics, and adhesives) increased from 1983 to 1984, decreased from 1984 to 1985, and increased during January-June 1986 compared with that in January-June 1985.

The petitioners accounted for 47.2 percent of total urea production in 1985 and 61.0 percent of the production of solid urea as reported in official statistics of the U.S. Department of Commerce.

TVA has provided statistical and technical data on the U.S. and world fertilizer industries for many years. TVA data for capacity are believed to be the best available historical data for both U.S. and foreign urea producers and these data are, therefore, included in appendix C.

U.S. capacity data are reported by the TVA in both thousands of short tons of urea and in thousands of metric tons of contained nitrogen (the nitrogen content of commercial urea ranges from 45 to 46 percent, depending on purity). These data are included at appendix C to facilitate comparisons between U.S. capacity and capacity in East Germany, Romania, and the U.S.S.R. International capacity data are reported by the TVA in thousands of metric tons of contained nitrogen.

Two important facts should be kept in mind when using the data in appendix C: (1) a metric ton is larger than a short ton and to convert from metric tons to short tons the former must be multiplied by 1.1023, and (2) TVA has assumed (for conversion purposes) that urea is 45 percent nitrogen and to convert from contained nitrogen to gross weight of urea the former must be multiplied by 2.2222. Thus, to convert TVA's international statistics for urea in thousands of metric tons of contained nitrogen to thousands of short tons of urea, the world data must be multiplied by 2.4496. Fortunately, for analyses of changes in urea capacity, such conversions are not required if the compared data are in the same units.

An examination of the data for U.S. capacity shows a slight increase (0.6 percent) from 1983 to 1984 and a 2.0 percent increase from 1984 to 1985. The capacity during January-June 1986 was, because of plant closures, 7.4 percent below that during the corresponding period of 1985. 1/

U.S. capacity utilization rates increased from 76.1 percent in 1983 to 93.6 percent in 1984 and then dropped to 81.0 percent in 1985 (table 5). Capacity utilization rates dropped from 92.2 percent during January-June 1985 to 86.9 percent during January-June 1986. It should be noted that these utilization rates are for operating plants. Utilization rates would be lower if idle or closed plant capacity was included. Urea plants are designed by plant vendors to produce at rates somewhat greater than nameplate capacity so that actual capacity closely approximates or exceeds TVA nameplate capacity for urea. Further, modern urea plants are designed to operate at maximum efficiency when operating at, or near, maximum capacity. The thermodynamics of the production processes allow limited flexibility to operate much below full capacity. Therefore, rather than operate at significantly reduced rates, urea plants are closed. To shutdown a urea plant for an extended period is costly and producers will sometimes continue to operate in an oversupplied market if they expect conditions to improve. In addition, once a producer exits from a highly competitive market, such as the U.S. urea market, it is difficult to reenter that market.

In general, the trends in production and capacity reported in table 6, from the Commission's questionnaire responses, follow those in table 5 from Commerce's and TVA's data. Commerce estimates monthly production for firms that do not report their data by a certain date of the month and then revises the data when reports are received. Therefore, Commerce's January-June 1986 data may be overstated, in view of responses to the Commission's questionnaires.

1/ For plant-by-plant changes in U.S. capacity and ownership, refer to app. C, pp. D-3 through D-5 and D-7 through D-9.

Table 6.--Urea: U.S. production, capacity, and capacity utilization, by form of finished product, 1983-85, January-June 1985, and January-June 1986

Item	1983	1984	1985	January-June-- 1985	1986
Production: 1/					
As prills					
1,000 short tons..	2,001	2,509	2,207	1,266	1,023
As granules.....do....	1,705	1,715	1,701	1,001	774
All other 2/.....do....	754	1,567	1,490	832	709
Total.....do....	4,460	5,791	5,398	3,099	2,506
Capacity: 1/					
Prilling.....do....	2,504	2,523	2,523	1,260	1,257
Granulation.....do....	2,937	2,937	2,937	1,468	1,468
All other.....do....	782	1,260	1,354	641	680
Total.....do....	6,223	6,720	6,814	3,369	3,405
Capacity utilization:					
Prilling.....percent..	79.9	99.4	87.5	100.5	81.4
Granulation.....do....	58.1	58.4	57.9	68.2	52.7
Average 3/.....do....	71.7	86.2	79.2	92.0	73.6

1/ On a dry, 100-percent urea basis.
2/ Reactor solution (70 to 87 percent urea in an aqueous solution) used captively in the production of UAN solutions or mixed chemical fertilizers, reported on a dry, 100-percent urea basis (i.e., the quantity of pure urea contained in the solution).
3/ All forms.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission. These data are understated compared with the data in table 5 because not all domestic producers of urea responded to the Commission's questionnaire.

An interesting bit of new information is shown in table 6, and that is the difference in utilization rates in the prilling and granulation plants. Those producers that finish solid urea as prills have been operating their prilling towers at higher utilization rates than have those producers that finish their urea as granules.

U.S. producers' shipments

U.S. producers' domestic shipments of urea produced in their own establishments (i.e., excluding any purchased or imported urea) increased, on the basis of quantity, 4.4 percent from 1983 to 1984 and declined slightly (1.5 percent) from 1984 to 1985 (table 7). Producers' domestic shipments were virtually constant during January-June 1986 when compared with shipments in the corresponding period of the previous year. Intracompany transfers of urea, principally for captive use in the production of UAN solutions,

Table 7.--Urea: U.S. producers' domestic shipments, intracompany shipments, and export shipments, 1983-85, January-June 1985, and January-June 1986

Item	1983	1984	1985	January-June-- 1985	1986
	Quantity (1,000 short tons) 1/				
U.S. producers' domestic shipments	2,680	2,798	2,755	1,758	1,769
Intracompany transfers	898	1,602	1,682	932	814
Export shipments	855	977	647	376	***
Total	4,433	5,377	5,084	3,066	***
	Value (1,000 dollars)				
U.S. producers' domestic shipments	326,098	401,744	370,061	246,350	182,311
Intracompany transfers	78,390	155,842	159,453	81,929	71,580
Export shipments	91,098	131,017	79,246	52,517	***
Total	495,586	688,603	608,760	380,796	***
	Unit value (per short ton)				
U.S. producers' domestic shipments	$121.68	$143.58	$134.32	$140.13	$103.06
Intracompany transfers	87.29	97.28	94.80	87.90	87.94
Export shipments	106.55	134.10	122.48	139.67	***
Average	111.79	128.06	119.74	124.20	***

1/ On a dry, 100-percent urea basis.

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

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

increased 78.4 percent from 1983 to 1984 and then increased an additional 5.0 percent from 1984 to 1985. Intracompany transfers of urea dropped 12.7 percent during January-June 1986 when compared with those in January-June 1985. Export shipments of urea increased 14.3 percent from 1983 to 1984 before dropping sharply, by 33.8 percent, from 1984 to 1985. Exports plummeted another *** percent during January-June 1986 when compared with exports during January-June 1985.

Unit values of domestic shipments (i.e., shipments to distributors, brokers, retail outlets, and other "arm's-length-transactions") increased from 1983 to 1984, decreased from 1984 to 1985, and dropped sharply when values during January-June 1986 are compared with those during January-June 1985. The unit values of exports are largely useless because * * *. This means that the unit values for exports are significantly understated. * * *.

The petitioner alleges that the significant drop (26.5 percent) in the unit value of U.S. producers' domestic shipments during January-June 1986, compared with the unit value of such shipments during January-June 1985, was directly related to the alleged LTFV sales of imported urea from East Germany, Romania, and the U.S.S.R.

Export data as compiled by the U.S. Department of Commerce are shown in table 8. The Commerce data show the same general trends as those compiled from responses to the Commission's questionnaires. The Commerce data are, however, more complete because not all domestic producers responded to the Commissions' questionnaires and, consequently, the export data reported in table 7 are understated.

U.S. producers' inventories

U.S. producers' inventories of urea, produced in their own plants, decreased from 478,000 short tons, as of December 31, 1982, to 314,000 short tons, as of December 31, 1983, or by 34.3 percent. Inventories increased to 531,000 short tons as of December 31, 1984, or by 69.1 percent, then increased to 695,000 short tons as of December 31, 1985, or by 30.9 percent. Inventories on June 30, 1986, amounted to 308,000 short tons, a decrease of 38.8 percent compared with the level of inventories on June 30, 1985.

As a share of U.S. producers' total domestic production during the preceding year, inventories increased from 7.0 percent as of December 31, 1983, to 9.2 percent as of December 31, 1984, and to 12.9 percent as of December 31, 1985. The ratio was 8.1 percent as of June 30, 1985, compared with 6.1 percent as of June 30, 1986. Data on U.S. producers' end-of-period inventories of urea are presented in the following tabulation:

Date	Inventories 1,000 short tons 1/	Percent of total production 2/
Dec. 31--		
1982	478	3/
1983	314	7.0
1984	531	9.2
1985	695	12.9
June 30--		
1985	503	4/ 8.1
1986	308	4/ 6.1

1/ On a dry, 100-percent urea basis.
2/ As reported in response to the Commission's producers' questionnaires (table 6).
3/ Not available.
4/ Annualized.

U.S. producers' employment and wages

The average number of production and related workers producing nitrogenous fertilizers for the 16 producers that provided employment data increased from 2,549 in 1983 to 2,753 in 1984, or by 8.0 percent, and was virtually constant from 1984 to 1985 (table 9). The number of workers in January-June 1986 was 2,616, representing a decrease of 5.1 percent from the 2,757 workers in the corresponding period of 1985.

Table 8.--Urea: U.S. exports, by markets, 1983-85, January-June 1985, and January-June 1986

Market	1983	1984	1985	January-June- 1985	1986
	Quantity (1,000 short tons)				
India	0	207	1/	149	1/
Canada	118	133	1/	88	1/
China	313	288	1/	84	1/
Sudan	0	0	1/	62	1/
Chile	55	83	1/	48	1/
All other	613	559	1/	262	1/
Total	1,099	1,270	1,154	693	257
	Value (1,000 dollars)				
India	-	29,989	-	22,012	-
Canada	19,934	22,143	-	13,972	-
China	32,706	36,366	-	11,299	-
Sudan	-	-	-	8,837	-
Chile	6,434	12,374	-	6,369	-
All other	66,988	81,716	-	38,834	-
Total	126,062	182,588	1/	101,323	1/
	Unit value (per short ton)				
India	-	$144.95	-	$147.55	-
Canada	$168.99	166.34	-	159.13	-
China	104.36	126.30	-	134.74	-
Sudan	-	-	-	141.59	-
Chile	116.54	149.32	-	133.92	-
All other	109.37	146.26	-	148.21	-
Average	114.70	143.82	-	146.25	-

1/ Effective July 1985, the U.S. Department of Commerce discontinued publishing export statistics for urea. However, Commerce provided data to the Commission for total quantities of exports in 1985 and during January-June 1986. In addition, quantities of urea exports are published monthly in Commerce's Current Industrial Reports, M28B.

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

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

The average number of production and related workers producing urea increased 7.2 percent during 1983-85, but the number of such workers dropped 6.9 percent during January-June compared with the number in the corresponding period of the previous year.

Table 9.--Average number of production and related workers employed in U.S. establishments in which urea is produced; hours worked, wages paid, hourly wages, and labor productivity, 1983-85, January-June 1985, and January-June 1986

Item	1983	1984	1985	January-June-- 1985	1986
Production and related workers producing:					
All products	4,456	4,937	4,916	4,952	4,713
Nitrogenous fertilizers	2,549	2,753	2,759	2,757	2,616
Urea	773	820	829	838	780
Hours worked by production and related workers producing:					
Nitrogenous fertilizers: 1,000 hours	5,018	5,510	5,435	2,740	2,561
Urea.....do	1,348	1,479	1,460	744	681
Wages paid to production and related workers producing:					
Nitrogenous fertilizers: 1,000 dollars	69,522	79,687	84,213	41,648	40,188
Urea.....do	20,417	22,672	23,849	11,901	10,842
Hourly wages for production and related workers producing:					
Nitrogenous fertilizers	$13.85	$14.46	$15.49	$15.20	$15.69
Urea	$15.15	$15.33	$16.33	$16.00	$15.92
Labor productivity: Urea short tons per hour	3.3	3.9	3.7	4.2	3.7

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

The number of hours worked by production and related workers producing urea increased 9.7 percent from 1983 to 1984 and then declined 1.3 percent from 1984 to 1985. Hours worked during January-June 1986 were 8.5 percent below those in the corresponding period of 1985.

Financial experience of U.S. producers

Fifteen U.S. producers, accounting for about 80 percent of total U.S. urea production in 1985, supplied usable income-and-loss data for both their nitrogenous fertilizer and urea operations. These data are discussed separately below.

Operations producing nitrogenous fertilizers.--Net sales rose 41.7 percent from $1.4 billion in 1983 to $2.0 billion in 1984 (table 10). In 1985, sales were $1.8 billion, a decrease of 6.3 percent from 1984. Interim

Table 10.--Income-and-loss experience of 15 U.S. producers on their overall nitrogenous fertilizer operations (including urea), accounting years 1983-85, and interim periods ended June 30, 1985, and June 30, 1986

Item	1983	1984	1985	Interim period ended June 30--1985	Interim period ended June 30--1986
Net sales..1,000 dollars..	1,389,255	1,968,740	1,845,494	1,349,461	955,167
Cost of goods sold 1,000 dollars..	1,168,497	1,474,038	1,476,932	1,014,128	830,595
Gross profit.....do....	220,758	494,702	368,562	335,333	124,572
General, selling, and administrative expenses 1,000 dollars..	129,701	138,028	148,516	110,023	106,186
Operating income....do....	91,057	356,674	220,046	225,310	18,386
Depreciation and amortization expense included above 1,000 dollars..	94,223	93,479	94,282	60,304	63,067
As a share of net sales:					
Cost of goods sold percent..	84.1	74.9	80.0	75.2	87.0
Gross profit.....do....	15.9	25.1	20.0	24.8	13.0
General, selling, and administrative expenses.....percent..	9.3	7.0	8.0	8.2	11.1
Operating income..do....	6.6	18.1	11.9	16.7	1.9
Number of firms reporting operating losses.....	9	1	5	1	8
Number of firms reporting data.....	14	15	15	15	15

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

1986 sales were $955 million, a decline of 29.2 percent from sales of $1.3 billion in interim 1985. Operating income was $91.1 million in 1983, or 6.6 percent of sales; $356.7 million in 1984, or 18.1 percent of sales; and $220.0 million in 1985, or 11.9 percent of sales. Operating income was $225.3 million, or 16.7 percent of sales, in interim 1985 and $18.4 million, or 1.9 percent of sales, in interim 1986. Nine firms reported operating losses in 1983, one firm in 1984, and five firms in 1985. In interim 1986, eight firms reported operating losses, compared with one firm in interim 1985.

