

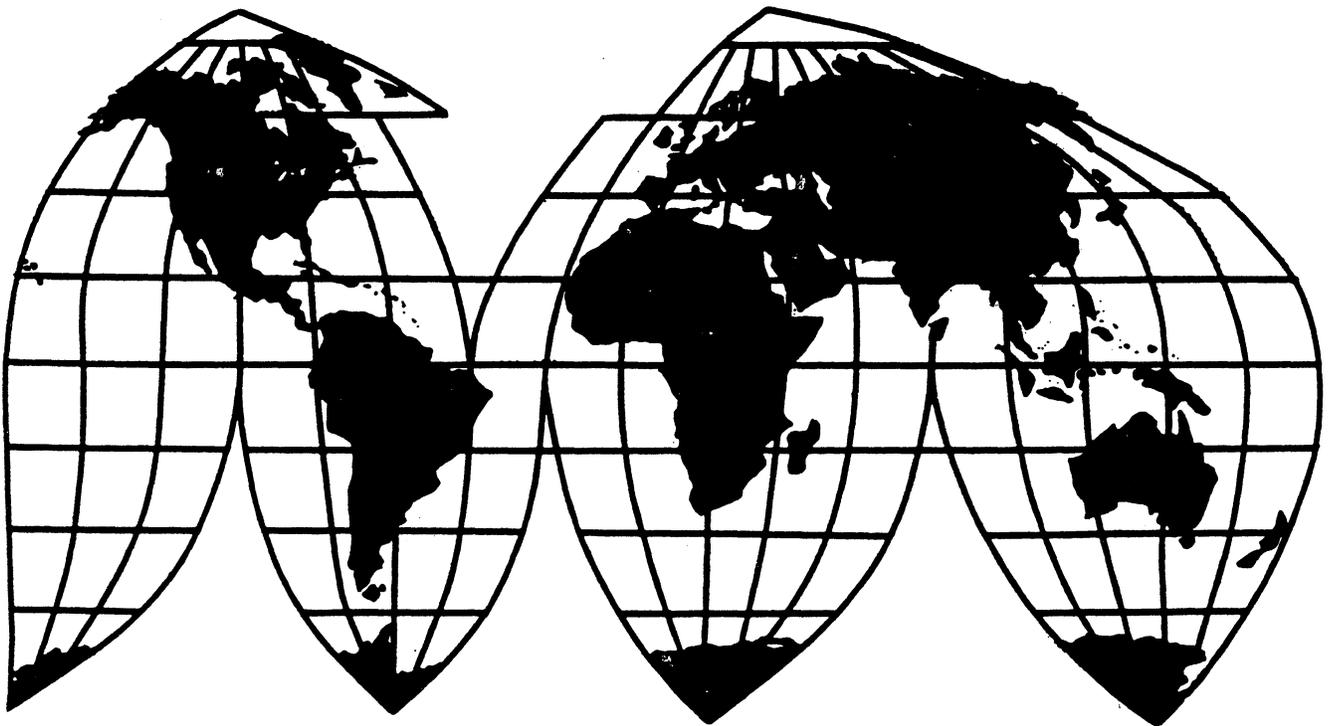
Uranium From Tajikistan and Ukraine

Investigations Nos. 731-TA-539-D and 539-E (Final)

Publication 2669

August 1993

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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U.S. International Trade Commission

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Note.--Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report.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

DETERMINATIONS AND VIEWS OF THE COMMISSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigations Nos. 731-TA-539-D and 539-E (Final)

URANIUM FROM TAJIKISTAN AND UKRAINE

Determinations

On the basis of the record¹ developed in the subject investigations, the Commission unanimously determines, pursuant to section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) (the Act), that an industry in the United States is not materially injured or threatened with material injury, and the establishment of an industry in the United States is not materially retarded, by reason of imports from Tajikistan of uranium, provided for in subheadings 2612.10.00, 2844.10.10, 2844.10.20, 2844.10.50, and 2844.20.00 of the Harmonized Tariff Schedule of the United States (HTS), that have been found by the Department of Commerce to be sold in the United States at less than fair value (LTFV).

The Commission determines,² pursuant to section 735(b) of the Act, that an industry in the United States is threatened with material injury by reason of imports from Ukraine of uranium, other than highly-enriched uranium, provided for in subheadings 2612.10.00, 2844.10.10, 2844.10.20, 2844.10.50, and 2844.20.00 of the HTS, that have been found by the Department of Commerce to be sold in the United States at LTFV. Further, the Commission determines,³ pursuant to section 735(b) of the Act, that an industry in the United States is not materially injured or threatened with material injury, and the establishment of an industry in the United States is not materially retarded,

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

² Commissioners Brunsdale and Crawford dissenting.

³ Chairman Newquist and Commissioner Rohr make affirmative determinations with respect to all forms of uranium from Ukraine.

by reason of imports from Ukraine of highly-enriched uranium, provided for in subheading 2844.20.00 of the HTS, that have been found by the Department of Commerce to be sold in the United States at LTFV.

Background

The Commission continued these investigations effective April 19, 1993 (Ukraine), and May 13, 1993 (Tajikistan), following notification by the Department of Commerce that it had resumed its antidumping investigations of imports of uranium from Tajikistan and Ukraine that were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. § 1673b(b)). Notices of the continuation of the Commission's investigations and of a public hearing to be held in connection therewith were given by posting copies of the notices in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notices in the Federal Register of May 5, 1993 (58 F.R. 26798) (Ukraine)) and May 21, 1993 (58 F.R. 29635) (Tajikistan)). The hearing was held in Washington, DC, on July 1, 1993, and all persons who requested the opportunity were permitted to appear in person or by counsel.

VIEWS OF THE COMMISSION

Based on the record in these final investigations, we unanimously determine that a domestic industry is not materially injured or threatened with material injury by reason of imports of uranium from Tajikistan that the Department of Commerce (Commerce) has found to be sold at less than fair value (LTFV).¹ We determine that a domestic industry producing uranium other than highly enriched uranium (HEU) is threatened with material injury by reason of imports of uranium other than HEU from Ukraine that Commerce has found to be sold at LTFV.^{2 3} We determine that a domestic industry producing HEU is not injured or threatened with material injury by reason of imports from Ukraine that Commerce has found to be sold at LTFV.⁴

I. THE COMMISSION'S AUTHORITY TO CONDUCT THESE INVESTIGATIONS

Initially we address respondents' assertions that these investigations are unlawful because the Commission conducted no preliminary investigations specifically concerning imports from Tajikistan and Ukraine. Respondents contend that the preliminary determination the Commission made in December

¹ Material retardation of the establishment of an industry is not an issue in these investigations and will not be discussed further.

² Commissioners Brunsdale and Crawford determine that a domestic industry producing uranium is neither materially injured nor threatened with material injury by reason of imports of uranium from Ukraine that Commerce has found to be sold at LTFV. See Dissenting Views of Commissioners Brunsdale and Crawford.

³ Vice Chairman Watson and Commissioner Nuzum join in these views insofar as they relate to uranium other than HEU. They find HEU to be a separate like product. Their views with respect to HEU are set forth in their Separate Views.

⁴ Chairman Newquist and Commissioner Rohr find one industry producing all uranium, including HEU. Accordingly, they determine that the one industry is threatened with material injury by reason of all imports of uranium from Ukraine that Commerce has found to be sold at LTFV.

1991 concerning imports from the Soviet Union⁵ is not the factual or legal equivalent of an investigation concerning imports from Tajikistan and Ukraine, and that a preliminary investigation is an indispensable prerequisite to any final determination.

Respondents' arguments are not new. Respondents submitted the same arguments to the Commerce Department in 1992 prior to suspension of these and four additional investigations of uranium imports from former Soviet republics. In March 1992, Commerce denied respondents' request to terminate those investigations.⁶ Respondents then directed a termination request to the Commission. The Commission rejected that request on September 10, 1992, on the grounds that determining when and whether an investigation should be terminated is Commerce's role.⁷ Subsequently, the Court of International Trade upheld Commerce's March 1992 decision not to terminate.⁸ Moreover, when it issued its final determinations in these investigations, Commerce reiterated that the investigations concerning Tajikistan and Ukraine were within its authority and should not be terminated.⁹

We reaffirm our previous ruling. The Commission's long-standing position has been that the statute provides Commerce, not the Commission, the principal role in determining whether and when an antidumping investigation

⁵ Uranium from the U.S.S.R., Inv. No. 731-TA-539 (Preliminary), USITC Pub. 2471 (December 1991) ("Preliminary Determination").

⁶ Memorandum from Stephen J. Powell to Alan M. Dunn (March 23, 1992).

⁷ See Letter from Paul R. Bardos to Service List, Inv. Nos. 731-TA-539A-539F (Sept. 10, 1992).

⁸ Techsnabexport, Ltd. v. United States, 802 F. Supp. 469, 472-73 (CIT 1992) (Commerce ruling reasonable because "the statute provides no clear answer as to the result that must follow if a country dissolves mid-investigation").