Operations producing urea.--Net sales rose 43.9 percent from $476.4 million in 1983 to $685.3 million in 1984 (table 11). In 1985, sales were $595.3 million, a decrease of 13.1 percent from 1984. Interim 1986 sales were $296.4 million, a decline of 26.5 percent from sales of $403.3 million in

Table 11.--Income-and-loss experience of 15 U.S. producers on their operations producing urea, accounting years 1983-85, and interim periods ended June 30, 1985, and June 30, 1986

Item	1983	1984	1985	Interim period ended June 30-- 1985	1986
Sale quantities 1,000 short tons..	3,367	4,374	4,088	2,671	2,529
Net sales..1,000 dollars..	476,386	685,347	595,330	403,303	296,364
Cost of goods sold 1,000 dollars..	370,592	528,526	491,970	308,569	268,983
Gross profit.....do.....	105,794	156,821	103,360	94,734	27,381
General, selling, and administrative expenses 1,000 dollars..	37,502	37,871	37,120	24,011	24,365
Operating income....do....	68,292	118,950	66,240	70,723	3,016
Depreciation and amortization expense included above 1,000 dollars..	28,596	30,419	28,741	17,547	17,323
As a share of net sales:					
Cost of goods sold percent..	77.8	77.1	82.6	76.5	90.8
Gross profit.....do....	22.2	22.9	17.4	23.5	9.2
General, selling, and administrative expenses.....percent..	7.9	5.5	6.2	6.0	8.2
Operating income..do....	14.3	17.4	11.1	17.5	1.0
Number of firms reporting operating losses.....	8	5	6	5	8
Number of firms reporting data.....	14	15	15	15	15

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

interim 1985. Operating income was $68.3 million, or 14.3 percent of sales, in 1983; $119.0 million, or 17.4 percent of sales, in 1984; and $66.2 million, or 11.1 percent of sales, in 1985. Aggregate operating income was $70.7 million, or 17.5 percent of sales, in interim 1985 and $3.0 million, or 1.0 percent of sales, in interim 1986.

Eight firms reported operating losses in 1983, five firms did so in 1984, and six firms did so in 1985. During the interim periods, five firms reported operating losses in 1985 and eight firms did so in 1986 (table 11).

Income-and-loss data for urea operations on a dollars-per-ton-sold basis are presented in table 12. The sharp decline in operating income in the 1986 interim period was due to sharply lower selling prices.

Table 12.--Income-and-loss experience on a per-ton basis of 15 U.S. producers on their operations producing urea, accounting years 1983-85, and interim periods ended June 30, 1985, and June 30, 1986

(Per short ton)

Item	1983	1984	1985	Interim period ended June 30-- 1985	1986
Net sales	$141.49	$156.69	$145.63	$150.99	$117.19
Cost of goods sold	110.06	120.83	120.34	115.53	106.36
Gross profit	31.43	35.86	25.29	35.46	10.83
General, selling, and administrative expenses	11.14	8.66	9.08	8.99	9.63
Operating income	20.29	27.20	16.21	26.47	1.20
Depreciation and amortization	8.49	6.95	7.03	6.57	6.85

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

About 22,000 cubic feet of natural gas are required to produce the ammonia to make a ton of urea and, had it not been for a decline in natural gas prices during January-June 1986 (reflected in the lower cost of goods sold figure for that period), the urea industry would have had even less operating income.

Investment in productive facilities.--Fifteen U.S. producers supplied data concerning their investment in productive facilities employed in the production of urea. Their investment in such facilities, valued at cost, rose from $505 million as of the end of 1983 to $540 million as of the end of 1985. The book value of such assets was $228 million as of yearend 1985. Fourteen companies furnished interim data. For interim 1986, the original cost was $524 million and the book value was $205 million. These data are shown in the following tabulation (in thousands of dollars):

Period	Original cost	Book value
1983	505,004	274,612
1984	534,772	245,602
1985	539,573	227,534
January-June--		
1985	518,672	234,880
1986	524,244	204,728

Research and development expenses.--Only two producers reported research and development expenses. Their expenses were $*** in 1983, $*** in 1984, and $*** in 1985. The two companies reported research and development expenses of $*** and $*** in interim periods 1985 and 1986, respectively.

Capital expenditures.--Fourteen U.S. producers supplied information on their capital expenditures for facilities used in the production of urea. Capital expenditures increased from $3.3 million in 1983 to $7.4 million in 1984 and $12.2 million in 1985 (table 13). Thirteen companies reported capital expenditures of $7.6 million in interim 1985 and $10.2 million in interim 1986.

Table 13.--U.S. producers' capital expenditures for facilities used in the production of urea, 1983-85, January-June 1985, and January-June 1986

(In thousands of dollars)

Item	1983	1984	1985	January-June-- 1985	1986
Land and land improvements....	46	13	47	45	0
Building.....	77	28	82	62	0
Machinery and equipment.....	3,131	7,370	12,036	7,490	10,250
Total.....	3,254	7,411	12,165	7,597	10,250

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

Capital and investment.--Several U.S. producers provided questionnaire comments as to the actual and potential negative effects of imports of urea from East Germany, Romania, and the U.S.S.R. on their firm's growth, investment, and ability to raise capital. The responses quoted below are representative of the industry position:

> * * *: "Imports of urea from these countries have placed tremendous downward pressure upon urea price levels. It can, in fact, be argued that these imports actually set the market-clearing price for urea, not only in the Gulf area, but throughout the Midwest. With the urea market at the present levels, profitability and, therefore, ability to raise capital, will be seriously impaired. Of additional concern is the fact that the low urea price levels will set the price of other forms of nitrogen products."
>
> * * *: "Because earnings are so depressed by imports from East Germany, Romania, and the U.S.S.R., no further expansion will occur in the lower 48 states. In fact, much of the current capacity is under-utilized and is threatened by eventual shutdown unless competition on a real least cost production basis can be re-established."

Consideration of Alleged Threat of Material Injury

Among the relevant economic factors that may contribute to the threat of material injury to the domestic industry are (1) any increase in production capacity or existing unused or under-utilized capacity in East Germany, Romania, or the U.S.S.R. that would be likely to result in a significant increase in exports of urea to the United States, (2) any substantial increase in inventories of urea imported from East Germany, Romania, and the U.S.S.R. in the United States, (3) any rapid increase in U.S. market penetration or the likelihood that penetration will increase to an injurious level, and (4) the probability that imports of urea will enter the United States at prices that will have a depressing or suppressing effect on U.S. prices of urea. The available information on foreign capacity, production, and exports of urea and U.S. importers' inventories of such merchandise is presented below. The issues of import penetration and price suppression/depression are discussed in subsequent sections.

U.S. importers' inventories

Importers that responded to the Commission's questionnaire accounted, on the basis of quantity, for all of the imports from East Germany, Romania, and the U.S.S.R. in 1983, 88.5 percent in 1984, 82.5 percent in 1985, 83.8 percent during January-June 1985, and 70.1 percent during January-June 1986, as reported in official import statistics of the U.S. Department of Commerce.

Some firms that imported urea from East Germany, Romania, or the U.S.S.R. commingled inventories from those countries and, in addition, commingled imports from other countries. Therefore, those importers were unable to provide precise inventory data. Commingling of inventories would seem to indicate that urea is a fungible product and that differences in quality are insignificant. Combined data on U.S. importers' end-of-period inventories of urea imported from East Germany, Romania, and the U.S.S.R. are presented in the following tabulation:

Date	Inventories (1,000 short tons) 1/	Percent of total imports 2/
Dec. 31--		
1982	29	3/
1983	128	23.8
1984	189	24.3
1985	69	9.9
June 30--		
1985	145	4/ 20.8
1986	29	4/ 2.4

1/ On a dry, 100-percent urea basis.
2/ As reported in response to the Commission's importers' questionnaires.
3/ Not available.
4/ Annualized.

As a share of total imports from East Germany, Romania, and the U.S.S.R., importers' inventories increased slightly from 23.8 percent as of December 31, 1983, to 24.3 percent as of December 31, 1984, and then dropped to 9.9 percent as of December 31, 1985. The ratio of inventories to imports was, on an annualized basis, 20.8 percent as of June 30, 1985, compared with 2.4 percent as of June 30, 1986. Some of the importers that responded to the questionnaires do not maintain inventories but sell urea directly from the ship to customer barges that anchor alongside of the ship for the transfer.

Ability of foreign producers to generate exports

Counsel for Occidental and Cargill was asked to provide information about the U.S.S.R.'s urea capacity, production, domestic consumption, exports to the United States, and exports to other countries during January 1983-June 1986. A representative of the Romanian urea export corporation, I.C.E. Chimica, was asked to supplement its U.S. importers' questionnaire response with similar information on Romania. There was no participation in these investigations on behalf of East German interests. Data on urea production and domestic consumption for the three countries are not available at this time. I.C.E. Chimica provided some data on exports of urea from Romania.

As previously noted, TVA publishes data on world urea capacity; these data have been converted from thousands of metric tons of contained nitrogen to thousands of short tons of urea for East Germany, Romania, and the U.S.S.R. for 1983-85. The converted urea capacity data for East Germany are presented in table 14; Romania in table 15; and the U.S.S.R. in table 16.

East Germany's capacity to produce urea was constant during 1983-85 at 1.7 million short tons (table 14). Urea capacity in Romania increased from 4.6 million short tons in 1983 to 5.1 million short tons in 1984 and 1985 (table 15). Urea capacity in the U.S.S.R. increased from 13.6 million short tons in 1983 to 14.5 million short tons in 1984 and 14.9 million short tons in 1985 (table 16).

In the aggregate, capacity in East Germany, Romania, and the U.S.S.R. was 2.5 times U.S. capacity in 1983 and 2.7 times U.S. capacity in 1984 and 1985. As shown in appendix C, the U.S.S.R. launched a major expansion of its urea capacity during the 1970's, and capacity to produce urea in the U.S.S.R. increased 117.0 percent during 1976-86, while U.S. capacity increased 13.4 percent during the same period. Exports to the United States in 1985 amounted to about 3.1 percent of the U.S.S.R.'s capacity to produce urea.

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

U.S. imports

According to official statistics of the U.S. Department of Commerce, imports of urea increased (in quantity) 14.6 percent from 1983 to 1984 and then declined slightly (1.6 percent) from 1984 to 1985 (table 17). Imports during January-June 1986 were 83.1 percent above those in the corresponding period of 1985.

Table 14.--Urea: East Germany's capacity to produce urea, by plant locations, 1983-85

(In thousands of short tons)

Plant location	1983	1984	1985
Leuna	505	505	505
Piesteritz	1,176	1,176	1,176
Total	1,681	1,681	1,681

Source: Compiled from data provided by the National Fertilizer Development Center, Tennessee Valley Authority, Muscle Shoals, AL, pp. D-11.

Table 15.--Urea: Romania's capacity to produce urea, by plant locations, 1983-85

(In thousands of short tons)

Plant location	1983	1984	1985
Arad	463	936	936
Bacau	483	483	483
Craiova	438	438	438
Craiova 1/	490	490	490
Piatra Neami	353	353	353
Risnov	17	17	17
Slobozia	794	794	794
Tirgu Mures	1,007	1,007	1,007
Turnu Magurele	549	549	549
Victoria	12	12	12
Total	4,606	5,079	5,079

1/ Current status unknown.

Source: Compiled from data provided by the National Fertilizer Development Center, Tennessee Valley Authority, Muscle Shoals, AL, pp. D-11 through D-12.

Imports from the U.S.S.R. increased 8.0 percent from 1983 to 1984 and 8.9 percent from 1984 to 1985. Imports from the U.S.S.R. during January-June 1986 were 95.1 percent above the quantity imported during the corresponding period of 1985. Imports from Romania increased 189.0 percent from 1983 to 1984 before dropping 16.0 percent from 1984 to 1985. Imports of urea from Romania during January-June 1986 were 61.5 percent above those during the corresponding period of 1985. Imports of urea from East Germany were erratic during January 1983-June 1986.

Table 16.--Urea: U.S.S.R.'s capacity to produce urea, by plant locations, 1983-85

(In thousands of short tons)

Plant location	1983	1984	1985
Angarsk	220	585	585
Berezniki	551	916	916
Cherkassy	1,178	1,178	1,178
Chirchik	363	363	363
Dneprodzerzhinsk	372	372	372
Dzerzhinsk	98	98	98
Gorlovka	1,117	1,117	1,117
Grodno	485	485	485
Ivanova	122	122	122
Kemerovo	617	617	617
Kirovakan	98	98	98
Kohtla Jarve	135	135	135
Komsomoiskaya	1,014	1,014	1,014
Kuybyshev	186	186	186
Lisichansk	269	269	269
Nevinnomyssk	642	811	811
Nizhnly Tagil	37	37	37
Novogorod	392	392	392
Novokemerovo	559	559	559
Novomoskovsk	784	784	784
Odessa	441	441	441
Perm	559	559	559
Rovno	110	110	110
Rustavi	245	245	245
Salavat	549	549	921
Severodonetsk	186	186	186
Shchekino	184	184	184
Sumgait	203	203	203
Tashkent	186	186	186
Tolyiatti	1,117	1,117	1,117
Tula	186	186	186
Ufa	201	201	201
Vakhsr	186	186	186
Total	13,592	14,491	14,863

Source: Compiled from data provided by the National Fertilizer Development Center, Tennessee Valley Authority, Muscle Shoals, AL, pp. D-12 through D-14.

In the aggregate, imports of urea from the U.S.S.R., Romania, and East Germany accounted for 27.3 percent of the total quantity of urea imports in 1983, 40.0 percent in 1984, 39.0 percent in 1985, 34.8 percent during January-June 1985, and 41.9 during January-June 1986. Such imports rose by 68 percent from 523,000 short tons in 1983 to 880,000 tons in 1984, and then fell by 4 percent to 844,000 tons in 1985. During January-June 1986, combined imports totaled 867,000 tons, representing an increase of 120 percent over the 394,000 tons imported during January-June 1985.

Table 17.--Urea: U.S. imports, by principal sources, 1983-85, January-June 1985, and January-June 1986

Source	1983	1984	1985	January-June-- 1985	1986
	Quantity (1,000 short tons)				
Canada	766	880	771	476	727
U.S.S.R.	387	418	455	264	515
Romania	136	393	330	130	210
Netherlands	232	127	192	87	75
Qatar	70	0	98	14	30
New Zealand	21	22	71	37	33
East Germany	0	69	59	0	142
All other	307	291	189	123	340
Total	1,919	2,200	2,165	1,131	2,071
	Value (1,000 dollars)				
Canada	112,115	115,268	97,564	59,937	78,954
U.S.S.R.	38,913	44,694	57,130	40,026	38,063
Romania	10,885	40,473	25,711	11,186	15,153
Netherlands	30,799	23,119	36,880	18,007	12,979
Qatar	8,984	-	9,119	1,508	2,698
New Zealand	1,767	2,753	7,726	4,785	2,275
East Germany	-	7,920	4,885	-	9,907
All other	32,483	35,379	23,465	16,350	27,908
Total	235,946	269,606	262,480	151,799	187,938
	Unit value				
Canada	$146.45	$130.95	$126.53	$125.84	$108.67
U.S.S.R.	100.56	107.04	125.57	151.64	73.85
Romania	79.98	103.06	77.81	85.93	72.25
Netherlands	132.91	181.70	191.59	207.06	174.03
Qatar	129.23	-	93.25	109.20	91.14
New Zealand	84.84	127.11	108.27	130.64	69.18
East Germany	-	114.96	83.31	-	69.76
All other	105.21	121.42	124.88	132.97	82.08
Average	122.93	122.56	121.26	134.24	90.76
	Percent of total quantity				
Canada	39.9	40.0	35.6	42.1	35.1
U.S.S.R.	20.2	19.0	21.0	23.3	24.9
Romania	7.1	17.9	15.3	11.5	10.1
Netherlands	12.1	5.8	8.9	7.7	3.6
Qatar	3.6	-	4.5	1.2	1.4
New Zealand	1.1	1.0	3.3	3.2	1.6
East Germany	-	3.1	2.7	-	6.9
All other	16.0	13.2	8.7	10.9	16.4
Total	100.0	100.0	100.0	100.0	100.0

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

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

An official of the Romanian export company, I.C.E. Chimica, appeared at the Commission's conference to take issue with a number of allegations in the petition. In addition, this official disputes the accuracy of the official U.S. Department of Commerce import statistics for Romania. 1/ * * *. Chimica provided information showing total 2/ Romanian urea exports of *** short tons in 1983, *** tons in 1984, and *** tons in 1985.

With respect to nitrogen solutions imported under TSUSA item 480.6550, 3,000 short tons of nitrogen solutions were imported from East Germany during January-June 1986; 73,000 short tons of nitrogen solutions were imported from Romania in 1983, 99,000 short tons in 1984, 59,000 short tons in 1985, 17,000 short tons during January-June 1985, and 91,000 short tons during January-June 1986. 3/ The amount of urea in those nitrogen solutions is unknown. There were no imports of nitrogen solutions from the U.S.S.R. during January 1983-June 1986.

According to Commerce statistics, there were no imports of mixed chemical fertilizers under TSUSA item 480.8030 from East Germany, Romania, or the U.S.S.R. during January 1983-June 1986.

Market penetration by the alleged LTFV imports

All imports and exports of urea, per se, are believed to be in solid form. Table 18 shows the quantity, in thousands of short tons, of U.S. production, exports, imports, and apparent consumption of urea in solid form (prills or granules) during January 1983-June 1986. U.S. apparent consumption of solid urea increased 19.5 percent from 1983 to 1984 before falling 13.8 percent from 1984 to 1985. Apparent consumption during January-June 1986 was 38.8 percent above that during the corresponding period of 1985.

Ratios as percentages of imports of solid urea to apparent consumption of solid urea are also shown in table 18. Combined imports from East Germany, Romania, and the U.S.S.R. increased, as a percentage of apparent consumption, from 10.4 percent in 1983 to 14.7 percent in 1984 and 16.3 percent in 1985. The ratio of imports from East Germany, Romania, and the U.S.S.R. to apparent consumption during January-June 1986 was 22.2 percent compared with 14.0 percent during January-June 1985. The ratio of total solid urea imports to apparent consumption of solid urea jumped to 53.0 percent during January-June of 1986 compared with 40.2 percent during January-June 1985.

Both data sets (i.e, that for total urea as shown in table 4 and that for solid urea as shown in table 18) show generally increasing imports from East Germany, Romania, and the U.S.S.R., as well as steadily increasing market penetration by imports from those countries.

1/ Transcript of conference, pp. 153-163 and 173-175.
2/ Exports to all countries, including the United States.
3/ Compiled from official statistics of the U.S. Department of Commerce.

Table 18.--Solid urea: U.S. production, exports, imports, and apparent consumption, 1983-85, January-June 1985, and January-June 1986

Solid urea	1983	1984	1985	January-June-- 1985	1986
U.S. production: 1/					
1,000 short tons 2/..	4,203	5,072	4,163	2,377	2,093
U.S. exports.....do....	1,099	1,270	1,154	693	257
U.S. imports:					
East Germany.....do....	0	69	59	0	142
Romania.....do....	136	393	330	130	210
U.S.S.R.....do....	387	418	455	264	515
Import subtotal...do....	523	880	844	394	867
All other imports...do....	1,396	1,320	1,322	737	1,204
Total imports..do....	1,919	2,200	2,166	1,131	2,071
Apparent consumption 3/					
1,000 short tons 2/..	5,023	6,002	5,175	2,815	3,907
Ratio of imports to apparent consumption:					
East Germany.....percent..	-	1.1	1.1	-	3.6
Romania.....do....	2.7	6.5	6.4	4.6	5.4
U.S.S.R.....do....	7.7	7.0	8.8	9.4	13.2
East Germany, Romania, and the U.S.S.R. percent..	10.4	14.7	16.3	14.0	22.2
All imports.....do....	38.2	36.7	41.8	40.2	53.0

1/ Includes solid urea for fertilizer use and urea for all other uses and may be slightly overstated because some urea for other uses could be in solution form.
2/ On a dry, 100-percent urea basis.
3/ Calculated as production less exports plus imports.

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

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

Prices

In general, information in the urea market is readily available to buyers and sellers. Field representatives of U.S. producers and importers are regularly in contact with purchasers to inform them of the current price of urea. Many participants in the market subscribe to the "Green Markets" newsletter, which publishes weekly average prices and reports on production and import levels. In addition, some U.S. producers and importers also publish bimonthly pricelists for dealers, brokers, and end users.

When a purchaser decides to buy urea, he shops around for bids. He may receive bids in a variety of ways. A field representative may give a purchaser a price quote during a regular visit, or the purchaser may place calls to his regular suppliers to obtain bids over the telephone. Some purchasers may give high-bidding suppliers the opportunity to meet or beat the low bid they have received, especially if the high bidder is a preferred supplier.

Since urea is not a perishable item, it can be stored, under appropriate conditions, for long periods. U.S.-produced and imported urea are highly similar products. In fact, imported and domestic urea are frequently commingled in warehouses, and purchasers commonly are not aware of the origin of the product.

Because of the generally homogeneous nature of urea, the prices for urea at each level of the marketing chain at any given time tend to converge; producers' leverage in the market is limited, and they cannot sell the product to different purchasers at widely differing prices. Thus, all producers and importers tend to respond to market forces similarly, and if one producer's prices rise, all producer's prices tend to rise. A significant mitigating factor in the market is transportation costs. The location of the seller in relation to the buyer can markedly affect transportation costs, and thus can affect the delivered price of urea. Because of this, not all producers or importers are able to compete equally at all locations.

Although the urea market is driven primarily by price, quality can differ, and can affect purchasing decisions. However, quality differences in urea from different sources are negligible for many applications. The quality of urea depends primarily on two factors: (1) the size and uniformity of the prills or granules and (2) resistance to caking. Purchasers of both domestic urea and urea from the subject countries have reported that the U.S. material is generally of a higher quality, and is preferred or required for certain applications, but that the imported material, although generally of a lower quality, can be used for many of the same applications as domestic urea. The quality problems associated with imported urea cited by purchasers were that the prills are too small, thus making it unable to be blended as successfully as the U.S. material; and that the material is prone to caking, therefore making it more difficult to work with.

Demand side factors affecting price.--Demand for urea varies throughout the year because agriculture is seasonal. Demand is highest in the spring, and to a lesser extent in the fall, when fields are being prepared for planting. The rise in demand for urea, particularly in the springtime, may exert upward pressure on prices.

Demand for urea is primarily reliant on crop acreages planted to crops that have high requirements for nitrogen, such as corn, wheat, and rice. In the 1986 crop year, corn acreage is down approximately 8 percent from that of 1985, and other nitrogen-consuming crops have also experienced reduced acreage

this year. 1/ Since farmers tend to keep the nitrogen-per-acre ratio fairly constant, a decline in acreage of nitrogen-consuming crops is likely to cause demand for nitrogen, and hence urea, to decline. 2/ 3/

Alternatively, because farmers tend to keep the nitrogen-per-acre ratio constant, demand for nitrogen, and therefore urea, is likely to be fairly unresponsive to changes in farm incomes. Thus, although farm incomes have shown declines in recent years, farm purchases of nitrogen, including urea, have probably not declined as rapidly. Farmers are more likely to reduce purchases of nonnitrogenous fertilizers before they cut back on nitrogenous fertilizers. 4/

Demand for urea also depends, to some extent, on prices for other nitrogen fertilizers. However, of the solid fertilizers, urea is usually the lowest cost per unit of nitrogen. Although ammonium nitrate has some undesirable characteristics, such as flammability and caking, it is the closest substitute for solid urea of the nitrogen fertilizers. Both are dry, granular solids that can be stored and blended easily and both are made from ammonia. The technology for spreading these fertilizers is relatively simple. Thus, though individual farmers may prefer one type of fertilizer or another, ammonium nitrate and urea are relatively substitutable.

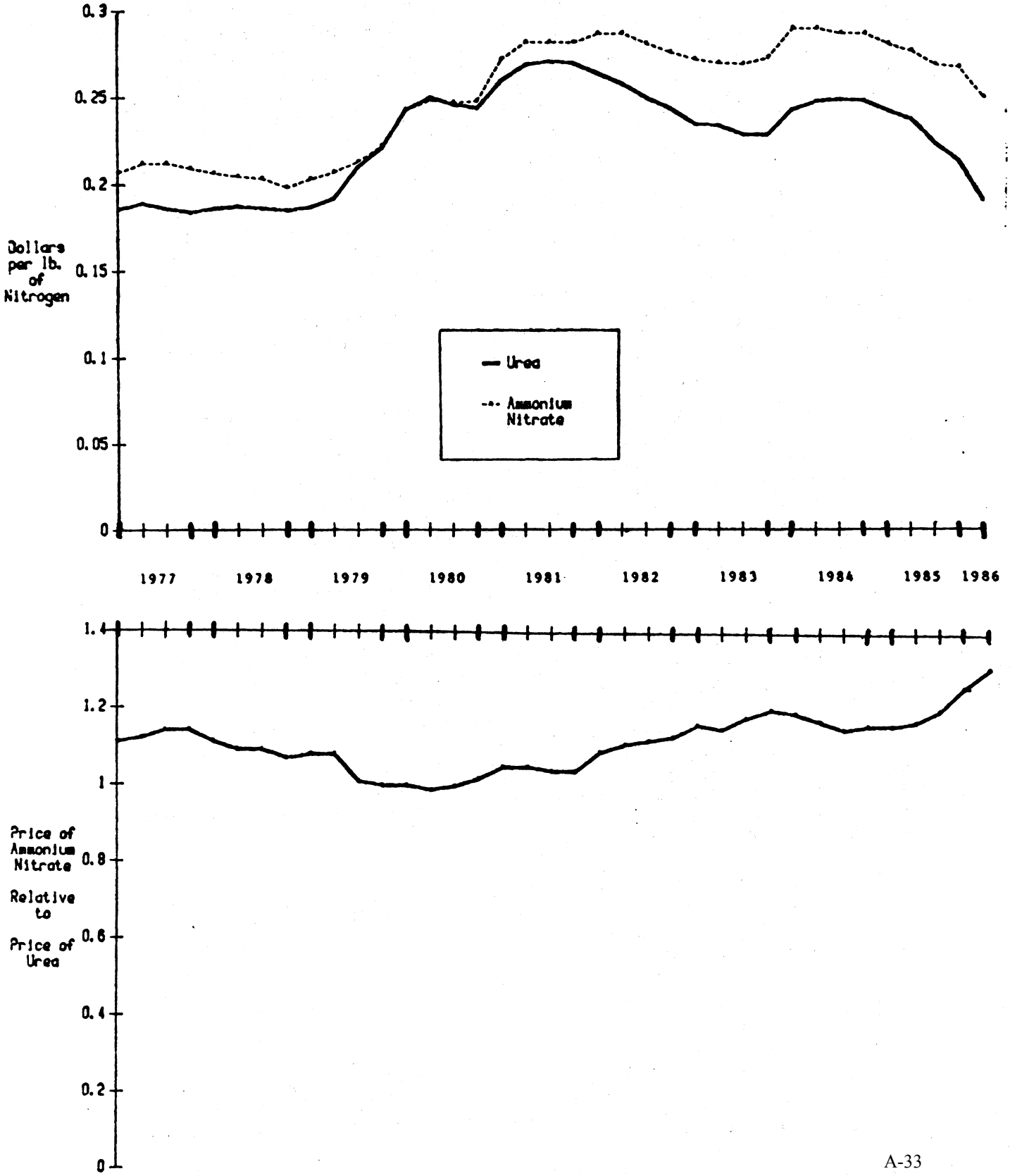
The price of ammonium nitrate relative to the price of urea, therefore, is likely to have some influence on demand for urea. In order for these products' prices to be comparable, they must be converted to prices per pound of nitrogen. If the price of ammonium nitrate per pound of nitrogen rises relative to the price of urea per pound of nitrogen, then urea has become a relatively less expensive source of nitrogen, and vice versa.

The upper portion of figure 3 depicts the absolute levels of U.S. prices for urea and ammonium nitrate. Recently, the price of urea has fallen more rapidly than the price of ammonium nitrate. The bottom half of the figure shows the price of ammonium nitrate relative to the price of urea (in pounds of nitrogen).

When the relative price increases, ammonium nitrate has become a more expensive source of nitrogen, and when the relative price falls, urea is the more expensive source of nitrogen. As figure 3 shows, since 1982, the price of ammonium nitrate has been rising relative to the price of urea. Thus, urea has become a less expensive source of nitrogen over the past 3 to 4 years.

1/ Based on a telephone conversation with Paul Andrilenas, U.S. Department of Agriculture, Aug. 14, 1986, and on respondents exhibit 4, submitted at the Commission's conference, Aug. 8, 1986.
2/ Based on a telephone conversation with Paul Andrilenas, cited above.
3/ However, demand is not the sole determinant of urea consumption, and trends in apparent consumption may differ from trends in demand for a number of reasons. For example, the increased apparent consumption of urea during January-June 1986 may be the result of increased buying for inventory to take advantage of low prices.
4/ Based on a telephone conversation with Paul Andrilenas, cited above.

Figure 3.--Average U.S. farm prices of urea and ammonium nitrate, and the price of ammonium nitrate relative to the price of urea, in March, May, October, and December of each year, 1977-86.