⁹ 58 Fed. Reg. 36640, 36642-43 (July 8, 1993).

should be terminated (other than by making a negative injury determination) and that the Commission consequently will not revisit Commerce's determinations concerning initiation and termination of investigations.¹⁰ When initially confronted with respondents' arguments, Commerce determined that the investigations should continue. That determination was upheld by the Court of International Trade and reaffirmed by Commerce in its final determination of sales at less than fair value. In light of these rulings, we see no need to deviate from our prior practice.¹¹ Accordingly, we proceed with consideration of these investigations.

II. LIKE PRODUCT AND DOMESTIC INDUSTRY

A. Like Product

In determining whether an industry in the United States is materially injured or is threatened with material injury by reason of the subject imports, the Commission must first define the "like product" and the "industry." Section 771(4)(A) of the Tariff Act of 1930 (the "Act") defines the relevant industry as the "domestic producers as a whole of a like product, or those producers whose collective output of the like product constitutes a major proportion of the total domestic production of that product"¹²

¹⁰ Gray Portland Cement and Cement Clinker from Japan, Inv. No. 731-TA-461 (Final), USITC Pub. 2376 at 7-9 (April 1991). The Commission's position that determining whether to terminate an investigation for lack of standing is the sole responsibility of the Commerce Department has been upheld by the Federal Circuit. Suramerica de Aleaciones Laminadas, C.A. v. United States, 966 F.2d 660, 665 n.6 (Fed. Cir. 1992); see Trent Tube Div. v. Avesta Sandvik Tube AB, 975 F.2d 807, 812-13 (Fed. Cir. 1992). See also Associacao dos Industriais de Cordoraria e Redes v. United States, slip op. 93-141 at 9 (CIT July 28, 1993) ("Commerce alone determines petition sufficiency").

¹¹ Commissioner Rohr defers to Commerce's ruling in accordance with the Commission's prior practice.

¹² 19 U.S.C. § 1677(4)(A).

In turn, the Act defines "like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation" ¹³

The imported product subject to investigation is uranium from Tajikistan and Ukraine. ¹⁴ Uranium is a silvery-gray radioactive metal. Domestic uranium "like" that subject to investigation undergoes several stages of processing. In the initial, or mining, stage, uranium is extracted from rocks and minerals. The resulting product is uranium ore. ¹⁵ Uranium ore is then milled to produce uranium concentrates. ¹⁶ The third processing stage is that of conversion, in which uranium concentrates are transformed into natural uranium hexafluoride (or "UF₆"). ¹⁷ The next stage is enrichment, in which the concentration of the fissible U₂₃₅ isotope in natural uranium hexafluoride is increased. Low enriched uranium (LEU) is uranium in which the concentration of U₂₃₅ has been increased to a level of up to 20 percent; LEU generally has 2 to 5 percent U₂₃₅ content by weight. ¹⁸ HEU is uranium in which the concentration of U₂₃₅ has been increased to 20 percent or more. ¹⁹

¹³ 19 U.S.C. § 1677(10).

¹⁴ Commerce's specification of the scope of the investigation appears at 58 Fed. Reg. 36640, 36641 (July 8, 1993), reprinted in Report at A-8.

¹⁵ Report at I-5, 7-8.

¹⁶ Report at I-6, 8.

¹⁷ Report at I-8-9.

¹⁸ Report at I-6-7. LEU is subject to further processing before it can be used as nuclear fuel. In this final processing stage, enriched uranium hexafluoride is converted into enriched uranium oxide and processed into fuel rods at nuclear fabrication plants. Report at I-10. Enriched uranium oxide is included within Commerce's scope determination, but fuel rods are not.

¹⁹ Report at I-7.

We have determined to treat all uranium like that subject to investigation as a single like product.²⁰ In making this determination, we have used the analysis that the Commission has generally used to resolve like product issues involving semifinished products.^{21 22 23} Under this analysis,

²⁰ Vice Chairman Watson and Commissioner Nuzum have designated two like products: uranium other than HEU and HEU. See Separate Views of Vice Chairman Watson and Commissioner Nuzum.

²¹ Respondent Energy Fuels repeated arguments that it asserted in the preliminary investigation against use of a semifinished products analysis. For the reasons stated in the Preliminary Determination, we reject these arguments. See USITC Pub. 2471 at 6.

²² Commissioner Rohr concurs with his colleagues' conclusion that uranium at each of the stages of processing relevant to these investigations constitutes a single like product. He reiterates, however, the concern he expressed in the preliminary determination in this investigation that the so-called semifinished products analysis is not the appropriate analysis. See Preliminary Determination, USITC Pub. 2471 at 30-34. He believes that it is proper to recognize the difference between drawing lines among vertically organized products and horizontally organized products. This is why the so-called semifinished products analysis was invented by the Commission in the first place. In his view, however, the analysis was solidified into stone before it could be refined enough to be truly useful in the myriad of situations in which it has been applied. That is why, in his view, a review of Commission application of the analysis reveals so many inconsistencies.

He has therefore determined to apply the type of like product analysis that the Commission undertook in the Tungsten investigation. See Tungsten Ore Concentrates from the People's Republic of China, Inv. No. 731-TA-497 (Preliminary), USITC Pub. 2367 (March 1991). He determines that a single like product is justified because although the manufacturing processes at the various stages of production are different, as they were in Tungsten, this is outweighed by the fact the interests of the producers at the various stages of production are not adverse to one another as they were in Tungsten. In this investigation the interests of the uranium concentrate producers and the enricher are similar. The producers who are downstream from the enrichers have no interest either way. The converters, who are between the uranium concentrate producers and the enricher, would seem to have at least a theoretical difference of interest, but have not supported the petition. Furthermore, a review of their performance does not indicate that the theoretical interest they have in lower uranium concentrates prices actually significantly affects their performance. He has therefore determined that a single like product is appropriate for these investigations.

²³ Although Commissioner Brunsdale agrees that a semifinished product

(continued...)

the Commission examines five factors to determine whether parts, components, subassemblies, or semifinished products should be included in the same like product as a finished product.²⁴

Accordingly, we examine these five factors. Regarding the necessity for, and costs of, further processing, the record indicates that uranium concentrates must undergo both conversion and enrichment, and natural uranium hexafluoride must undergo enrichment, to be used as nuclear fuel.²⁵

²³ (...continued)

analysis is most appropriate in this case, she notes that her final determinations in no way depend on the finding of one like product. While she believes that there are good analytical arguments for the finding of one like product, she notes that domestic producers at different stages of uranium production are not affected the same way by imports of uranium concentrates. Given her negative determinations in this case, she has decided to give petitioners the benefit of the doubt and has found petitioners' suggested like product, all uranium.

²⁴ These factors are: (1) the necessity for, and costs of, further processing; (2) the degree of interchangeability of articles at different stages of production; (3) whether the article at an earlier stage of production is dedicated to use in the finished article; (4) whether there are significant independent uses or markets for the finished and unfinished articles; and (5) whether the article at an earlier stage of production embodies or imparts to the finished article an essential characteristic or function. See, e.g., Certain Calcium Aluminate Cement and Cement Clinker from France, Inv. No. 731-TA-645 (Preliminary), USITC Pub. 2637 at 11 n.32 (May 1993); Stainless Steel Flanges from India and Taiwan, Invs. Nos. 731-TA-639-640 (Preliminary), USITC Pub. 2600 at 5-6 (February 1993).

In the preliminary determination, the Commission requested the parties in these investigations to "address the utility of, and suggest any modifications to, the Commission's semifinished products analysis." Preliminary Determination, USITC Pub. 2471 at 9-10. Petitioners were the only party to accept the Commission's invitation to comment upon the Commission's semifinished products analysis, and they did not squarely advocate or propose modifications in the analysis. We do not address this issue further in light of the circumstances of these investigations.

²⁵ See Report at I-11.

Additional further processing is also needed to transform LEU into HEU.^{26 27} The information in the record indicates that conversion does not add substantial value to the product, but that enrichment does.²⁸ The very limited available information also suggests that costs of processing LEU into HEU are not nominal.²⁹

Regarding interchangeability, uranium concentrates, natural uranium hexafluoride, and enriched uranium are not interchangeable either in use or in the production process.³⁰ HEU and LEU are not interchangeable with each other absent further processing.³¹

All forms of natural uranium are "dedicated for use" in enriched uranium. The only commercial use for any form of uranium is as an input in the nuclear fuel cycle.³² Moreover, markets for the various forms of uranium subject to investigation do not operate independently from each other. All commercial uranium markets focus on electric utilities, which typically

²⁶ See Report at I-9-10. Theoretically, HEU can also be transformed into LEU. The precise technology of this "de-enrichment" process has not yet been delineated, however. Report at I-10.

²⁷ Commissioner Rohr notes that the record does not indicate that the further processing necessary to produce HEU is anything more than a continuation of the same processing steps necessary to produce LEU. Commissioner Rohr notes as well that the record shows there has never been any significant legitimate trade in HEU, which has no commercial use, and the inherent physical and security concerns in moving what is essentially nuclear weapons grade material around the world made such trade unlikely. As such he believes the separation of this material into a separate like product is moot.

²⁸ See Petitioners' Prehearing Brief at 14.

²⁹ See Report at I-9-10; Compare Report, Tables C-4 and C-5 (unit value data).

³⁰ Report at I-5-7.

³¹ See Report at I-9-10.

³² See Report at I-6-7; Memorandum EC-Q-085 at 17.

purchase uranium concentrates and arrange themselves for conversion and enrichment services.³³

The "essential characteristic" of uranium is the presence of U₂₃₅, the only naturally-existing fissionable isotope. This isotope exists in all forms of uranium like those subject to investigation; the enrichment process only increases its concentration.³⁴

On balance, we have determined that single like product treatment is warranted primarily because all forms of uranium have only one ultimate commercial use -- for nuclear power facilities -- and because independent commercial markets do not exist for the various forms of uranium. In several previous investigations, the Commission has found that the lack of independent end uses and independent markets for a semifinished product, part, or component supported including that semifinished product in the same like product as a finished product subject to investigation, even though the semifinished product required extensive further processing or was not interchangeable with the finished product.³⁵ Accordingly, we have determined that there is one like product coextensive with the articles subject to investigation.

³³ See Memorandum EC-Q-085 at 17-18.

³⁴ Report at I-5-7.

³⁵ See, e.g., Fresh and Chilled Atlantic Salmon from Norway, Invs. Nos. 701-TA-302, 731-TA-454 (Final), USITC Pub. 2371 at 8-9 (April 1991); Certain Gene Amplification Thermal Cyclers and Subassemblies Thereof from the United Kingdom, Inv. No. 731-TA-485 (Preliminary), USITC Pub. 2346 at 10-12 (December 1990); Certain Laser Light-Scattering Instruments and Parts Thereof from Japan, Inv. No. 731-TA-455 (Final), USITC Pub. 2328 at 11-13 (November 1990); Certain Forged Crankshafts from the Federal Republic of Germany and the United Kingdom, Invs. Nos. 731-TA-351 and 353 (Final), USITC Pub. 2014 at 7 (September 1987).

B. Domestic Industry

As previously stated, the domestic industry consists of the "domestic producers" of a "like product." In this investigation, the domestic industry consists of all domestic producers of uranium, including uranium concentrate producers, natural uranium hexafluoride converters, the United States Enrichment Corporation (USEC -- the only domestic enricher), and fuel fabricators.³⁶

We additionally must consider whether Energy Fuels, Ltd., a uranium concentrate producer, should be excluded from the domestic industry as a related party. Under section 771(4)(B) of the Tariff Act of 1930, producers who are related to exporters or importers, or who are themselves importers of dumped or subsidized merchandise, may be excluded from the domestic industry in appropriate circumstances.³⁷ Energy Fuels shares common ownership with a company that imports uranium from the subject countries.³⁸ Energy Fuels is thus a related party, and the Commission consequently must decide whether appropriate circumstances exist to exclude it from the domestic industry pursuant to the related parties provision.³⁹

³⁶ Vice Chairman Watson and Commissioner Nuzum find two domestic industries. The first encompasses all United States producers of uranium other than HEU. The second industry, HEU producers, consists of USEC's HEU operations. The like parties discussion below pertains to the first industry.

³⁷ 19 U.S.C. § 1677(4)(B).

³⁸ Energy Fuels Posthearing Brief, app. A.

³⁹ The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude the related parties include:

(1) the percentage of domestic production attributable to related producers;

(2) the reason why importing producers choose to import the articles

(continued...)

In the preliminary determination, the Commission did not exclude Energy Fuels from the domestic industry on the basis that its exclusion would not affect overall industry data.⁴⁰ The record in these current investigations pertaining to Energy Fuels, which is largely proprietary, supports the same conclusion; Energy Fuels' inclusion or exclusion would cause no more than a de minimis change in overall industry data.⁴¹ Accordingly, we have determined not to exclude Energy Fuels from the domestic industry in these final investigations.

III. CONDITION OF THE DOMESTIC INDUSTRY

In determining whether the domestic industry is materially injured by reason of LTFV imports, the Commission considers all relevant economic factors which have a bearing on the state of the industry in the United States. These include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, and research and development. No single factor is

³⁹ (...continued)

under investigation -- to benefit from the unfair trade practice or to enable them to continue production and compete in the domestic market; and

(3) the competitive position of the related domestic producer vis-a-vis other domestic producers, i.e., whether inclusion or exclusion of the related party will skew the data for the rest of the industry.

See Torrington Co. v. United States, 790 F. Supp. 1161, 1168 (CIT 1992), aff'd without opinion, 991 F.2d 809 (Fed. Cir. 1993); Empire Plow Co. v. United States, 675 F. Supp. 1348, 1353 (CIT 1987); Certain Calcium Aluminate Cement and Cement Clinker from France, Inv. No. 731-TA-645 (Preliminary), USITC Pub. 2637 at 20 (May 1993).

⁴⁰ Preliminary Determination, USITC Pub. 2471 at 14-16.

⁴¹ See Report at I-16, Tables 3, 10; Petitioners' Postconference Brief at 19. This is true regardless of whether the pertinent domestic industry is the industry producing uranium or the industry producing uranium other than HEU.

determinative, and we consider all relevant factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."⁴²

The uranium industry features a number of distinct conditions of competition. As previously stated, although domestic uranium producers engage in a variety of types of processing operations, marketing activities exclusively center on electric utilities, which purchase uranium concentrates and contract for conversion and enrichment services.⁴³ Conversion and enrichment services are generally offered under long-term contracts.⁴⁴ By contrast, utilities purchase uranium concentrates either under contract or on the spot market. In the past, uranium concentrate contracts were generally for periods of 10 years or more and had either fixed prices or base-price escalators.⁴⁵ Such contracts tended to have higher prices than prices in the spot market or in contracts that reference prevailing market conditions.⁴⁶ In recent years, however, the market has moved towards shorter contracts (of 3 to 7 years duration) and to contracts that are at least partially related to market conditions at time of shipment.⁴⁷ Additionally, spot market sales have become a larger share of total sales in recent years.⁴⁸ The growing

⁴² 19 U.S.C. § 1677(7)(C)(iii).

⁴³ Report at I-62; Memorandum EC-Q-085 at 17-18.

⁴⁴ Report at I-62, 64.

⁴⁵ Report at I-63.

⁴⁶ Report at I-63.

⁴⁷ Report at I-63.

⁴⁸ Report at I-61-62; see Energy Information Administration, Uranium Industry Annual 1991, Table 25 (Oct. 1992).

importance of the spot market and the trend of incorporating market-related pricing provisions in multiyear contracts indicate that spot market pricing trends can be of particular significance in assessing the future for uranium concentrate producers.

Additionally, uranium products, particularly uranium concentrates and natural uranium hexafluoride, are commodity products produced to standard industry specifications.⁴⁹ The commodity nature of uranium -- together with the fact that many utilities' multiyear contracts do not specify a particular country of origin for uranium concentrates⁵⁰ -- makes it fairly easy for uranium concentrate purchasers to switch their sources of supply. The commodity nature of the product also enables uranium market participants to "swap," or exchange ownership titles, for uranium products. Market participants use "swaps" to reduce the supply costs associated with production inflexibilities and inventory shortfalls and to minimize the costs associated with freight movements.⁵¹ The incidence of "swaps" and loans of uranium renders shipment-based data a poor measure for determining apparent consumption. Additionally, aggregating production-related data from the various industry sectors is not useful because this can result in double- and triple-counting of product and because USEC measures its output in different units than converters or uranium concentrate producers.⁵²

Instead, in our judgment, the best available information concerning domestic consumption of uranium is based on U.S. utilities' nuclear reactor

⁴⁹ Report at I-61.

⁵⁰ See Memorandum EC-Q-085 at 37.

⁵¹ Report at I-62-63.

⁵² Compare Report, Table 21 with Tables 3, 15.

requirements. These requirements moved irregularly during the Commission's period of investigation, which encompasses January 1990 through March 1993. Nuclear reactor requirements rose by 7.9 percent from 1990 to 1991, fell by 12.2 percent from 1991 to 1992, and were 15.6 percent higher in the first quarter of 1993 as compared with the first quarter of 1992 ("the interim period comparison").⁵³ Based on nuclear reactor requirements, U.S. uranium producers' market penetration declined from 20.3 percent in 1990 to 8.9 percent in 1992 and was 7.2 percent in the first quarter of 1993.⁵⁴

Additionally, nuclear power facilities are the only commercial users of uranium. These facilities can be placed into operation only after a protracted regulatory process, and their numbers are not expected to change materially in the near future.⁵⁵ As a result, total domestic demand for uranium products is unlikely to expand or contract significantly in response to changes in market conditions. Indeed, the Department of Energy foresees U.S. utilities' enrichment feed deliveries (i.e., consumption) growing only modestly through 1998 and then declining at the end of the century.⁵⁶

Domestic uranium concentrate producers' U.S. shipments fell throughout the period of investigation. The quantity of U.S. shipments declined by 58.5 percent, and the value of shipments declined by 62.6 percent from 1990 to

⁵³ Report, Table 1. The data in the Commission report are based on nuclear reactor requirements, which measure the amount of uranium that utilities actually used during the period of investigation. These data provide a more accurate measure of actual consumption than the alternative consumption data presented by petitioners, which essentially measure only uranium purchases, not consumption.