Source: Compiled from data of the U.S. Department of Agriculture.

Supply side factors affecting price.--Natural gas is used to make ammonia which, in turn, is used to make all of the other nitrogenous fertilizers (including urea). Thus, as previously noted, the price of natural gas affects the price at which a producer can sell urea at a profit. Figure 4 depicts well-head gas prices and average gulf coast prices for prilled urea during January 1984-July 1986. The two price series have generally moved together through most of the period, although urea prices have fallen more rapidly than have natural gas prices. It is likely that the drop in natural gas prices reduced the cost of producing urea somewhat, which may have exerted some downward pressure on prices. 1/

International factors affecting price.--Urea is a commodity that is traded internationally. Thus, U.S. producers are not insulated from world market forces which influence prices around the world. One source at the U.S. Department of Agriculture reported that as developing countries have moved toward self-sufficiency in fertilizer production, they have also begun exporting fertilizer, especially urea. This overall increase in world supply has created an international surplus of urea, which is exerting downward pressure on prices worldwide. 2/

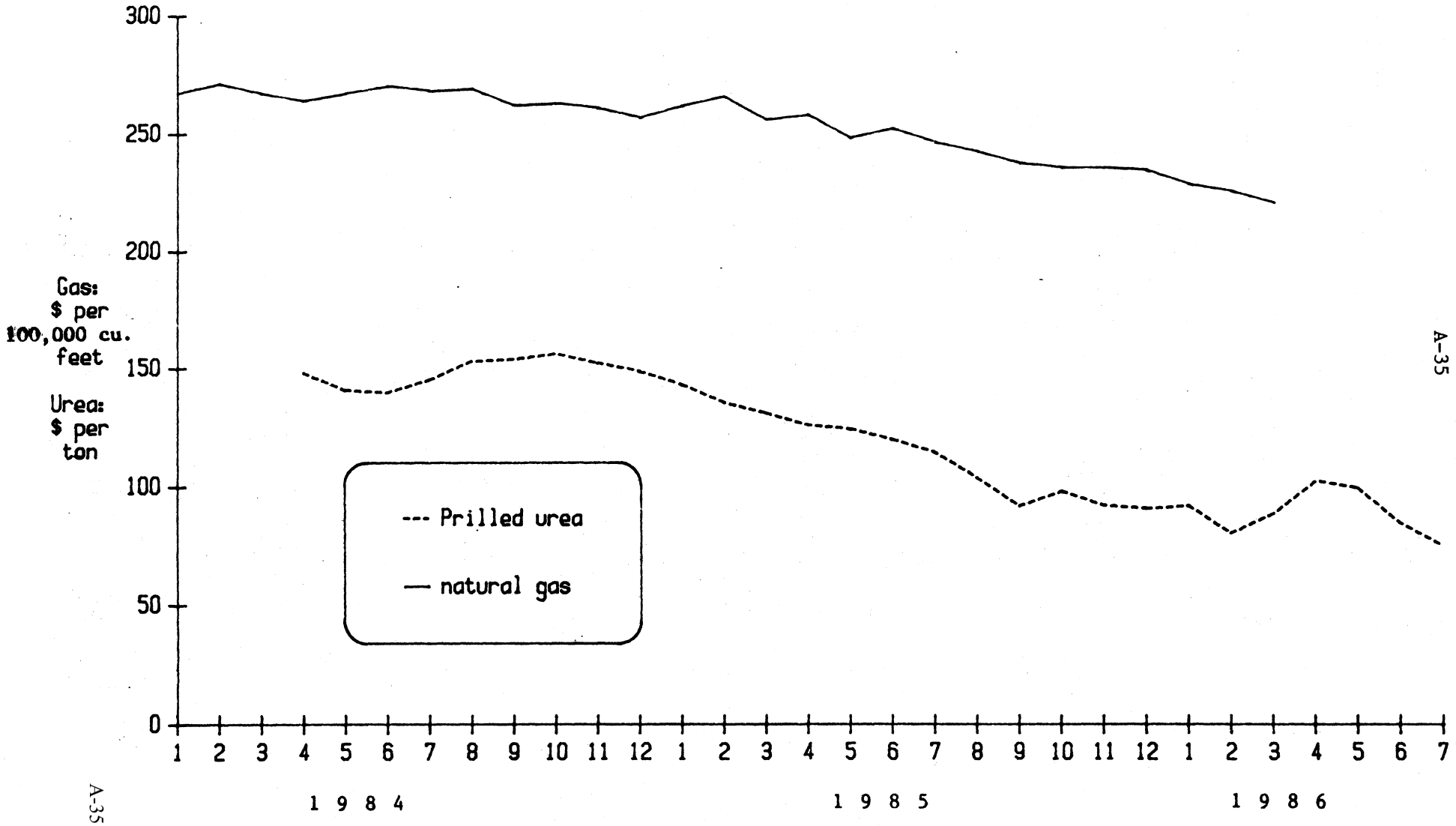
Trends in prices.--Figure 5 depicts a time series of average monthly gulf coast prices for domestic urea from January 1977 through July 1986. From this graph, it is clear that the price of urea changes frequently and often sharply. The vertical lines mark off the first 4 months of each year when planting begins, and demand for urea is generally highest. In most years, the price rises above its prior level during those 4 months, although the magnitude and duration of that increase varies widely from year to year. The only year in which no increase in price occurred during the first 4 months was 1985. The price of domestic urea declined in 1985, after it reached a high point in 1984.

The information available to the Commission on urea prices comes from two primary sources: questionnaire responses and the "Green Markets" newsletter. Figure 6 compares Green Markets' average gulf coast prilled urea prices for the first full week of each month with weighted-average f.o.b. prilled urea prices from the Commission's questionnaires for transactions during the first full week of each month. The questionnaire prices are broken out by transport mode. The figure reveals that though the absolute levels of prices differ between the Green Markets' and questionnaire data, the trends are basically the same. In particular, the questionnaire truck prices echo much of the movement in the Green Markets' prices.

The Commission gathered data for two different urea products, prilled and granular, and three different transportation modes, barge, truck, and rail. Industry sources report that granular urea generally commands a slightly higher price than prilled urea, because it is of superior quality, and is better suited to certain applications.

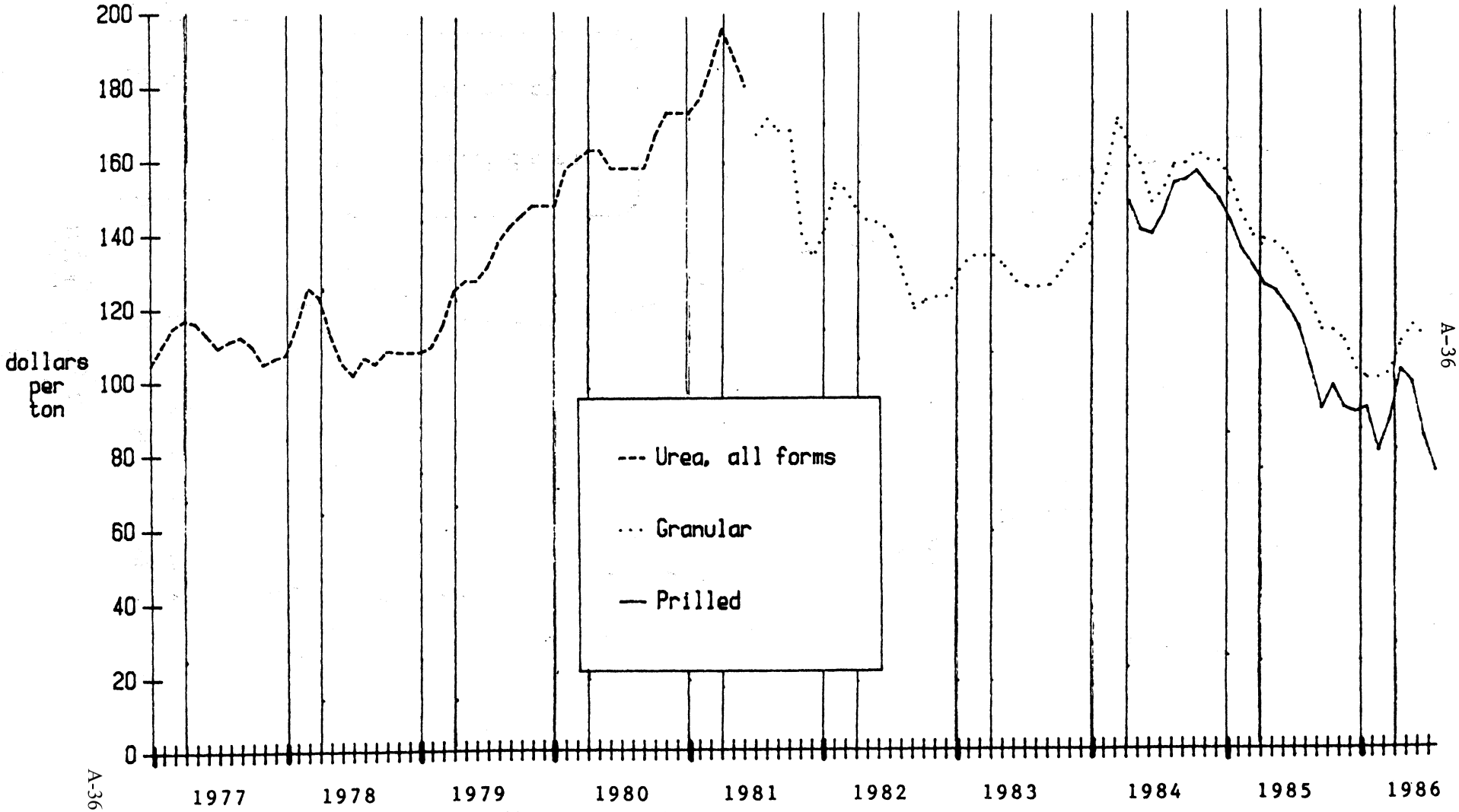
1/ Declining natural gas prices would not have an equal impact on all producers, due to the differing gas contracts held by individual producers.
2/ Based on a telephone conversation with Paul Andrilenas, U.S. Department of Agriculture, Aug. 14, 1986.

Figure 4.--Prilled urea and natural gas: Average gulf coast prices for prilled urea and average well-head prices for natural gas, by months, January 1984-July 1986.



Source: Prilled urea prices published by Green Markets, McGraw-Hill Co., and natural gas prices published in Natural Gas Monthly, May 1986, U.S. Department of Energy.

Figure 5.--Urea: Average gulf coast prices by forms and by months, January 1977-July 1986.



Source: Green Markets, McGraw-Hill Co.

Figure 6.--Urea: Average gulf coast prices in the first full week of each month, and weighted-average f.o.b. prices by mode of transport in the first full week of each month, monthly, January 1985-July 1986.

* * * * * * *

Source: Green Markets, McGraw-Hill Co., and data submitted in response to questionnaires of the U.S. International Trade Commission.

Figure 7 shows that in nearly every month from January 1985 to July 1986, granular urea was priced somewhat higher than prilled urea. In addition, prices for both forms declined during that period.

Figure 7.--Weighted-average f.o.b. prices of prilled and granular urea in truckload shipments in the first full week of each month, monthly, January 1985-July 1986.

* * * * * * *

Source: Data submitted in response to questionnaires of the U.S. International Trade Commission.

Most imported urea is sold in barge shipments on the gulf coast and, therefore, the most relevant price comparisons are at the barge level. However, a great deal of domestic urea is sold in truckloads and by railcar. Thus, truck and rail sales must be considered in an analysis of price trends.

The Commission requested producers and importers to provide price and quantity data for barge, truck, and rail shipments of prilled and granular urea sold during the first full week of each month between January 1985 and July 1986. Transactions were limited to 1 week during each month because urea prices change frequently, and monthly or quarterly average prices would not present a reliable picture of price trends. Producers and importers were requested to provide this price and quantity data for their three leading customers. Because price comparisons are possible only for prilled urea (all imports from East Germany, Romania, and the U.S.S.R. are prilled), only prices for prilled urea are presented and considered below. The Commission received usable price data on barge shipments of prilled urea from four U.S. producers, which accounted for 20.8 percent of all domestic 1985 urea production. 1/ Usable data on truck shipments of prilled material was received from eight

1/ * * *, * * *, * * *, and * * *.

U.S. producers, representing 27.9 percent of 1985 production, 1/ and five U.S. producers, representing 22.3 percent of production, reported rail prices for prilled urea. 2/ Relatively little data was received on import prices, especially for the East German and Romanian products.

Domestic prices.--The weighted-average f.o.b. price of domestic prilled urea sold in barge shipments declined *** percent, from $144.30 per ton in January 1985 to $*** per ton in February 1986 (table 19). The price firmed after February, reaching $101.15 per ton in May 1986, and then declined to $*** per ton in June 1986. Overall, the barge price of domestic urea fell *** percent between January 1985 and June 1986.

The f.o.b. price of truck shipments of U.S.-produced prilled urea also declined during this period (table 20). It fell nearly steadily from $156.25 per ton in January 1985 to $101.21 per ton in March 1986, representing a decrease of 35.2 percent. The price strengthened somewhat in the spring of 1986, rising to $119.34 per ton in June 1986. The July 1986 price showed a sharp decline to $102.09. In net terms, the price of U.S.-produced prilled urea in truckload shipments declined 34.7 percent during January 1985-July 1986.

The f.o.b. price of U.S. urea shipped by rail also showed a steady and significant decline. Between January 1985 and July 1986, the weighted-average price declined 32.2 percent, paralleling movements in price for urea shipped by barge and truck.

U.S.S.R. prices.--The weighted-average f.o.b. price of U.S.S.R.-produced prilled urea sold in barge shipments declined during February 1985-March 1986 by *** percent (table 19). The price fell fairly steadily throughout 1985 to reach $77.47 per ton in October 1985, and then rose somewhat to $82.84 per ton in February 1986. It then lost some ground in March 1986 when it declined to a low of $*** per ton.

* * * reported prices for U.S.S.R.-produced prilled urea in truck shipments. 3/ The f.o.b. price varied throughout 1985, and showed a gradual downward trend. During 1986, it declined more steadily, ending in June 1986 *** percent below its level in January 1985.

In every month except one in which a price comparison is possible, the U.S.S.R. urea sold in barge shipments was lower priced than the U.S. product. In April 1985, the price of U.S.S.R. prilled urea in barge shipments was slightly higher than the U.S. price. However, the prices reported by * * * for U.S.S.R. urea in truck shipments show the U.S.S.R. urea to be priced above the U.S. product from January 1985 through March 1986. Only in April, May, and June 1986 did the price of U.S.S.R. urea fall below the U.S. price.