⁵⁴ Report, Table 41.

⁵⁵ See Energy Fuels Prehearing Brief, ex. C.

⁵⁶ See Report at I-15.

1992; both categories declined further in the interim period comparison.⁵⁷ Capacity declined over the period of investigation. Capacity utilization levels were extremely low, declining from 32.1 percent in 1990 to 28.9 percent in 1992 and the level was 15.4 percent during the first quarter of 1993.⁵⁸ Converters' U.S. shipments moved irregularly, increasing slightly from 1990 to 1992 but declining sharply in the interim period comparison. Capacity was stable between 1990 and 1992 but also declined sharply in the interim period comparison.⁵⁹ USEC's U.S. shipments and capacity utilization both increased between 1990 and 1992.^{60 61}

Domestic uranium concentrate producers' inventories, although falling throughout the period of investigation, remained at extremely high levels relative to production. The inventory-to-production ratio was 84.6 percent in 1992 and over 100 percent in the two previous years.⁶² Converters and USEC also reported inventory levels that were declining, but remained high relative to production.⁶³

The number of production and related workers producing uranium

⁵⁷ Report, Table 3.

⁵⁸ Report, Table 2.

⁵⁹ Report, Tables 14-15.

⁶⁰ Report, Tables 20-21.

⁶¹ The Commission also collected data concerning fuel fabricators' enriched uranium oxide production operations. See Report at I-38-41. Enriched uranium oxide production is of little commercial significance, however, because there are no commercial sales of the product and most domestic consumption is consumed captively. See Report at I-38, I-61. Consequently, fuel fabricators will not be discussed further; in any event, the available data concerning enriched uranium oxide production do not materially affect industry trends.

⁶² Report, Table 5.

⁶³ Report, Tables 17, 22.

concentrates declined by 44.4 percent from 1990 to 1992, and hours worked by such workers declined by 39.6 percent over the same period. Both figures fell by over 50 percent in the interim period comparison.⁶⁴ Several uranium concentrate producers reported substantial reductions in employment during the period of investigation.⁶⁵ Employment-related indicators for converters were generally stable between 1990 and 1992, but the number of production workers and hours worked declined in the interim period comparison.⁶⁶ The employment trends of USEC, the uranium industry's largest employer, were mixed: the number of production workers rose slightly throughout the period of investigation but hours worked declined from 1990 to 1992 before increasing in the interim period comparison.⁶⁷

Although U.S. producers' uranium concentrate operations showed positive gross profit and operating income for each calendar year, they have declined throughout the period of investigation. Gross profit declined by 40.8 percent and operating income declined by 43.1 percent from 1990 to 1992. The ratios of both gross profit and operating income to net sales, however, remained relatively stable. The calendar year gross profit margin fluctuated between a low of 26.5 percent in 1991 and high of 28.9 percent in 1990; the operating income margin ranged between 17.8 percent in 1992 and 19.9 percent in 1990.⁶⁸ Several producers indicated that the positive profitability levels were the result of older long-term contracts negotiated at much higher prices than

⁶⁴ Report, Table 6.

⁶⁵ Report, Table 7.

⁶⁶ Report, Table 18.

⁶⁷ Report, Table 23.

⁶⁸ Report, Table 9.

those prevailing today.⁶⁹ Converters showed sharply deteriorating profitability levels over the period of investigation.⁷⁰ USEC, by contrast, displayed steadily increasing profitability over the period of investigation, and gross profit and operating income margins that were high and improving.⁷¹

Capital expenditures by uranium concentrate producers declined irregularly over the period of investigation.⁷² Research and development expenditures increased by 5.8 percent between 1990 and 1992, but declined slightly in the interim period comparison.^{73 74}

IV. NO MATERIAL INJURY BY REASON OF LTFV IMPORTS FROM TAJIKISTAN⁷⁵

In determining whether there is material injury by reason of LTFV imports, the Commission is required to assess cumulatively the volume and effect of imports from two or more countries subject to investigation if such imports are reasonably coincident with one another and "compete with each

⁶⁹ Report at I-24-25.

⁷⁰ Report, Table 19.

⁷¹ Report, Table 24.

⁷² Report, Table 12.

⁷³ Report, Table 13.

⁷⁴ Based on the foregoing, Chairman Newquist and Commissioner Rohr find the domestic uranium industry to be in a vulnerable condition.

Commissioner Rohr further notes that there have been no imports of uranium from either Tajikistan or Ukraine during the period between the date of resumption by Commerce of this investigation, which under 19 U.S.C. §1673c(i) is also the date of the Commerce preliminary determination, and the Commission's final determination. In such a situation there is no legal difference between the effect of a finding of present injury and the effect of a finding of threat of injury.

⁷⁵ Because Chairman Newquist and Commissioner Rohr do not find the domestic uranium industry to be presently injured, they do not join this section.

other and with like products of the domestic industry in the United States market."⁷⁶ Cumulation is not required, however, when imports from a subject country are negligible and have no discernible adverse impact on the domestic industry.⁷⁷

Consequently, the first question that we must consider in determining whether there is material injury by reason of LTFV imports from Tajikistan concerns whether these imports should be cumulated with both subject imports from Ukraine and, as petitioners contend, imports from former Soviet republics that are parties to currently effective suspension agreements. For the reasons stated below, we have determined that imports from Tajikistan should not be cumulated with any other country's imports.

The available data for Tajikistan in the Commission report show no imports from or uranium mining in Tajikistan throughout the period of investigation.⁷⁸ Petitioners question the authoritativeness of these data. In a final investigation, however, the Commission's determination must be based upon the "best information available,"⁷⁹ and petitioners can identify no information establishing that there may have been imports from Tajikistan or

⁷⁶ 19 U.S.C. § 1677(7)(C)(iv)(I); Chaparral Steel Co. v. United States, 901 F.2d 1097 (Fed. Cir. 1990).

⁷⁷ 19 U.S.C. § 1677(7)(C)(v).

⁷⁸ Report at I-44, 47. The record does show that Tajikistan milled uranium concentrates from ore mined in other countries during the period of investigation. Id. at I-44. According to Commerce's scope determination, however, such product would not be considered Tajiki in origin. See 55 Fed. Reg. at 36641.

⁷⁹ 19 U.S.C. § 1677e(c); see Atlantic Sugar, Ltd. v. United States, 744 F.2d 1556, 1560 (Fed. Cir. 1984).

mining activity in Tajikistan during the period of investigation.⁸⁰ We have accordingly concluded that the information in the Commission report concerning the absence of imports from Tajikistan is the "best information available."

The absence of imports from Tajikistan during the period of investigation is dispositive of our cumulation analysis in this final investigation. We do not cumulate imports from Tajikistan because these imports do not "compete" with subject imports from Ukraine, imports from former Soviet republics that are subject to currently effective suspension agreements,⁸¹ or the domestic like product(s). In assessing whether imports compete with each other and with the domestic like product, the Commission generally has considered four factors:

- (1) the degree of fungibility between the imports from different countries and the domestic like product, including consideration of specific customer requirements and other quality related questions;
- (2) the presence of sales or offers to sell in the same geographic markets of imports from different countries and the domestic like product;
- (3) the existence of common or similar channels of distribution for imports from different countries and the domestic like product; and

⁸⁰ Petitioners' argument that there may have been Tajiki production or imports is based principally on Tajikistan's failure to certify to Commerce in 1992 that it did not mine, produce, or stockpile uranium. See Petitioners' Posthearing Brief at 6. Because Tajikistan acknowledged to Commerce at the time that it had warehoused (or "stockpiled") uranium of Tajiki origin mined "prior to the closing of Tajiki mines," Petitioners' Posthearing Brief, app. M, the failure to certify does not support an inference that production of uranium also occurred during the Commission's period of investigation. Nor does it indicate that product was exported to the United States.

⁸¹ Because we find that imports from Tajikistan do not compete with imports from the suspension agreement countries, we do not need to address in the context of material injury analysis for imports from Tajikistan the question whether imports from the suspension agreement countries are "subject to investigation." Commissioners Brunsdale and Crawford do reach this issue in their material injury analysis for imports from Ukraine. See Dissenting Views of Commissioners Brunsdale and Crawford.

(4) whether the imports are simultaneously present in the market.⁸²

Although uranium from Tajikistan is fungible in the abstract, inasmuch as uranium is a commodity product, none of the other three "competition" requirements are satisfied. Because there have been no imports from Tajikistan, uranium from Tajikistan has not been the subject of sales or offers to sell, has not been simultaneously present in the market with any other uranium, and has not been distributed through common or similar channels of distribution.⁸³

In light of the discussion above, we determine that there has been no material injury to the domestic uranium industry by reason of LTFV imports from Tajikistan. In determining whether material injury exists, the Commission must consider the volume of imports, their effect on prices for the like product, and their impact on domestic producers of the like product in the context of U.S. production operations.⁸⁴ Because there have been no

⁸² See Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea and Taiwan, Invs. Nos. 731-TA-278-280 (Final), USITC Pub. 1845 (May 1988), aff'd, Fundicao Tupy S.A. v. United States, 678 F. Supp. 898 (CIT), aff'd, 859 F.2d 915 (Fed. Cir. 1988).

⁸³ Even absent the lack of competition, cumulation of imports from Tajikistan would not be required because they are "negligible and have no discernible impact on the domestic industry." 19 U.S.C. § 1677(7)(C)(v). The zero volume and market share of the imports are clearly "negligible." Sales transactions of such imports have been not merely isolated or sporadic, but non-existent. Because no imports from Tajikistan have entered the United States market, they have had no effect on U.S. uranium prices. The Commission has previously found the negligible imports provision to be applicable to countries with no imports. See Certain Personal Word Processors from Japan and Singapore, Invs. Nos. 731-TA-483-484 (Preliminary), USITC Pub. 2344 at 19-20 (December 1990); Certain Sodium Sulfur Chemical Compounds from the Federal Republic of Germany, the People's Republic of China, Turkey, and the United Kingdom, Invs. Nos. 701-TA-303, 731-TA-465-468 (Preliminary), USITC Pub. 2307 at 19-20 (August 1990).

⁸⁴ 19 U.S.C. § 1677(7)(B)(i).

imports from Tajikistan, they have had no price effects or other impact on the domestic industry.⁸⁵

V. THREAT OF MATERIAL INJURY

A. General Legal Considerations

The statute specifies ten factors that we must consider in making threat determinations.⁸⁶ It further states that any affirmative threat determination "shall be made on the basis of evidence that the threat of material injury is real and that actual injury is imminent." The Commission's determination "may not be made on the basis of mere conjecture or supposition."⁸⁷

B. No Threat of Material Injury by Reason of LTFV Imports from Tajikistan

We have not cumulated imports from Tajikistan for threat analysis with imports from Ukraine or the suspension agreement countries because imports from Tajikistan are non-existent.⁸⁸ Indeed, because Tajikistan's uranium

⁸⁵ For the foregoing reasons, Vice Chairman Watson and Commissioner Nuzum determine that the domestic industry producing uranium other than HEU is not materially injured by reason of LTFV imports from Tajikistan.

⁸⁶ 19 U.S.C. § 1677(7)(F)(i). The Commission must also consider whether dumping findings or antidumping remedies in markets of foreign countries against the same class or kind of merchandise suggest a threat of material injury to the domestic industry. 19 U.S.C. § 1677(7)(F)(iii)(I). Because these investigations concern neither subsidy allegations nor agricultural products, the first and ninth statutory threat factors are not applicable here and will not be discussed further. The eighth factor, potential for product shifting, is also inapplicable because the foreign uranium-producing facilities cannot be used to produce other articles subject to antidumping and countervailing duty investigations.

⁸⁷ 19 U.S.C. § 1677(7)(F)(ii).

⁸⁸ Cumulation for threat analysis is discretionary. See 19 U.S.C. § 1677(7)(F)(iv). The Commission has previously declined to cumulate subject imports for threat analysis when import penetration was extremely low. See Torrington Co. v. United States, 790 F. Supp. at 1172; Coated Groundwood Paper from Austria, Belgium, Finland, France, Germany, Italy, the Netherlands, Sweden, and the United Kingdom, Invs. Nos. 731-TA-486-494 (Preliminary), USITC Pub. 2359 at 44 (Feb. 1991).

mines are currently closed and Tajikistan lacks capacity to produce subject imports, there is no existing unused or underutilized capacity. Moreover, we believe that any increase in production capacity in the immediate future is highly unlikely. Petitioners contend that if Tajiki-origin uranium can freely enter the United States, Tajikistan may reopen its uranium mines.

Petitioners, however, offer no evidence indicating that such an action is under consideration, much less likely.⁸⁹ Speculation about future actions is an inadequate basis for a threat finding.⁹⁰

There has also been no rapid increase in the market penetration of imports from Tajikistan, which has remained at zero throughout the period of investigation. In light of the current lack of facilities in Tajikistan to produce uranium within the scope of investigation, market penetration is not likely to increase.

Available information concerning inventories, which is proprietary, indicates that there has been no substantial increase in inventories of Tajiki uranium in the United States during the period of investigation.⁹¹ Counsel for the Tajikistan respondents did inform Commerce in 1992, however, that there were inventories in that country of uranium mined in Tajikistan before that country's mines were closed.⁹² We cannot, however, conclude that these

⁸⁹ Moreover, the record indicates that reopening a closed uranium mine takes fairly significant time and investment. See Memorandum EC-Q-085 at 30 n.55. Additionally, Tajikistan respondents have asserted that that country's existing milling facilities are being closed. Tajikistan/Ukraine Posthearing Brief, app. 8.

⁹⁰ See American Spring Wire Corp. v. United States, 590 F. Supp. 1273, 1281 n.8 (CIT 1984), aff'd, 760 F.2d 249 (Fed. Cir. 1985).

⁹¹ Report, Table 30.

⁹² Petitioners' Posthearing Brief, app. M.

inventories constitute evidence that market penetration is likely to increase. Uranium from Tajikistan, unlike that from Ukraine and other former Soviet uranium-producing republics, was not exported to the United States before provisional duties and suspension agreement restrictions became effective in 1992. In light of the recent lack of any uranium trade between Tajikistan and the United States, we do not view the possibility of export to the United States of any existing inventories of Tajiki-origin uranium to be evidence that the threat of material injury is real or that actual injury is imminent.

Similarly, because there have not been, and are not likely to be, imports of uranium from Tajikistan to the United States, imports from Tajikistan have not had and are not likely to have in the future any price effects on U.S.-produced uranium products. There similarly can be no effects on the industry's development and production efforts.

In sum, there is no history of imports of uranium from Tajikistan to the United States and no likelihood of future imports in light of the current absence of mining there. Consequently, we determine that the domestic uranium industry is not threatened with material injury by reason of LTFV imports from Tajikistan.⁹³

C. Threat of Material Injury
by Reason of LTFV Imports from Ukraine⁹⁴

Our affirmative determination for Ukraine is on the basis of threat of

⁹³ For the foregoing reasons, Vice Chairman Watson and Commissioner Nuzum determine that the domestic industry producing uranium other than HEU is not threatened with material injury by reason of LTFV imports from Tajikistan.

⁹⁴ Commissioners Brunsdale and Crawford do not join this section. See their dissenting views.

material injury.⁹⁵ ⁹⁶ Although the record does not indicate imminent increases in Ukrainian production capacity, or extensive unused or underutilized capacity, it does show that a significant increase in subject imports is likely.⁹⁷ Ukraine has exported a significant proportion of its uranium production during the period of investigation, and projects that it will continue to do so in the near future.⁹⁸ Indeed, Ukraine respondents have substantial motivation for increasing export shipments of uranium: Ukraine's well-documented economic problems and need for hard currency.⁹⁹

Four reasons support our finding that, absent antidumping duties, such Ukrainian exports will likely be directed to the United States at injurious

⁹⁵ Our affirmative threat determination is not based on cumulation of Ukrainian imports with any other imports. Imports from Ukraine have not been cumulated with imports from Tajikistan for the reasons stated in section V.B. above. Petitioners do not contend that imports from Ukraine should be cumulated with any imports from the suspension agreement countries for purposes of threat analysis.

⁹⁶ Chairman Newquist notes that the basis for his affirmative determination is that imports from Ukraine alone pose a real threat of imminent injury to the domestic industry. Therefore, he did not cumulate imports from Ukraine with those from countries subject to suspension agreements. He notes, however, that in his view, countries subject to suspension agreements remain subject to investigation and may be cumulated in appropriate circumstances, both for the purposes of a material injury analysis and a threat of material injury analysis.

⁹⁷ Report, Table 31. This paragraph's discussion is pertinent to statutory threat factors (II) (increased production capacity or unused capacity in the exporting country) and (VI) (underutilized capacity in exporting country).

⁹⁸ Report, Table 31.