1/ * * *, * * *, * * *, * * *, * * *, * * *, * * *, and * * *.
2/ * * *, * * *, * * *, * * *, and * * *.
3/ No prices were reported for rail shipments of U.S.S.R.-produced urea.

Table 19.--Prilled urea shipped by barge: Weighted-average f.o.b. sales prices of prilled urea sold during the first full week of each month, January 1985-July 1986

(Per short ton)

Period	U.S. price	U.S.S.R. price	East German price	Romanian price
1985:				
January.....	$144.30	1/	1/	1/
February.....	132.75	2/ $***	1/	1/
March.....	133.57	2/ ***	1/	1/
April.....	2/ ***	2/ ***	1/	2/ $***
May.....	3/ ***	3/ ***	1/	1/
June.....	2/ ***	2/ ***	1/	1/
July.....	1/	3/ ***	1/	2/ ***
August.....	1/	1/	1/	2/ ***
September.....	1/	1/	1/	1/
October.....	2/ ***	77.47	2/ $***	80.95
November.....	1/	1/	1/	1/
December.....	3/ ***	78.68	2/ ***	84.38
1986:				
January.....	3/ ***	82.15	1/	1/
February.....	2/ ***	82.84	2/ ***	80.20
March.....	87.64	3/ ***	69.00	2/ ***
April.....	97.88	1/	2/ ***	81.35
May.....	101.15	1/	1/	1/
June.....	3/ ***	1/	1/	1/
July.....	1/	1/	1/	1/

1/ Not available.
2/ Only one observation reported.
3/ Only two observations reported.

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

East German prices.--The data available on shipments of East German-produced prilled urea are scarce. No data were received for truck or rail shipments of prilled urea from East Germany, and in 4 of 5 months for which information was available on barge shipments, only one observation was reported. The f.o.b. price of East German-produced prilled urea in barge shipments declined *** percent from $*** per ton in October 1985 to $69.00 per ton in March 1986 (table 19). However, it showed a substantial increase to $*** per ton in April 1986. In each period for which data are available, the East German-produced prilled urea was priced below the U.S. product.

Romanian prices.--Very little data were reported on shipments of Romanian urea. No data were received for truck or rail shipments of the material. The f.o.b. price of Romanian-produced prilled urea sold by barge showed an overall decline of *** percent from $*** per ton in April 1985 to $81.35 per ton in April 1986. A comparison of the Romanian price with the price for U.S.

Table 20.--Prilled urea shipped by truck and rail: Weighted-average f.o.b. sales prices of prilled urea sold during the first full week of each month, January 1985-July 1986

Period	(Per short ton) U.S. truck price	U.S.S.R. truck price	U.S. rail price
1985:			
January	$156.25	1/ $***	$149.11
February	148.67	1/ ***	146.76
March	145.84	1/ ***	147.52
April	143.68	1/ ***	143.76
May	141.47	1/ ***	141.29
June	140.35	1/ ***	139.08
July	131.96	1/ ***	130.78
August	135.49	1/ ***	136.52
September	125.50	1/ ***	127.59
October	114.74	1/ ***	116.89
November	115.55	1/ ***	119.38
December	113.93	1/ ***	120.63
1986:			
January	110.52	2/	118.95
February	106.92	1/ ***	112.67
March	101.21	1/ ***	105.90
April	115.80	1/ ***	102.83
May	117.42	1/ ***	113.82
June	119.34	1/ ***	104.33
July	102.09	2/	101.16

1/ Only one observation reported.
2/ Not available.

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

material shows that with the exception of April 1985, when the Romanian price exceeded the U.S. price, Romanian urea was lower priced than U.S.-produced urea.

Lost sales

A number of U.S. producers responding to the Commission's questionnaire made lost sales allegations. A great number of these allegations did not state the country of origin of the allegedly purchased imports. The Commission staff contacted 18 purchasers in this regard. Five reported having purchased imported material from the subject countries because it was lower priced, although some reported that the quantities and/or values of the sales lost were overstated. The other 13 purchasers either denied the allegations or were unable to comment because they reportedly did not know the origin of the imports they purchased.

Lost revenues

The Commission received numerous lost revenue allegations during this investigation. However, many of the allegations did not contain information concerning the country of origin of the allegedly competing imports. In addition, one U.S. producer made allegations based on its information that market prices were declining, but did not base these allegations on transactions on which revenues were actually lost.

The Commission staff attempted to contact 11 purchasers to discuss the allegations. A number of them could not be reached for comment. One purchaser reported that the U.S. producer had reduced his price in order to obtain the sale, but could not state that the import competition came from the countries under investigation. The remaining purchasers denied the allegations based on the fact that they do not purchase imported material, and stated that any revenues lost were lost due to competition from other U.S. producers.

Transportation costs

U.S. producers were asked to provide information on the cost of transporting urea to their customers. All but one producer reported that inland shipping costs ranged between 5 percent and 20 percent of the total delivered value of shipments. All producers agreed that barge transportation is significantly lower priced than rail or truck transport. Some made estimates of the relative costs of transporting urea by the various modes. They estimated that barge shipment costs range from $3 to $6 per ton, rail shipment costs range from $12 to $30 per ton, and truck shipment costs range from $15 to $50 per ton. One producer noted that some purchasers may be able to negotiate rail rates that are comparable with barge rates if they ship large enough quantities. All but one producer reported that purchasers pay shipping costs for urea. However, producers often absorb the costs incurred in shipping material from production points to inland warehouses.

Countertrade arrangements

* * * * * * *

Exchange rates

Because the values of the currencies of the U.S.S.R., East Germany, and Romania are determined by their respective governments, exchange rates are not presented here.

APPENDIX A

FEDERAL REGISTER NOTICES

[Investigations Nos. 731-TA-338 through 340 (Preliminary)]

Urea From the German Democratic Republic, Romania, and the Union of Soviet Socialist Republics

AGENCY: International Trade Commission.

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

SUMMARY: The Commission hereby gives notice of the institution of preliminary antidumping investigations Nos. 731-TA-338 through 340 (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 German Democratic Republic (investigation No. 731-TA-338 (Preliminary)), Romania (investigation No. 731-TA-339 (Preliminary)), and the Union of Soviet Socialist Republics (investigation No. 731-TA-340 (Preliminary)) of urea, provided for in item 480.30 of the Tariff Schedules of the United States, which are alleged to be sold in the United States at less than fair value. As provided in section 733(a), the Commission must complete preliminary antidumping investigations in 45 days, or in these cases by September 2, 1986.

For further information concerning the conduct of these investigations and rules of general application, consult the Commission's Rules of Practice and Procedure, Part 207, Subparts A and B (19 CFR Part 207), and Part 201, Subparts A through E (19 CFR Part 201).

EFFECTIVE DATE: July 16, 1986.

FOR FURTHER INFORMATION CONTACT: Tedford Briggs (202-523-4612), Office of Investigations, U.S. International Trade Commission, 701 E Street NW., Washington, DC 20436. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202-724-0002.

SUPPLEMENTARY INFORMATION:

Background

These investigations are being instituted in response to a petition filed on July 16, 1986, by counsel on behalf of The Ad Hoc Committee of Domestic Nitrogen Producers.[1]

Participation in the investigations

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

Service list

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

Conference

The Director of Operations of the Commission has scheduled a conference in connection with these investigations for 9:30 a.m. on August 8, 1986, at the U.S. International Trade Commission Building, 701 E Street NW., Washington, DC. Parties wishing to participate in the conference should contact Tedford Briggs (202-523-4612) not later than August 1, 1986, to arrange for their appearance. Parties in support of the imposition of antidumping duties in these investigations and parties in opposition to the imposition of such duties will each be collectively allocated

[1] The Ad Hoc Committee of Domestic Nitrogen Producers comprises the following: Agrico Chemical Co., Tulsa, OK; American Cyanamid Co., Wayne, NJ; CF Industries, Long Grove, IL; Farmland Industries, Inc., Kansas City, MO; First Mississippi Corp., Jackson, MS; Mississippi Chemical Corp., Yazoo City, MS; Terra Chemicals International, Sioux City, IA; and W.R. Grace & Co., New York, NY.

one hour within which to make an oral presentation at the conference.

Written submissions

Any person may submit to the Commission on or before August 13, 1986, a written statement of information pertinent to the subject of the investigations, as provided in § 207.15 of the Commission's rules (19 CFR 207.15). A signed original and fourteen (14) copies of each submission must be filed with the Secretary to the Commission in accordance with § 201.08 of the rules (19 CFR § 201.8). All written submissions except for confidential business data will be available for public inspection during regular business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary to the Commission.

Any business information for which confidential treatment is desired must be submitted separately. The envelope and all pages of such submissions must be clearly labeled "Confidential Business Information." Confidential submissions and requests for confidential treatment must conform with the requirements of § 201.6 of the Commission's rules (19 CFR 201.6).

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

By order of the Commission.

Issued: July 17, 1986.

Kenneth R. Mason,

Secretary.

[FR Doc. 86-16581 Filed 7-22-86; 8:45 am]

BILLING CODE 7020-02-M

DEPARTMENT OF COMMERCE

International Trade Administration

[A-429-601]

Urea From the German Democratic Republic; Initiation of Antidumping Duty Investigation

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

ACTION: Notice.

SUMMARY: On the basis of a petition filed in proper form with the United States Department of Commerce, we are initiating an antidumping duty investigation to determine whether urea from the German Democratic Republic (GDR) is being, or is likely to be, sold in the United States at less than fair value. We are notifying the United States International Trade Commission (ITC) of this action so that it may determine whether imports of this product are causing material injury, or threaten material injury, to a United States industry. If this investigation proceeds normally, the ITC will make its preliminary determination on or before September 2, 1986, and we will make ours on or before December 23, 1986.

EFFECTIVE DATE: August 12, 1986.

FOR FURTHER INFORMATION CONTACT: Frank Crowe (202-377-4087) or Mary S. Clapp (202-377-1769), Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230.

SUPPLEMENTARY INFORMATION:

The Petition

On July 16, 1986, we received a petition in proper form filed by the Ad Hoc Committee of Domestic Nitrogen Producers, a coalition of major U.S. producers of urea and other nitrogen fertilizers. In compliance with the filing requirements of § 353.36 of the Commerce Regulations (19 CFR 353.36), the petition alleges that imports of the subject merchandise from the GDR are being, or are likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Tariff Act of 1930, as amended (the Act), and that these imports are causing material injury, or threaten material injury, to a United States industry.

Petitioner was unable to obtain actual prices of GDR urea sold to importers in the United States. Therefore, the United States price is based on U.S. import statistics. Using these statistics, petitioner calculated a weighted-average f.o.b. import price for the period October 1985 through March 1986. The import price was adjusted for foreign inland freight based upon freight charges in a surrogate country as described below. Petitioner had no information concerning other charges or expenses incident to bringing urea from the GDR to the United States. Petitioner also asserts that a significant portion of U.S. urea imports may be obtained through countertrade transactions in which the declared transaction values of the imports may not reflect actual payments by U.S. importers. Petitioner further alleges that countertrade results in distortions that would affect our normal less-than-fair-value analysis. We will examine these transactions to determine what effects, if any, the countertrade transactions have on prices to the United States. We invite comments on how to analyze the effects of countertrade transactions in the context of an antidumping duty investigation.

Petitioner has also alleged that certain importers may be selling urea to unrelated purchasers in the United States at prices below acquisition and marketing costs, so-called middleman dumping. Absent an allegation of a relationship between the exporters and importers or the importers acting as agents for the exporters, we have no basis for investigating the prices charged by the importers. Therefore, we do not plan to investigate this allegation at this time.

Petitioner, alleging that the GDR is a state-controlled-economy country, derived foreign market value from information on the production of the merchandise in a non-state-controlled-economy country (surrogate country) in accordance with the provisions of section 773(c) of the Act and 19 CFR 353.8. Petitioner asserts that the Federal Republic of Germany (FRG), Italy, and France are suitable surrogate countries for the GDR for purposes of this investigation. In selecting the FRG as the most appropriate surrogate country, petitioner considered the following factors: Similar industrial infrastructures, comparable percentages of labor forces in industrial sectors, percent of manufacturing value-added represented by the chemical industry, and the Department's prior designations of the FRG as a suitable surrogate for the GDR

in the investigations of *Potassium Chloride from the German Democratic Republic* 50 FR 4559 (1985) and *Unrefined Montan Wax from the German Democratic Republic* 46 FR 38555 (1981).

Petitioner rejects prices of urea sold in the FRG as a suitable basis for determining foreign market value, alleging that prices in the FRG are artificially depressed by sales of urea by non-market-economy producers and that urea is being sold in the FRG at less than the cost of production. Petitioner further alleges that the same conditions exist in other potential surrogates and that prices must be rejected on a world-wide basis.

Petitioner therefore based foreign market value on constructed value calculations. Petitioner presented two separate constructed values. The first is derived from U.S. producers' costs, adjusted for known differences in the cost of inputs in the FRG in accordance with 19 CFR 353.36(a)(7). For purposes of this analysis, petitioner adjusted for differences in the prices of natural gas, electricity and labor in the FRG.

The second constructed value calculation is based upon average factors of production of urea in developed countries (which petitioner alleges may be representative of GDR production) valued in the FRG. Petitioner suggests this method as an alternative to relying upon U.S. import statistics, in the event that the Department is unable to find an acceptable, cooperative surrogate. The latter methodology is in accordance with 19 CFR 353.8(c). Based upon the foreign market values derived by the two methods, petitioner alleges dumping margins of 167 and 196 percent, respectively.

Initiation of Investigation

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

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

In the course of our investigation, we will determine whether the economy of the GDR is state-controlled to an extent that sales of such or similar merchandise in the home market or to third country markets do not permit determination of foreign market value. If the GDR is determined to be a state-controlled economy, we will then choose a non-state-controlled economy surrogate country for purposes of determining foreign market value. If our investigation proceeds normally, we will make our preliminary determination by December 23, 1986.

Scope of Investigation

The product covered by this investigation is urea, a high-nitrogen content fertilizer which is produced by reacting ammonia with carbon dioxide. The product is currently classified under the *Tariff Schedules of the United States Annotated* (TSUSA) item 480.3000.

Petitioner has requested that in order to avoid possible circumvention of an eventual antidumping duty order we include in the scope of the investigation nitrogen solutions currently classified under TSUSA item 480.6550, as well as solid urea mixed with other fertilizers as currently classifed under TSUSA item 480.8030. Merchandise classified under these two items will be subject to the investigation only if the predominant component is urea.

Allegation of Critical Circumstances

Petitioner alleges that critical circumstances exist with respect to imports of urea from the GDR. We will determine whether critical circumstances exist with respect to these imports in our preliminary determination, and if the investigation proceeds normally, in our final determination.