⁹⁹ Even a witness for respondents acknowledged that Ukraine might desire to make exports "to obtain financial resources it needs to update and improve its nuclear infrastructure." Tr. at 149 (Newton). See also Tajikistan/Ukraine Posthearing Brief, app. 7 (news articles referencing Ukraine's financial difficulties).

levels.¹⁰⁰ First, there is a history of exports of Ukrainian uranium to the United States. During 1990 and 1991, import penetration of Ukrainian-produced uranium increased rapidly.¹⁰¹ Although import penetration subsequently dropped virtually to zero, we give this little weight in our threat analysis because we find it to be a function of the imposition of very high levels of provisional duties and the operation of the suspension agreement.¹⁰²

¹⁰⁰ The discussion in this and the following three paragraphs is pertinent to statutory threat factor (III) (rapid increase in U.S. market penetration).

¹⁰¹ Report, Table 41. We believe that the data in the staff report provide the best information available concerning import volumes and penetration, and reject each of respondents' objections to the data. The first objection, that the Commission is barred from examining any import data from before December 25, 1991, when Ukraine became a separate country, is simply a variant of the "illegal investigation" argument rejected in section I. above. Moreover, with respect to former Soviet republics, the Commission has previously determined that it may "consider imports that originated in each area prior to its becoming a country in making injury determinations." Ferrosilicon from Argentina, Kazakhstan, the People's Republic of China, Russia, Ukraine, and Venezuela, Invs. Nos. 303-TA-23, 731-TA-565-570 (Preliminary), USITC Pub. 2535 at 14 (July 1992).

Respondents' second argument, that the data in the staff report should be disregarded because they are based on part on estimates, is specious. Respondents did not assert that better data were available on import volume and penetration. It is well established that the Commission must base its determinations on the best information available. See Atlantic Sugar, Ltd. v. United States, 744 F.2d 1556, 1560 (Fed. Cir. 1984).

¹⁰² The Court of International Trade has repeatedly stated that we are not precluded from giving reduced weight to contemporaneous data that have been skewed by post-petition activities. See Metallwerken Nederland, B.V. v. United States, 14 CIT 481, 484, 744 F. Supp. 281, 284 (1990); USX Corp. v. United States, 11 CIT 82, 88, 655 F. Supp. 487, 492 (1987); Rhone Poulenc, S.A. v. United States, 8 CIT 47, 53, 592 F. Supp. 1318, 1324 (1984). See also Sheet Pailings from Canada, Inv. No. 731-TA-52 (Final), USITC Pub. 2384 at 10 (May 1991) (Commission may take into account the impact of a suspension agreement on relevant economic indicators, such as the changes in price or volume of imports that have been brought about by such an agreement).

The lack of any recent imports caused inventory levels of Ukrainian uranium in the United States to decline sharply over the period of investigation. Report, Table 30. (This is pertinent to statutory threat factor (V)). Because this also is a function of post-petition activities, we
(continued...)

Respondents did not contest the proposition that provisional duties and the suspension agreement were responsible for the virtual disappearance of imports from Ukraine after 1991.¹⁰³

Second, while respondents do indicate that Ukraine has export markets in other countries, they have presented no information that would indicate that Ukrainian uranium is committed to specific third-country markets pursuant to contract. Exports were readily shifted from the United States to third country markets after provisional duties and the suspension agreement became effective.¹⁰⁴ The record therefore shows that there is no impediment to Ukraine again exporting to the United States uranium in at least the quantities that it exported in 1991.¹⁰⁵

A third reason that Ukraine is likely to increase its exports of uranium to the United States in the near future is that, contrary to respondents' assertions, the record does not show that Ukraine's home market for uranium is

¹⁰² (...continued)

give little weight to this factor. We note, however, that the 1990-91 import surge was accompanied by a surge in U.S. inventories of Ukrainian uranium. Id.

¹⁰³ Ukraine respondents did assert that, even though Ukraine is permitted to import some uranium to the United States pursuant to its suspension agreement, it did not do so. The provision of the suspension agreement that Ukraine respondents reference, however, refers only to sales pursuant to pre-existing contracts. The overwhelming majority of Ukrainian imports during the period of investigation, however, were sold in the spot market, see Report at I-70, and would not have been covered by this provision.

¹⁰⁴ See Report, Tables 31, 41.

¹⁰⁵ We also note that the prior levels of market penetration achieved by uranium from Ukraine occurred while unrestricted imports of uranium from other former Soviet republics, including Russia, also were entering the United States. To the extent that these other sources of uranium are now subject to quantitative restrictions under suspension agreements, the likelihood is that Ukraine would have an enhanced ability to export uranium to the United States and achieve an even greater level of market penetration.

likely to grow significantly in the immediate future. Ukraine respondents argued that Ukraine's home market demand will increase in light of new nuclear facilities that it is constructing. In an attempt to corroborate these assertions, Ukraine respondents submitted several newspaper and trade-press articles. Our careful review of these materials indicates that they do not support respondents' contentions, and, in fact, cast doubt on the projected increases in home market shipments of Ukrainian uranium projected by Ukraine respondents' counsel at the Commission hearing and set forth at Table 31 of the Commission Report. The articles indicate that there is a moratorium on the commissioning of new nuclear power plants in Ukraine.¹⁰⁶ Respondents have not provided any evidence that this moratorium has been lifted.¹⁰⁷

Additionally, the articles indicate that the new nuclear facilities under construction are not additional facilities, but merely replace existing nuclear power generation at Chernobyl. Thus, even if the moratorium were to be lifted, it is not apparent that there will be a significant increase in demand for uranium within Ukraine in the immediate future.

The final reason that Ukrainian exports would likely be directed to the U.S. market is that the United States is the world's largest uranium market; U.S. utilities account for the preponderance of the world's uncommitted uranium demand.¹⁰⁸ Indeed, as stated above, the U.S. uranium spot market is

¹⁰⁶ See Tajikistan/Ukraine Posthearing Brief, app. 6.

¹⁰⁷ The most recent information in the record referencing the moratorium indicated that it was still in effect. See Tajikistan/Ukraine Posthearing Brief, app. 6 (Uranium Institute report prepared January 1993).

¹⁰⁸ Petitioners' Prehearing Brief, app. 12, table 2. Additionally, Ukrainian imports to the European Community are currently subject to price and volume limitations. Petitioners' Prehearing Brief, app. 13 at 5. Although these restrictions are not tantamount to a dumping finding, compare 19 U.S.C.

(continued...)

significant and of growing importance. As the nature of a spot market suggests, and as the rapid increase in Ukrainian market penetration in 1990-91 which was concentrated in the spot market confirms, there are no significant barriers to entry in the United States market.¹⁰⁹ Moreover, current U.S. spot market uranium prices are higher than those prevailing elsewhere in the world.¹¹⁰

We further believe that these increased imports from Ukraine would be likely to have injurious effects on the domestic industry.¹¹¹ The record indicates that additional imports from Ukraine would likely have price depressing or suppressing effects. As previously stated, the only commercial customers for uranium are electric utilities, whose demand is predictable and fairly stable. Huge existing inventories indicate that the product is in oversupply. As a consequence of this oversupply and stable demand, domestic uranium price levels generally declined over the period of investigation.¹¹²

¹⁰⁸ (...continued)

§ 1677(7)(F)(iii), they are nonetheless relevant to our threat analysis, because they restrict the access of Ukrainian product to the world's second largest uranium market. See Petitioners' Prehearing Brief, app. 12, table 1.

¹⁰⁹ See Report, Table 41. Even in many multiyear contracts, electric utility companies specify open-origin uranium concentrates and consequently do not know until the time of shipment the specific country origin of the product. Memorandum EC-Q-085 at 37.

¹¹⁰ See Report, Table 42; EC-Q-085, Table B-1; Tr. at 32, 69.

¹¹¹ The discussion in the following paragraphs is pertinent to statutory threat factors (III) (rapid increase in U.S. market penetration), (IV) (probability that imports will enter at prices that will have a depressing or suppressing effect on domestic prices), (VII) (other demonstrable adverse trends), and (X) (negative effects on domestic industry's development and production efforts).

¹¹² Report at I-70-71, Tables 42-44. Additionally, unit values of imports of Ukrainian uranium declined during the period that they were present in the U.S. market. Report, Table 32.

Even relatively small amounts of additional imports are likely to exacerbate this oversupply and cause additional price depression and suppression.¹¹³

Finally, the distinctive conditions under which domestic uranium producers compete also indicate that the volume of imports from Ukraine that will enter the United States will likely have injurious effects on the domestic industry. As discussed earlier, the domestic industry is contracting in size, as evidenced by its decreasing shipments and diminishing market penetration.¹¹⁴ This contraction is particularly evident in the uranium concentrates sector, where the number of producers has decreased, and capacity and productive output have declined.¹¹⁵ As the size of the domestic industry decreases, it grows increasingly vulnerable to the effects of dumped imports of uranium.

Further, those domestic uranium concentrate producers who are still operating profitably are able to do so only because their long-term fixed-price contracts have not yet expired.¹¹⁶ The industry makes its planning

¹¹³ This was corroborated by a witness for respondents, who testified that "imports, whatever the quantity, from whatever country, do affect the marketplace." Tr. at 148 (Klingbiel). Ukrainian uranium that enters the U.S. spot market will not necessarily undersell domestically-produced uranium; there was mixed underselling and overselling for the imports from Ukraine sold in the spot market during the period of investigation. Report at I-74. This is consistent with the pricing pattern one would expect for a commodity product sold in an open market. Moreover, underselling is not necessary for a finding of adverse price effects. See Cemex, S.A. v. United States, 16 CIT ___, 790 F. Supp. 290, 298 (1992), aff'd without opinion, App. No. 92-1343 (Fed. Cir. Feb. 8, 1993); Florex v. United States, 13 CIT 28, 40, 705 F. Supp. 582, 593 (1989).

¹¹⁴ Report, Table 41.

¹¹⁵ Report at I-16, Tables 2, 3.

¹¹⁶ Report at I-24-25.

decisions on the basis of such multiyear contracts.¹¹⁷ As these contracts expire, they are being replaced with new multiyear contracts whose pricing provisions are increasingly tied to spot market prices at the time of shipment.¹¹⁸ Contract price levels are an imminent concern for a second reason as well: the quantity of domestic uranium delivery commitments covered by contract price arrangements is projected to fall by 45 percent between 1993 and 1994.¹¹⁹ Hence the growing importance of the spot market will be felt increasingly by domestic producers.

Uranium is a highly fungible commodity. Thus, even small volumes of LTFV imports will likely exacerbate the oversupply of uranium and have a depressing and suppressing effect on domestic prices, particularly in the spot market where the overwhelming majority of uranium from Ukraine is sold. Given the high likelihood that imports of uranium from Ukraine will increase in the immediate future in the absence of an antidumping duty order, we conclude that there is a real threat of imminent material injury due to the likely price effects of increased imports of uranium from Ukraine.

Accordingly, Chairman Newquist and Commissioner Rohr determine that the domestic uranium industry is threatened with material injury by reason of LTFV imports from Ukraine. Vice Chairman Watson and Commissioner Nuzum determine that the domestic industry producing uranium other than HEU is threatened with material injury by reason of LTFV imports from Ukraine.

Finally, there is no evidence that imports of uranium from Ukraine would

¹¹⁷ See Tr. at 69-70 (Courtenay).

¹¹⁸ See Report at I-63.

¹¹⁹ Energy Information Administration, Uranium Industry Annual 1991, Table 27 (Oct. 1992).

have caused material injury but for suspension of liquidation of entries as a result of Commerce's preliminary affirmative determination. The statute requires that when the Commission makes a final affirmative determination on the basis of threat, it also make a finding on this issue.¹²⁰ Suspension of liquidation occurred on April 12, 1993 for Ukraine.¹²¹ Because, as stated above, uranium imports from Ukraine have not entered the U.S. market in significant quantities since 1992, suspension of liquidation did not affect our determination not to base an affirmative determination on material injury. Accordingly, Chairman Newquist and Commissioner Rohr conclude that there would not have been material injury to the domestic uranium industry, and Vice Chairman Watson and Commissioner Nuzum conclude that there would not have been material injury to the domestic industry producing uranium other than HEU, but for the suspension of liquidation of entries.

¹²⁰ See 19 U.S.C. § 1673d(b)(4)(B).

¹²¹ 58 Fed. Reg. at 36652.

**SEPARATE VIEWS OF
VICE CHAIRMAN WATSON AND COMMISSIONER NUZUM**

We concur with our colleagues' views insofar as they relate to uranium other than highly-enriched uranium (HEU). Because we find HEU to be a separate like product, however, we set forth here our analysis and determination with respect to HEU.

Like Product and Domestic Industry

As in any antidumping investigation, our analysis begins with defining the like product. In making our like product determination, we applied the Commission's "traditional" like product factors. Specifically, we considered differences between HEU and uranium other than HEU in terms of physical characteristics, manufacturing facilities, channels of distribution, producer and customer perceptions, and end uses.¹

HEU is enriched uranium in which the concentration of isotope U²³⁵ has been increased to a level of 20 percent or more.² This is in contrast to low-enriched uranium (LEU), in which the concentration of isotope U²³⁵ is less than 20 percent.³ This difference in concentration levels is fundamental and affects the end uses and producer and customer perceptions of HEU as compared to LEU. HEU is not used in commercial power plants, but instead is used in

¹ The Commission also examines differences in price, where appropriate. The record indicates that HEU is not sold in commercial markets, as is LEU. Price is not an appropriate factor, therefore, in this investigation.

² Report at I-7.

³ Id. at I-6, I-7. Most LEU used by commercial power plants in the United States generally has only 2 to 5 percent U²³⁵ by weight. Id.

Because all uranium other than HEU is either LEU or dedicated to the production of LEU, we focused our analysis on the similarities and differences between HEU and LEU.

military applications. Consequently, HEU is not sold to commercial utilities. Nor is HEU interchangeable with LEU.⁴

HEU and LEU share a number of common production processes, including mining, milling and conversion into uranium hexafluoride. HEU also undergoes the same enrichment processes as LEU. HEU undergoes several additional processes, however, and requires additional equipment. While the details of HEU production are not available, the record suggests that the production involves processing LEU through hundreds, and possibly thousands, of additional stages in the diffusion or centrifuge processes. Further, because of its far higher radioactivity, the production of HEU requires extra security measures, stringent precautions to prevent initiation of fission reactions, and precautions related to increased levels of radiation from U²³⁵.⁵ Thus, while HEU and LEU share a number of common production processes, in our view, they are nevertheless distinctly different products.

In sum, the differences between HEU and LEU (to which all other uranium is dedicated) in terms of their physical characteristics, end uses, manufacturing processes, and producer and customer perceptions outweigh the common production processes which HEU and LEU do share. These differences result in a clear dividing line between HEU and LEU (as well as uranium that is used to produce LEU). Accordingly, we find that HEU is a separate like product from other uranium.

⁴ As noted in the Views of the Commission, it is theoretically possible to convert HEU into LEU by diluting the concentration of the U²³⁵. See Views of the Commission, supra, at 10-11. The record indicates, however, that such conversion of HEU into LEU apparently is not being performed currently. See Report at I-9, I-10 (discussing proposed methods for converting weapons-grade HEU into LEU).

⁵ Report at I-9.

The United States Enrichment Corporation (USEC) is currently the only producer of HEU in the United States.⁶ Accordingly, we find that the USEC constitutes the domestic industry producing HEU.

No Material Injury By Reason of Imports from Tajikistan or Ukraine⁷

In determining whether the domestic industry is materially injured by reason of the imports under investigation, the statute directs the Commission to consider:

(I) the volume of imports of the merchandise which is the subject of the investigation;

(II) the effect of imports of that merchandise on prices in the United States for like products, and

(III) the impact of imports of such merchandise on domestic producers of like products, but only in the context of production operations within the United States.⁸

In making this determination, the Commission may consider "such other economic factors as are relevant to the determination . . ."⁹ Although we may consider information that indicates that injury to the industry is caused by factors other than the LTFV imports, we do not weigh causes.

The record indicates that there were no imports of any enriched uranium from Tajikistan or Ukraine during the period examined.¹⁰ Consequently, we

⁶ Report at I-17.

⁷ As discussed below, the record indicates that there were no imports of enriched uranium (including HEU) from Tajikistan, Ukraine or any other country during the period examined. Accordingly, for the reasons discussed in the Views of the Commission concerning cumulation, we have not cumulated imports for our analysis of either present material injury or threat. See Views of the Commission, supra, at 22-24.

⁸ 19 U.S.C. § 1677(7)(B)(i).

⁹ 19 U.S.C. § 1677(7)(B)(ii).

¹⁰ Report at Table 34.

find that there are no significant adverse price effects on the domestic industry that are attributable to imports of HEU. We find, as well, that the domestic industry has not been otherwise affected by any subject imports of HEU. We conclude, therefore, that the domestic industry is not materially injured by reason of imports of HEU from either Tajikistan or Ukraine.

No Threat of Material Injury By Reason of Imports from Tajikistan or Ukraine

Having arrived at a negative determination with respect to present injury, we now turn to examine whether the domestic industry is threatened with material injury by reason of subject imports. Section 771(7)(F) of the Act directs the Commission to determine whether a U.S. industry is threatened with material injury by reason of imports "on the basis of evidence that the threat of material injury is real and that actual injury is imminent." The statute specifically states, "Such a determination may not be made on the basis of mere conjecture or supposition."¹¹ The Commission considers as many of the ten statutory factors as are relevant to the facts of the particular investigation before it, as well as any other relevant economic factors.¹² Our reviewing court has stated that the ten statutory factors serve primarily as guidelines for the Commission's analysis of the likely impact of future imports.¹³

There is no evidence on the record to indicate that Tajikistan or

¹¹ 19 U.S.C. §1677(7)(F)(ii). See Metallwerken Nederland B.V. v. United States, 744 F. Supp. 281, 287 (Ct. Int'l Trade 1990).