Notification of ITC

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

Preliminary Determination by ITC

The ITC will determine by September 2, 1986, whether there is a reasonable indication that imports of urea from the GDR are causing material injury, or threaten material injury, to a United States industry. If its determination is negative, the investigation will terminate; otherwise, it will proceed according to the statutory procedures.

Gilbert B. Kaplan,

Deputy Assistant Secretary for Import Administration.

August 5, 1986.

[FR Doc. 86-18108 Filed 8-11-86; 8:45 am]

BILLING CODE 3510-DS-M

[A-485-601]

Urea From the Socialist Republic of Romania; Initiation of Antidumping Duty Investigation

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

ACTION: Notice.

SUMMARY: On the basis of a petition filed in proper form with the United States Department of Commerce, we are initiating an antidumping duty investigation to determine whether urea from the Socialist Republic of Romania (Romania) is being, or is likely to be, sold in the United States at less than fair value. We are notifying the United States International Trade Commission (ITC) of this action so that it may determine whether imports of this product are causing material injury, or threaten material injury, to a United States industry. If this investigation proceeds normally, the ITC will make its preliminary determination on or before September 2, 1986, and we will make ours on or before December 23, 1986.

EFFECTIVE DATE: August 12, 1986.

FOR FURTHER INFORMATION CONTACT: Frank Crowe (202-377-4087) or Mary S. Clapp (202-377-1769), Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230.

SUPPLEMENTARY INFORMATION:

The Petition

On July 16, 1986, we received a petition in proper form filed by the Ad Hoc Committee of Domestic Nitrogen Producers, a coalition of major U.S. producers of urea and other nitrogen fertilizers. In compliance with the filing requirements of § 353.36 of the Commerce Regulations (19 CFR 353.36), the petition alleges that imports of the subject merchandise from Romania are being, or are likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Tariff Act of 1930, as amended (the Act), and that these imports are causing material

injury, or threaten material injury, to a United States industry.

Petitioner was unable to obtain actual prices of Romanian urea sold to importers in the United States. Therefore, the United States price is based on U.S. import statistics. Using these statistics, petitioner calculated a weighted-average f.o.b. import price for the period October 1985 through March 1986. The import price was adjusted for foreign inland freight based upon freight charges in a surrogate country as described below. Petitioner had no information concerning other charges or expenses incident to bringing urea from Romania to the United States. Petitioner also asserts that a significant portion of U.S. urea imports may be obtained through countertrade transactions in which the declared transaction values of the imports may not reflect actual payments by U.S. importers. Petitioner further alleges that countertrade results in distortions that would affect our normal less-than-fair-value analysis. We will examine these transactions to determine what effects, if any, the countertrade transactions have on prices to the United States. We invite comments on how to analyze the effects of countertrade transactions in the context of an antidumping duty investigation.

Petitioner has also alleged that certain importers may be selling urea to unrelated purchasers in the United States at prices below acquisition and marketing costs, so-called middleman dumping. Absent an allegation of a relationship between the exporters and importers, or the importers acting as agents for the exporters, we have no basis for investigating the prices charged by the importers. Therefore, we do not plan to investigate this allegation at this time.

Petitioner, alleging that Romania is a state-controlled-economy country, derived foreign market value from information on the production of the merchandise in a non-state-controlled-economy country (surrogate country) in accordance with the provisions of section 773(c) of the Act and 19 CFR 353.8. Petitioner alleges that the Federal Republic of Germany (FRG) is the appropriate surrogate country for Romania for purposes of this investigation. In selecting the FRG as a surrogate country, petitioner considered the following factors: infrastructure development, a similar percentage of manufacturing value-added represented by the chemical industry, and the availability of information on production in the FRG.

Petitioner rejects prices of urea sold in the FRG as a suitable basis for determining foreign market value, alleging that prices in the FRG are artificially depressed by sales of urea by non-market-economy producers and that urea is being sold in the FRG at less than the cost of production. Petitioner further alleges that the same conditions exist in other potential surrogates and that prices must be rejected on a world-wide basis.

Petitioner therefore based foreign market value on constructed value calculations. Petitioner presented two separate constructed values. The first is derived from U.S. producers' costs, adjusted for known differences in the cost of inputs in the FRG in accordance with 19 CFR 353.36(a)(7). For purposes of this analysis, petitioner adjusted for differences in the prices of natural gas, electricity and labor in the FRG. The second constructed value calculation is based upon average factors of production of urea in developed countries (which petitioner alleges may be representative of Romanian production) valued in the FRG. Petitioner suggests this method as an alternative to relying upon U.S. import statistics, in the event that the Department is unable to find an acceptable, cooperative surrogate. The latter methodology is in accordance with 19 CFR 353.8(c). Based upon the foreign market value derived by the two methods, petitioner alleges dumping margins of 211 and 245 percent, respectively.

Initiation of Investigation

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

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

In the course of our investigation, we will determine whether the economy of Romania is state-controlled to an extent that sales of such or similar merchandise in the home market or to third country markets do not permit determination of foreign market value. If Romania is determined to be a state-controlled economy, we will then choose a non-state-controlled economy surrogate country for purposes of determining foreign market value. If our investigation proceeds normally, we will make our preliminary determination by December 23, 1986.

Scope of Investigation

The product covered by this investigation is urea, a high-nitrogen content fertilizer which is produced by reacting ammonia with carbon dioxide. The product is classified under the *Tariff Schedules of the United States Annotated* (TSUSA) item 480.3000.

Petitioner has requested that in order to avoid possible circumvention of an eventual antidumping duty order we include in the scope of the investigation nitrogen solutions currently classified under TSUSA item 480.6550, as well as solid urea mixed with other fertilizers as currently classified under TSUSA item 480.8030. Merchandise classified under these two items will be subject to the investigation only if the predominant component is urea.

Allegation of Critical Circumstances

Petitioner alleges that critical circumstances exist with respect to imports of urea from Romania. We will determine whether critical circumstances exist with respect to these imports in our preliminary determination, and if the investigation proceeds normally, in our final determination.

Notification of ITC

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

Preliminary Determination by ITC

The ITC will determine by September 2, 1986, whether there is a reasonable indication that imports of urea from Romania are causing material injury, or threaten material injury, to a United States industry. If its determination is negative, the investigation will

terminate; otherwise, it will proceed according to the statutory procedures.

Gilbert B. Kaplan,

Deputy Assistant Secretary for Import Administration.

August 5, 1986.

[FR Doc. 86-18109 Filed 8-11-86- 8:45 am]

BILLING CODE 3510-DS-M

[A-461-601]

Urea From the Union of Soviet Socialist Republics; Initiation of Antidumping Duty Investigation

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

ACTION: Notice.

SUMMARY: On the basis of a petition filed in proper form with the United States Department of Commerce, we are initiating an antidumping duty investigation to determine whether urea from the Union of Soviet Socialist Republics (USSR) is being, or is likely to be, sold in the United States at less than fair value. We are notifying the United States International Trade Commission (ITC) of this action so that it may determine whether imports of this product are causing material injury, or threaten material injury, to a United States industry. If this investigation proceeds normally, the ITC will make its preliminary determination on or before September 2, 1986, and we will make ours on or before December 23, 1986.

EFFECTIVE DATE: August 12, 1986.

FOR FURTHER INFORMATION CONTACT: Frank Crowe, (202-377-4087) or Mary S. Clapp (202-377-1769) Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230.

SUPPLEMENTARY INFORMATION:

The Petition

On July 16, 1986, we received a petition in proper form filed by the Ad Hoc Committee of Domestic Nitrogen Producers, a coalition of major U.S. producers of urea and other nitrogen fertilizers. In compliance with the filing requirements of § 353.36 of the Commerce Regulations (19 CFR 353.36), the petition alleges that imports of the subject merchandise from the USSR are being, or are likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Tariff Act of 1930, as amended (the Act), and that these imports are causing material injury, or threaten material injury, to a United States industry.

Petitioner was unable to obtain actual prices of Soviet urea sold to importers in the United States. Therefore, the United States price is based on U.S. import statistics. Using these statistics, petitioner calculated a weighted-average f.o.b. import price for the period October 1985 through March 1986. The import price was adjusted for foreign inland freight based upon freight charges in a surrogate country as described below. Petitioner had no information concerning other charges or expenses incident to bringing Soviet urea to the United States. Petitioner also asserts that a significant portion of U.S. urea imports may be obtained through countertrade transactions in which the declared transaction values of the imports may not reflect actual payments by U.S. importers. Petitioner further alleges that countertrade results in distortions that would affect our normal less-than-fair-value analysis. We will examine these transactions to determine what effects, if any, the countertrade transactions have on prices to the United States. We invite comments on how to analyze the effects of countertrade transactions in the context of an antidumping duty investigation.

Petitioner has also alleged that certain importers may be selling urea to unrelated purchasers in the United States at prices below acquisition and marketing costs, so-called middleman dumping. Absent an allegation of a relationship between the exporters and importers, or the importers acting as agents for the exporters, we have no basis for investigating the prices charged by the importers. Therefore, we do not plan to investigate this allegation at this time.

Petitioner, alleging that the USSR is a state-controlled-economy country, derived foreign market value from information on the production of the merchandise in a non-state-controlled-economy country (surrogate country) in accordance with the provisions of section 773(c) of the Act and 19 CFR 353.8. Petitioner asserts that the Federal Republic of Germany (FRG), Italy, and France are suitable surrogate countries for the USSR for purposes of this investigation. In selecting the FRG as the most appropriate surrogate country, petitioner considered the following factors: per capita gross national product, infrastructure development, urea capacity, average plant capacity, overall labor force distribution, percent of manufacturing value-added represented by the chemical industry, the fact that the FRG is a major purchaser to Soviet natural gas, the availability of information on production in the FRG, and the Department's recent designation of the FRG as a suitable surrogate for the USSR in the investigation of *Potassium Chloride from the Union of Soviet Socialist Republics* 50 FR 4562 (1985).

Petitioner rejects prices of urea sold in the FRG as a suitable basis for determining foreign market value, alleging that prices in the FRG are artificially depressed by sales of urea by non-market-economy producers and that urea is being sold in the FRG at less than the cost of production. Petitioner further alleges that the same conditions exist in other potential surrogates and that prices must be rejected on a world-wide basis.

Petitioner therefore based foreign market value on constructed value calculations. Petitioner presented two separate constructed values. The first is derived from U.S. producers' costs, adjusted for known differences in the cost of inputs in the FRG in accordance with 19 CFR 353.36(a)(7). For purposes of this analysis, petitioner adjusted for differences in the prices of natural gas, electricity and labor in the FRG.

The second constructed value calculation is based upon average factors of production of urea in developed countries (which petitioner alleges may be representative of USSR production) valued in the FRG. Petitioner suggests this method as an alternative to relying upon U.S. import statistics, in the event that the Department is unable to find an acceptable, cooperative surrogate. The latter methodology is in accordance with 19 CFR 353.8(c). Based upon the foreign market values derived by the two methods, petitioner alleges dumping margins of 241 and 279 percent, respectively.

Initiation of Investigation

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

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

In the course of our investigation, we will determine whether the economy of the USSR is state-controlled to an extent that sales of such or similar merchandise in the home market or to third country markets do not permit determination of foreign market value. If the USSR is determined to be a state-controlled economy, we will then choose a non-state-controlled economy surrogate country for purposes of determining foreign market value. If our investigation proceeds normally, we will make our preliminary determination by December 23, 1986.

Scope of Investigation

The product covered by this investigation is urea, a high-nitrogen content fertilizer which is produced by reacting ammonia with carbon dioxide. The product is currently classified under the *Tariff Schedules of the United States Annotated* (TSUSA) item 480.3000.

Petitioner has requested that in order to avoid possible circumvention of an eventual antidumping duty order we include in the scope of the investigation nitrogen solutions currently classified under TSUSA item 480.6550, as well as solid urea mixed with other fertilizers as currently classified under TSUSA item 480.8030. Merchandise classified under these two items will be subject to the investigation only if the predominant component is urea.

Allegation of Critical Circumstances

Petitioner alleges that critical circumstances exist with respect to these imports of urea from the USSR. We will determine whether critical circumstances exist with respect to these imports in our preliminary determination, and if the investigation proceeds normally, in our final determination.

Notification of ITC

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

Preliminary Determination by ITC

The ITC will determine by September 2, 1986, whether there is a reasonable indication that imports of urea from the USSR are causing material injury, or threaten material injury, to a United States industry. If its determination is negative, the investigation will terminate; otherwise, it will proceed according to the statutory procedures.

Gilbert B. Kaplan,

Deputy Assistant Secretary for Import Administration.

August 5, 1986.

[FR Doc. 86-18110 Filed 8-11-86; 8:45 am]

BILLING CODE 3510-DS-M

APPENDIX B

LIST OF WITNESSES APPEARING AT THE COMMISSION'S CONFERENCE

CALENDAR OF PUBLIC CONFERENCE

Investigation Nos. 731-TA-338 through 340 (Preliminary)

UREA FROM FROM THE GERMAN DEMOCRATIC REPUBLIC, ROMANIA, AND THE UNION OF SOVIET SOCIALIST REPUBLICS

Those listed below appeared at the United States International Trade Commission's conference held in connection with the subject investigations on August 8, 1985, in the Hearing Room of the USITC Building, 701 E Street, NW., Washington, DC.

In support of the imposition of antidumping duties

Akin, Gump, Strauss, Hauer & Feld--Counsel
Washington, DC
on behalf of--

The Ad Hoc Committee of Domestic Nitrogen Producers

Mississippi Chemical Corp.
Yazoo City, MS

Thomas C. Parry, President

W.R. Grace & Co.
New York, NY

Dean McWilliams, Vice President, Marketing

Valerie A. Slater--OF COUNSEL

Shannon S. Shuman--Economist
Thomas L. Rogers--Economist

Neither in support of nor in opposition to the imposition of antidumping duties

Dean H. Travis, Jr.--President, J.R. Simplot Co.
on behalf of--

J.R. Simplot Co.
Pocatello, ID

In opposition to the imposition of antidumping duties

Steptoe & Johnson--Counsel
Washington, DC
on behalf of--

Occidental Petroleum Corp.
Los Angeles, CA

Cargill, Inc.
Minneapolis, MN

Susan G. Esserman--OF COUNSEL

Bruce Maleshevich--Vice President
Economic Consulting Services, Inc.

Dumitru Ionescu--President, Amrochem, Inc.
on behalf of--

I.C.E. Chimica
Bucharest, Romania

Amrochem, Inc.
White Plains, NY

APPENDIX C

UREA CAPACITY IN THE UNITED STATES AND IN CERTAIN OTHER COUNTRIES

PLANT STATUS CODING

OPR - Operating Unit

UCT - Under Construction

CTR - Contracted

PLN - Planned

IDF - Indefinite or Insufficient Information

EXP - Expansion of Existing Facility

CLS - Closed or Dismantled

IDL - Idle

SLD - Change in Ownership

Capacity data has been compiled from published sources, contacts with industry, and other sources. TVA makes no guarantee of completeness or accuracy of this list. Comments, corrections, or additions would be appreciated.

Source: National Fertilizer Development Center, Tennessee Valley Authority, Muscle Shoals, AL.

TVA - 06/18/86 WORLD FERTILIZER CAPACITY UREA

COMPANY AND LOCATION	PLANT STATUS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	INF
							(THOUSAND SHORT TONS MATERIAL)									
USA																
AGRICO CHEM-WILLIAMS																
BLYTHEVILLE, AR	IDL	350	350	350	350	350	350	350	350	350	-	-	-	-	-	-
DONALDSONVILLE, LA	EXP	210	210	210	210	210	210	210	270	270	270	270	270	270	270	270
VERDIGRIS, OK	OPR	250	250	250	500	500	500	500	500	500	500	500	500	500	500	500
AGWAY,INC.-																
OLEAN, NY	CLS	63	63	63	63	63	63	63	-	-	-	-	-	-	-	-
AIR PRODUCTS & CHEM																
PACE JUNCTION, FL	OPR	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
ALLIED CORP																
LAPLATTE, NE	SLD	132	132	132	132	132	132	132	132	-	-	-	-	-	-	-
GEISMAR, LA	SLD	230	230	306	306	306	306	306	306	-	-	-	-	-	-	-
SOUTH POINT, OH	CLS	125	125	-	-	-	-	-	-	-	-	-	-	-	-	-
HELENA, AR	SLD	-	70	70	70	70	70	-	-	-	-	-	-	-	-	-
AMERICAN CYANAMID																
FORTIER, LA	OPR	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145
ARCADIAN CORP																
GEISMAR, LA	OPR	-	-	-	-	-	-	-	-	306	306	306	306	306	306	306
LAPLATTE, NE	OPR	-	-	-	-	-	-	-	-	132	132	132	132	132	132	132
ATLAS CHEMICAL (TYLER)																
JOPLIN, MO	CLS	70	70	70	70	70	70	70	70	70	-	-	-	-	-	-
BEKER INDUSTRIES																
CARLSBAD, NM	IDL	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BORDEN CHEM CO.																
GEISMAR, LA	OPR	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215
CF INDUSTRIES,INC.																
DONALDSONVILLE, LA	OPR	375	885	885	885	885	885	885	885	885	885	885	885	885	885	885
FREMONT, NE	CLS	20	20	20	20	20	20	-	-	-	-	-	-	-	-	-
TUNIS-AHOSKIE, NC	CLS	165	165	165	165	165	165	-	-	-	-	-	-	-	-	-
TYNER, TN	CLS	45	45	45	45	45	45	-	-	-	-	-	-	-	-	-
CHEVRON CHEMICAL CO.																
FORT MADISON, IA	IDL	-	-	-	-	70	70	-	-	-	-	-	-	-	-	-
KENNEWICK, WA	OPR	-	70	70	70	70	70	70	70	70	70	70	70	70	70	70
COLUMBIA NITROGEN																
AUGUSTA, GA	CLS	30	30	-	-	-	-	-	-	-	-	-	-	-	-	-
	OPR	-	-	410	410	410	410	410	410	410	410	410	410	410	410	410
COMINCO																
BORGER, TX	OPR	-	-	-	-	85	85	85	85	85	85	85	85	85	85	85
CPEX PACIFIC, INC																
ST HELENS, OR	OPR	-	-	-	-	-	-	-	-	-	110	110	110	110	110	110
ESTECH, INC. (SWIFT)																
BEAUMONT, TX	CLS	50	50	50	50	-	-	-	-	-	-	-	-	-	-	-
FARMLAND INDUSTRIES																
FORT DODGE, IA	IDL	70	70	70	70	70	70	-	-	-	-	-	-	-	-	-
	OPR	-	-	-	-	-	-	-	-	70	70	70	70	70	70	70
ENID, OK	OPR	-	-	-	-	-	340	340	340	340	340	340	340	340	340	340
LAWRENCE, KS	OPR	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
GARDINIER																
HELENA, AR	SLD	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GOODPASTURE,INC.																
DIMMITT, TX	OPR	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24

TVA - 06/18/8: WORLD FERTILIZER CAPACITY UREA

COMPANY AND LOCATION	PLANT STATUS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	INF
		(THOUSAND SHORT TONS MATERIAL)														
USA																
W.R.GRACE & CO.																
WOODSTOCK, TN	EXP	350	385	385	385	385	385	385	385	385	385	385	385	385	385	385
HAWKEYE CHEMICAL CO.																
CLINTON, IA	EXP	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
HERCULES, INC.																
LOUISIANA, MO	CLS	95	95	95	95	95	95	95	-	-	-	-	-	-	-	-
KAICHEM INTERNATIONAL																
NORTH BEND, OH	OPR	-	-	-	-	-	-	-	-	80	80	80	80	80	80	80
KAISER AG CHEMICALS																
SAVANNAH, GA	CLS	78	100	100	100	100	100	-	-	-	-	-	-	-	-	-
PRYOR, OK	CLS	-	-	-	180	180	180	180	180	180	-	-	-	-	-	-
LAROCHE INDUSTRIES																
CHEROKEE, AL	OPR	-	-	-	-	-	-	-	-	-	-	96	96	96	96	96
MISS CHEMICAL CORP.																
YAZOO CITY, MS	EXP	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153
NIPAK,INC.(ENSERCH)																
PRYOR, OK	SLD	95	95	-	-	-	-	-	-	-	-	-	-	-	-	-
	SLD	85	85	-	-	-	-	-	-	-	-	-	-	-	-	-
KERENS, TX	SLD	86	86	-	-	-	-	-	-	-	-	-	-	-	-	-
N-REN CORPORATION																
EAST DUBUQUE, IL	EXP	85	85	85	125	125	125	125	125	125	125	125	125	125	125	125
PRYOR, OK	OPR	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
OLIN CORPORATION																
LAKE CHARLES, LA	OPR	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
PHILLIPS PAC CHEM																
KENNEWICK, WA	EXP	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
PHILLIPS PETROLEUM																
BEATRICE, NE	EXP	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
REICHHOLD CHEMICALS																
ST HELENS, OR	SLD	110	110	110	110	110	110	110	110	110	-	-	-	-	-	-
J.R.SIMPLOT																
POCATELLO, ID	OPR	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
EL CENTRO, CA	CLS	-	-	-	-	155	155	-	-	-	-	-	-	-	-	-
STANDARD OIL COMPANY																
LIMA, OH	EXP	250	250	250	250	250	250	250	390	390	390	390	390	390	390	390
TENN.VALLEY AUTH.																
MUSCLE SHOALS, AL	EXP	66	66	66	66	66	102	102	102	102	102	102	102	102	102	102
TERRA CHEMICALS																
PORT NEAL, IA	EXP	170	170	255	255	255	255	255	255	255	255	255	255	255	255	255
WOODWARD, OK	OPR	-	83	83	83	83	83	83	83	83	83	83	83	83	83	83
TRIAD CHEMICAL																
DONALDSONVILLE, LA	OPR	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420
UNION CHEM CO (UNOCAL)																
KENAI, AK	OPR	450	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
BREA, CA	EXP	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
U.S.S.AGRI-CHEMICALS																
CHEROKEE, AL	SLD	32	32	32	96	96	96	96	96	96	96	-	-	-	-	-
VALLEY NIT.PRODUCERS																
EL CENTRO, CA	SLD	155	155	155	155	-	-	-	-	-	-	-	-	-	-	-
HELM, CA	SLD	38	38	38	38	-	-	-	-	-	-	-	-	-	-	-

TVA - 06/18/86 WORLD FERTILIZER CAPACITY UREA

COMPANY AND LOCATION	PLANT STATUS	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	IBF
							(THOUSAND SHORT TONS MATERIAL)									
USA																
VALLEY NIT.PRODUCERS																
HERCULES, CA	CLS	45	45	-	-	-	-	-	-	-	-	-	-	-	-	-
WYCON CHEMICAL CO.																
CHEYENNE, WY	OPR	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
TOTAL USA -		6424	7514	7619	8153	8220	8596	7901	7943	8093	7493	7493	7493	7493	7493	7493
CANADA																
CANADIAN IND.,LTD.																
COURTRIGHT, ONT	EXP	75	75	75	176	176	176	176	176	176	176	176	176	176	176	176
CANADIAN FERT.LTD.																
MEDICINE HAT, ALTA	OPR	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480
COMINCO																
CALGARY, ALTA	OPR	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
CARSELAND, ALTA	EXP	480	480	480	480	480	480	480	480	480	480	480	590	590	590	590
CYANAMID OF CANADA																
WELLAND, ONT	OPR	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
ESSO CHEMICALS																
REDWATER, ALTA	OPR	-	-	-	-	-	-	-	542	542	542	542	542	542	542	542
NITROCHEM (GENSTAR)																
MAITLAND, ONT	IDL	55	55	55	55	55	55	55	-	-	-	-	-	-	-	-
SHERRITT-GORDON MINE																
FT SASKATCH, ALTA	OPR	88	88	88	88	88	88	428	428	428	428	428	428	428	428	428
J.R. SIMPLOT CO.																
BRANDON, MANITOBA	EXP	30	30	30	30	30	170	170	170	170	170	170	170	170	170	170
TOTAL CANADA		1384	1384	1384	1485	1485	1625	1965	2452	2452	2452	2452	2562	2562	2562	2562
N AMERICA		7808		9003		9705		9866		10545		9945		10055		10055
			8898		9638		10221		10395		9945		10055		10055	

WORLD FERTILIZER CAPACITY

MARKETING AND DISTRIBUTION ECONOMICS SECTION
TENNESSEE VALLEY AUTHORITY
MUSCLE SHOALS, ALABAMA 35660

AREA 07/15/86

CAPACITY DATA HAS BEEN COMPILED FROM PUBLISHED SOURCES, CONTACTS WITH INDUSTRY, AND OTHER SOURCES. TVA MAKES NO GUARANTEE OF COMPLETENESS OR ACCURACY OF THIS LIST. COMMENTS, CORRECTIONS, OR ADDITIONS WOULD BE APPRECIATED.

D-6

PLANT STATUS CODING

OPR - OPERATING UNIT

UCT - UNDER CONSTRUCTION

CTR - CONTRACTED

PLN - PLANNED

IDF - INDEFINITE OR INSUFFICIENT INFORMATION

EXP - EXPANSION OF EXISTING FACILITIES

CLS - CLOSED

IDL - IDLE

SLD - CHANGE IN OWNERSHIP

D-7

COMPANY AND LOCATION	PLANT STATUS	1970	1973	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
		(THOUSAND METRIC TONS N)																	
USA																			
AGRICO CHEM-WILLIAMS																			
BLYTHEVILLE, AR	IDL	143	143	143	143	143	143	143	143	143	143	143	143	-	-	-	-	-	-
DONALDSONVILLE, LA	EXP	86	86	86	86	86	86	86	86	86	86	110	110	110	110	110	110	110	110
VERDIGRIS, OK	OPR	-	-	102	102	102	102	204	204	204	204	204	204	204	204	204	204	204	204
AGWAY, INC.																			
OLEAN, NY	CLS	26	26	26	26	26	26	26	26	26	26	-	-	-	-	-	-	-	-
AIR PRODUCTS & CHEM																			
PACE JUNCTION, FL	OPR	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
ALLIED CORP																			
LAPLATTE, NE	SLD	54	54	54	54	54	54	54	54	54	54	54	-	-	-	-	-	-	-
GEISMAR, LA	SLD	94	94	94	94	94	125	125	125	125	125	125	-	-	-	-	-	-	-
SOUTH POINT, OH	CLS	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CLS	51	51	51	51	51	-	-	-	-	-	-	-	-	-	-	-	-	-
HELENA, AR	SLD	-	-	-	-	29	29	29	29	29	-	-	-	-	-	-	-	-	-
AMERICAN CYANAMID																			
FORTIER, LA	OPR	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
ARCADIAN CORP																			
GEISMAR, LA	OPR	-	-	-	-	-	-	-	-	-	-	-	125	125	125	125	125	125	125
LAPLATTE, NE	OPR	-	-	-	-	-	-	-	-	-	-	-	54	54	54	54	54	54	54
ARKLA CHEM.CORP.																			
HELENA, AR	SLD	29	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATLAS CHEMICAL (TYLER)																			
JOPLIN, MO	CLS	29	29	29	29	29	29	29	29	29	29	29	29	-	-	-	-	-	-
BEKER INDUSTRIES																			
CARLSBAD, NM	IDL	-	-	71	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BORDEN CHEM CO.																			
GEISMAR, LA	OPR	88	88	88	88	88	88	98	98	98	88	88	88	98	98	98	98	98	98
CF INDUSTRIES,INC.																			
DONALDSONVILLE, LA	OPR	-	-	153	153	361	361	361	361	361	361	361	361	361	361	361	361	361	361
FREMONT, NE	CLS	8	8	8	8	8	8	8	8	8	-	-	-	-	-	-	-	-	-
TUNIS-AMOSKIE, NC	CLS	67	67	67	67	67	67	67	67	67	-	-	-	-	-	-	-	-	-
TYNER, TN	CLS	18	18	18	18	18	18	18	18	18	-	-	-	-	-	-	-	-	-
CHEVRON CHEMICAL CO.																			
FORT MADISON, IA	IDL	-	-	-	-	-	-	-	29	29	-	-	-	-	-	-	-	-	-
KENNEWICK, WA	OPR	-	-	-	-	29	29	29	29	29	29	29	29	29	29	29	29	29	29
COLUMBIA NITROGEN																			
AUGUSTA, GA	CLS	12	12	12	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-
	OPR	-	-	-	-	-	167	167	167	167	167	167	167	167	167	167	167	167	167
COMINCO																			
BORGER, TX	OPR	-	-	-	-	-	-	-	35	35	35	35	35	35	35	35	35	35	35
CPEX PACIFIC, INC																			
ST HELENS, OR	OPR	-	-	-	-	-	-	-	-	-	-	-	-	45	45	45	45	45	45
DUPONT																			
BELLE, WV	CLS	16	16	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESTECH, INC. (SWIFT)																			
BEAUMONT, TX	CLS	-	-	20	20	20	20	20	-	-	-	-	-	-	-	-	-	-	-
FARMLAND INDUSTRIES																			
FORT DODGE, IA	IDL	-	-	29	29	29	29	29	29	29	-	-	-	-	-	-	-	-	-
	OPR	-	-	-	-	-	-	-	-	-	-	-	29	29	29	29	29	29	29
ENID, OK	OPR	-	-	-	-	-	-	-	-	139	139	139	139	139	139	139	139	139	139

COMPANY AND LOCATION	PLANT STATUS	1970	1973	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	ICF
		(THOUSAND METRIC TONS N)																	
USA																			
FARMLAND INDUSTRIES																			
LAWRENCE, KS	CLS	20	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	OPR	-	-	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
GARDINIER																			
HELENA, AR	SLD	-	-	51	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GOODPASTURE, INC.																			
DIMMITT, TX	OPR	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
W.R. GRACE & CO.																			
WOODSTOCK, TN	CLS	57	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	EXP	-	-	143	143	157	157	157	157	157	157	157	157	157	157	157	157	157	157
HAWKEYE CHEMICAL CO.																			
CLINTON, IA	EXP	14	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
HERCULES, INC.																			
HERCULES, CA	SLD	18	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LOUISIANA, MO	CLS	39	39	39	39	39	39	39	39	39	39	-	-	-	-	-	-	-	-
KAICHEM INTERNATIONAL																			
NORTH BEND, OH	OPR	-	-	-	-	-	-	-	-	-	-	-	33	33	33	33	33	33	33
KAISER AG CHEMICALS																			
SAVANNAH, GA	CLS	32	32	32	32	41	41	41	41	41	-	-	-	-	-	-	-	-	-
PRYOR, OK	CLS	-	-	-	-	-	-	73	73	73	73	73	73	-	-	-	-	-	-
KETONA CHEMICAL CORP																			
KETONA, AL	CLS	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LAROCHE INDUSTRIES																			
CHEROKEE, AL	OPR	-	-	-	-	-	-	-	-	-	-	-	-	-	39	39	39	39	39
MISS CHEMICAL CORP.																			
YAZOO CITY, MS	EXP	35	35	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
MOBIL CHEMICAL CO.																			
BEAUMONT, TX	SLD	20	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NIPAK, INC. (ENSERCH)																			
PRYOR, OK	SLD	39	39	39	39	39	-	-	-	-	-	-	-	-	-	-	-	-	-
	SLD	-	-	39	39	39	-	-	-	-	-	-	-	-	-	-	-	-	-
KERENS, TX	SLD	35	35	35	35	35	-	-	-	-	-	-	-	-	-	-	-	-	-
N-REN CORPORATION																			
EAST DUBUQUE, IL	EXP	-	-	35	35	35	35	51	51	51	51	51	51	51	51	51	51	51	51
PRYOR, OK	OPR	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
PLAINVIEW, TX	CLS	-	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OLIN CORPORATION																			
LAKE CHARLES, LA	OPR	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
PHILLIPS PAC CHEM																			
KENNEWICK, WA	EXP	18	18	19	19	18	19	18	18	19	19	19	18	18	18	19	19	19	19
PHILLIPS PETROLEUM																			
BEATRICE, NE	EXP	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
PREMIER PETROCHEM.																			
PASADENA, TX	CLS	92	92	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REICHHOLD CHEMICALS																			
ST HELENS, OR	CLD	-	45	45	45	45	45	45	45	45	45	45	45	-	-	-	-	-	-
SHELL CHEMICAL CO.																			
ST HELENS, OR	CLS	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VENTURA, CA	CLS	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
J.R. SIMPLOT																			
POCATELLO, ID	OPR	-	-	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20

COMPANY AND LOCATION	PLANT STATUS	1970	1973	1975	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	19
								(THOUSAND METRIC TONS N)											
USA																			
J.R.SIMPLOT																			
EL CENTRO, CA	CLS	-	-	-	-	-	-	-	63	63	-	-	-	-	-	-	-	-	-
STANDARD OIL COMPANY																			
LIMA, OH	CLS	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	EXP	-	102	102	102	102	102	102	102	102	102	159	159	159	159	159	159	159	159
SUNOLIN CHEMICAL CO.																			
CLAYMONT, DE	CLS	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TENN.VALLEY AUTH.																			
MUSCLE SHOALS, AL	EXP	-	27	27	27	27	27	27	27	42	42	42	42	42	42	42	42	42	42
TERRA CHEMICALS																			
PORT NEAL, IA	EXP	50	50	69	69	69	104	104	104	104	104	104	104	104	104	104	104	104	104
WOODWARD, OK	OPR	-	-	-	-	39	39	39	39	39	39	39	39	39	39	39	39	39	39
TRIAD CHEMICAL																			
DONALDSONVILLE, LA	OPR	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171
UNION CHEM CO (UNOCAL)																			
KENAI, AK	OPR	184	184	184	184	409	409	409	409	409	409	409	409	409	409	409	409	409	409
BREA, CA	EXP	20	20	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
U.S.S.AGRI-CHEMICALS																			
CHEROKEE, AL	SLD	13	13	13	13	13	13	39	39	39	39	39	39	39	-	-	-	-	-
VALLEY NIT.PRODUCERS																			
EL CENTRO, CA	SLD	63	63	63	63	63	63	63	-	-	-	-	-	-	-	-	-	-	-
HELM, CA	SLD	12	12	12	16	16	16	16	-	-	-	-	-	-	-	-	-	-	-
HERCULES, CA	CLS	-	-	-	19	19	-	-	-	-	-	-	-	-	-	-	-	-	-
WYCON CHEMICAL CO.																			
CHEYENNE, WY	OPR	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
TOTAL USA		1994	1989	2694	2622	3069	3111	3328	3356	3513	3226	3242	3304	3059	3059	3059	3059	3059	3059
CANADA																			
CANADIAN IND.,LTD.																			
COURTRIGHT, ONT	EXP	31	31	31	31	31	31	72	72	72	72	72	72	72	72	72	72	72	72
CANADIAN FERT.LTD.																			
MEDICINE HAT, ALTA	OPR	-	-	-	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196
COMINCO																			
CALGARY, ALTA	OPR	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
CARSELAND, ALTA	EXP	-	-	-	196	196	196	196	196	196	196	196	196	196	196	241	241	241	241
CYANAMID OF CANADA																			
WELLAND, ONT	OPR	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
ESSO CHEMICALS																			
REDWATER, ALTA	OPR	-	-	-	-	-	-	-	-	-	-	221	221	221	221	221	221	221	221
NITROCHEM (GENSTAR)																			
MAITLAND, ONT	IDL	22	22	22	22	22	22	22	22	22	22	-	-	-	-	-	-	-	-
SHERRITT-GORDON MINE																			
FT SASKATCH, ALTA	OPR	36	36	36	36	36	36	36	36	36	175	175	175	175	175	175	175	175	175
J.R. SIMPLOT CO.																			
BRANDON, MANITOBA	EXP	12	12	12	12	12	12	12	12	69	69	69	69	69	69	69	69	69	69
TOTAL CANADA		172	172	172	564	564	564	605	605	662	901	1000	1000	1000	1000	1045	1045	1045	1045
MEXICO																			
FERTIMEX																			
PARAJITOS	OPR	-	-	-	-	-	-	-	-	228	228	456	456	456	456	456	456	456	456

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COMPANY AND LOCATION	PLANT STATUS	1970	1973	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
		(THOUSAND METRIC TONS N)																	
CZECHOSLOVAK																			
SAVEROCESKE C ZAVODY LOVOSICE	OPR	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
USTI COMPLEX USTI	OPR	-	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
ZALUZI COMPLEX ZALUZI	OPR	-	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
TOTAL CZECHOSLOVAK		51	149	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	393
GERMAN DR																			
VEB LEUNA WERKE LEUNA	EXP	46	46	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206
VEB STICKSTOFFWERKE PIESTERITZ	OPR	-	-	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480
TOTAL GERMAN DR		46	46	686	686	686	686	686	686	686	686	686	686	686	686	686	686	686	686
HUNGARY																			
BORSODI CHEM.COMBINE KAZINBARCIKA	OPR	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
PET NITROGEN WORKS PETFURDO	OPR	45	45	135	135	135	135	135	135	135	135	135	181	181	181	181	181	181	181
TISZA VEGYI KOMBINAT TISZAPALKONYA	OPR	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
TOTAL HUNGARY		95	95	185	185	185	185	185	185	185	185	185	231	231	231	231	231	231	231
POLAND																			
F.DZIERZYNSKI PLANT TARNOW	OPR	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
KEDZIERZYN COMPLEX KEDZIERZYN	OPR	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
POLICE COMPLEX SZCZECIN II	UCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	182	182	182
PULAWY COMPLEX ONE	OPR	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380
TOTAL POLAND		522	522	522	522	522	522	522	522	522	522	522	522	522	522	522	704	704	704
ROMANIA																			
ARAD COM CHIMIC ARAD	OPR	-	-	-	-	189	189	189	189	189	189	382	382	382	382	382	382	382	382
BACAU COMPLEX BACAU	OPR	-	-	-	-	-	-	197	197	197	197	197	197	197	197	197	197	197	197
CRAIOVA COMPLEX CRAIOVA	OPR	179	179	179	179	179	179	179	179	179	179	179	179	179	179	179	179	179	179

COMPANY AND LOCATION	PLANT STATUS	1970	1973	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	199
		(THOUSAND METRIC TONS N)																	
ROMANIA																			
CRAIOVA COMPLEX																			
CRAIOVA	PLN	-	-	-	-	-	200	200	200	200	200	200	200	200	200	200	200	200	200
PIATRA NEAMT COMPLEX																			
PIATRA NEAMT	OPR	9	9	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144
RISNOV COMPLEX																			
RISNOV	OPR	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
SLOBOZIA COMPLEX																			
SLOBOZIA	EXP	-	-	131	131	131	131	131	131	131	324	324	324	324	324	324	324	324	324
TIRGU MURES COMPLEX																			
TIRGU MURES	OPR	-	-	135	135	411	411	411	411	411	411	411	411	411	411	411	411	411	411
TURNU MAGURELE COMPLEX																			
TURNU MAGURELE	OPR	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224
VICTORIA COMPLEX																			
VICTORIA	OPR	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
TOTAL ROMANIA		424	424	825	825	1230	1430	1687	1687	1687	1980	2073	2073	2073	2073	2073	2073	2073	2073
YUGOSLAVIA																			
HEMIJSKA INDUSTRIJA																			
PANCEVO	OPR	-	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
	IDF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165
INDUSTRIJA NAFTE(INA)																			
KUTINA	OPR	45	45	45	45	45	45	45	45	45	45	268	268	268	268	268	268	268	268
KOKSNO HEMIJSKI KOM																			
LUKAVAC	OPR	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
TOTAL YUGOSLAVIA		68	113	113	113	113	113	113	113	113	113	336	336	336	336	336	336	336	499
USSR																			
ANGARSK COMPLEX																			
ANGARSK	OPR	45	90	90	90	90	90	90	90	90	90	239	239	239	239	239	239	239	239
BEREZNIKI COMPLEX																			
BEREZNIKI	OPR	-	-	-	-	-	-	-	-	-	225	374	374	374	374	374	374	374	374
CHERKASSY COMPLEX																			
CHERKASSY	EXP	164	332	332	332	332	332	332	332	332	441	441	441	441	441	441	441	441	441
CHIRCHIK COMPLEX																			
CHIRCHIK	EXP	91	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148
DNEPRODZERSHINSK COM																			
DNEPRODZERSHINSK	OPR	-	-	-	-	-	-	-	-	-	152	152	152	152	152	152	152	152	152
DZERSHINSK COMPLEX																			
DZERZHINSK	OPR	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	UCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	152	152	152	152
FERGANA COMPLEX																			
FERGANA	CTR	-	-	-	-	-	-	-	-	-	-	-	-	-	152	152	152	152	152
GORLOVKA COMPLEX																			
GORLOVKA	OPR	-	-	-	-	-	-	-	456	456	456	456	456	456	456	456	456	456	456
GRODNO COMPLEX																			
GRODNO	OPR	46	46	46	46	46	46	198	198	198	198	199	198	198	199	199	199	199	199

COMPANY AND LOCATION	PLANT STATUS	1970	1973	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
		(THOUSAND METRIC TONS N)																	
USSR																			
GRODNO COMPLEX																			
GRODNO	CTR	-	-	-	-	-	-	-	-	-	-	-	-	-	152	152	152	152	152
IONAYA COMPLEX																			
IONAYA	OPR	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
KEMOROVO COMPLEX																			
KEMOROVO	OPR	29	29	29	29	29	29	29	29	29	252	252	252	252	252	252	252	252	252
KIROVAKAN COMPLEX																			
KIROVAKAN	OPR	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
KOHTLA YARVE COMPLEX																			
KOHTLA YARVE	OPR	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
KOMSOMOLSKAYA COMPLEX																			
KOMSOMOLSKAYA	OPR	189	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419
KUYBYSHEV COMPLEX																			
KUYBYSHEV	OPR	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
LISICHANSK COMPLEX																			
LISICHANSK	OPR	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
MENDELEYEVSK COMPLEX																			
MENDELEYEVSK	IDE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95
NEVINNOMYSSK COMPLEX																			
NEVINNOMYSSK	OPR	50	50	262	262	262	262	262	262	262	262	331	331	331	331	331	331	331	331
NIZHNIY TAGIL COMPL.																			
NIZHNIY TAGIL	OPR	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
NOVOGOROD COMPLEX																			
NOVOGOROD	OPR	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
NOVOKEMEROVO COMPLEX																			
NOVOKEMEROVO	OPR	-	-	-	-	-	-	-	-	-	228	229	228	228	228	229	228	229	229
NOVOMOSKOVSK COMPLEX																			
NOVOMOSKOVSK	OPR	92	92	92	92	92	320	320	320	320	320	320	320	320	320	320	320	320	320
ODESSA COMPLEX																			
ODESSA	OPR	-	-	-	-	-	180	190	190	180	180	180	180	190	180	190	180	180	190
	CTR	-	-	-	-	-	-	-	-	-	-	-	-	152	152	152	152	152	152
	CTR	-	-	-	-	-	-	-	-	-	-	-	-	-	152	152	152	152	152
PERM COMPLEX																			
PERM	OPR	-	-	-	-	-	-	-	-	-	228	228	229	229	228	229	229	228	229
ROUSTAVI COMPLX																			
ROUSTAVI	OPR	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
ROVNO COMPLEX																			
ROVNO	EXP	30	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
SALAVAT COMPLEX																			
SALAVAT	EXP	74	74	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224
	OCT	-	-	-	-	-	-	-	-	-	-	-	152	152	152	152	152	152	152
SEVERDONETSK COMPLEX																			
SEVERDONETSK	OPR	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
	CTR	-	-	-	-	-	-	-	-	-	-	-	-	-	152	152	152	152	152
SHCHEKINO COMPLEX																			
SHCHEKINO	OPR	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
SUMGAIT COMPLEX																			
SUMGAIT	OPR	93	93	93	83	93	83	93	83	93	83	93	83	83	93	83	93	83	83
TASHKENT COMPLEX																			
TASHKENT	OPR	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76