¹² Factor I, regarding the nature of the subsidy, and Factor XI, regarding raw agricultural products, are not relevant to this investigation.

¹³ Calabrian Corp. v. United States, 794 F. Supp. 377, 387-88 (Ct. Int'l Trade 1992).

Ukraine engaged in production of HEU during the period examined.¹⁴ The record does not reflect such capacity to produce HEU in either Tajikistan or Ukraine as to pose a threat of imminent actual injury to the domestic industry. Nor is there any evidence of likely underutilized capacity to produce HEU in the immediate future in either republic.¹⁵

As noted above, there have been no imports of any enriched uranium (including HEU) from Tajikistan or Ukraine during the period examined. Since there have been no imports, there are no inventories of imports in the United States. Likewise, there is no evidence of a likely increase in market penetration or that imports are likely to enter the United States at prices that will have a depressing or suppressing effect on domestic prices for HEU. We also do not find any evidence of any other adverse demonstrable trends or potential product-shifting. Accordingly, we determine that the domestic industry is not threatened with material injury by reason of imports of HEU from Tajikistan or Ukraine.

Conclusion

For the reasons discussed above, we find that the domestic industry producing HEU is neither materially injured nor threatened with material injury by reason of subject imports of HEU from Tajikistan or Ukraine. The complete absence of imports of HEU from either Tajikistan or Ukraine during the period examined was dispositive to our analysis in these investigations.

¹⁴ Report at I-44, I-46.

¹⁵ Id.

DISSENTING VIEWS OF COMMISSIONERS BRUNSDALE AND CRAWFORD

Uranium from Tajikistan and Ukraine

Invs. Nos. 731-TA-539-D and 539-E (Final)

We determine that the U.S. uranium industry is neither materially injured nor threatened with material injury by reason of LTFV imports. Our analysis follows.

I. CUMULATION

In its determination that there is no material injury or threat of material injury by reason of LTFV imports from Tajikistan, the Commission unanimously determined not to cumulate imports from Tajikistan and Ukraine. We incorporate by reference that determination and analysis in our determination in this investigation.

Petitioners assert that the Commission must cumulate subject imports from Ukraine with uranium imports from Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan. Imports from these four countries are covered by suspension agreements.

Imports must be "subject to investigation"¹ in order to be cumulated with imports from Ukraine. By definition, imports covered by suspension agreements are not "subject to investigation" because there are no ongoing antidumping or countervailing duty

¹ See 19 U.S.C. § 1677 (7) (C) (iv) and (F) (iv).

investigations at either Commerce or the Commission. The Commission has expressly decided not to cumulate imports covered by suspension agreements.² We find no justification for deviating from Commission practice.³

Because imports covered by the suspension agreements are not subject to investigation, the statutory direction for cumulation in our analysis of material injury by reason of LTFV imports is not met. For the same reason, we decline to exercise our discretion to cumulate these imports in our analysis of threat of material injury by reason of LTFV imports.

II. NO MATERIAL INJURY TO THE URANIUM INDUSTRY BY REASON OF LTFV IMPORTS FROM UKRAINE

In determining whether a domestic industry is materially injured by reason of the imports under investigation, the statute directs the Commission to consider:

- (I) the volume of imports of the merchandise which is the subject of the investigation,
- (II) the effect of imports of that merchandise on prices in the United States for like products, and

² Certain Fresh Cut Flowers from Canada, Chile, Colombia, Costa Rica, Ecuador, Israel and the Netherlands, Invs. Nos. 701-TA-275-278, 731-TA-327-331 (Final), USITC Pub. 1956 (March 1987).

³ The Commission's "recent order exception," cumulating imports for which an antidumping or countervailing duty order has been issued, does not apply to suspension agreements. An affirmative final determination by Commerce is required before an order can be issued. By statute, suspension agreements precede Commerce's final determination, and whether Commerce will ever make a subsequent final determination is speculative. Because a suspension agreement is fundamentally different than an order, the "recent order exception" does not apply.

- (III) the impact of imports of such merchandise on domestic producers of like products, but only in the context of production operations within the United States⁴

In assessing the effect of dumped imports, we compare the current condition of the domestic industry to that which would have existed had imports not been dumped.⁵ Then, taking into account the condition of the industry, we determine whether the resulting change of circumstances constitutes material injury. For the reasons discussed below, we find the domestic industry producing uranium is not materially injured by reason of dumped imports from Ukraine.

A. Volume of the Subject Imports

Ukraine exported only uranium concentrates to the United States. Therefore, we will focus our analysis on the segment of the domestic industry that produces uranium concentrates, as it is the segment of the industry likely to be most adversely affected by the dumped imports.

U.S. producers accounted for 24.3 percent of the uranium concentrates market in terms of quantity in 1990. Their market share dropped steadily to 12.1 percent in 1992, before increasing to 18 percent in the interim period. The market share of Ukrainian producers was extremely small compared with the market share of U.S. producers, in terms of both quantity and value, throughout the

⁴ 19 U.S.C. § 1677(7)(B)(i). In making its determination, the Commission may consider "such other economic factors as are relevant to the determination." 19 U.S.C. § 1677(7)(B)(ii).

⁵ 19 U.S.C. § 1677(7)(C)(iii).

period of investigation.⁶ The market share of fairly traded imports, measured by quantity or value, increased substantially from 1990 to 1992, and remained high during the interim period.⁷ We do not find the volume of imports from Ukraine to be significant, particularly in light of their effects.

B. Effect of LTFV Imports on Domestic Prices

To analyze the effect of subject imports on domestic prices of the like product and on the domestic industry, we consider a number of factors about the industry and the nature of the products, such as the availability of substitute products in the market, the degree of substitutability between the subject imports and the domestic like product, the presence of fairly traded imports, and the dumping margin, which was found to be 129.29 percent.⁸ We find the subject imports had no significant price effect.

There are no substitutes for uranium in its main end use, fuel for nuclear power plants. In addition, since there is a substantial fixed cost in building such a plant, it is unlikely that there would be a switch from nuclear energy to other forms of

⁶ See Report at I-55. We note that the Ukraine market share is even smaller if we use data for all uranium based on reactor requirements. The exact volume, value and market share of Ukrainian producers is confidential.

⁷ Report at I-55, Table 38.

⁸ Report at I-11.

energy if the price of uranium increased.⁹ As a result, demand for uranium is likely to be fairly unresponsive to small changes in price.¹⁰

Physically, uranium concentrates from all countries are close substitutes for each other. On the spot market, where the vast majority of subject imports were sold, purchasers buy almost solely on the basis of price.¹¹ For contract sales, long-term supply availability may be a concern, and it is unclear whether Ukrainian producers would have trouble selling their concentrates in the contract market. We will give petitioner all benefit of the doubt on this point, however, and assume that uranium concentrates from all countries are very close substitutes.

Fairly traded imports of uranium concentrates are readily available and, as discussed above, account for a substantial majority of sales.¹² The record indicates that producers of these nonsubject imports could readily increase their shipments to the United States.

If the subject imports had been fairly traded, they would have

⁹ Electric utilities' prices are set by rate commissions, not by market supply and demand. Thus, while utilities may be under pressure to reduce costs, they can often pass on increased costs to customers.

¹⁰ We note, however, that electric utilities can vary the combination of uranium concentrates and enriching services that they use in producing the uranium fuel for their reactors. This may increase the elasticity of demand for uranium concentrates.

¹¹ See Economics Memo at 37.

¹² Report at I-55. Fairly traded imports also account for the majority of sales using data based on reactor requirements. Report at I-60.

sold at prices up to 129.29 percent higher than their dumped price. Since uranium concentrates from Ukraine are highly substitutable with concentrates from the U.S. and from other countries, it is likely that they would have been priced out of the market. Because U.S. producers of concentrates are operating at an extremely low level of capacity utilization, they could easily increase production to meet the demand supplied by subject imports. However, U.S. producers of uranium concentrates noted frequently in their questionnaire responses that they need to receive significantly higher prices to increase production.¹³

Even if there were no subject imports, it is unlikely, however, that U.S. producers would have been able to command the higher prices they say are needed to increase production. Purchasers would have been able to purchase nonsubject imports to avoid domestic price increases. Nonsubject imports already have the vast majority of sales, and the record indicates that they would have taken an even larger share of the market, particularly if U.S. producers were not willing to increase sales at the going price. Given the extremely small market share of subject imports, the large market share of fairly traded imports, and the excess capacity in the United States, domestic prices are not likely to have increased.

C. Impact on the Uranium Industry

In assessing the impact of LTFV imports on the domestic industry, we consider, among other relevant factors, output, sales,

¹³ See Economics Memo at 29.

inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital and research and development.¹⁴ These factors either encompass or reflect the volume and price effects of the dumped imports, and so we must gauge the impact of the dumping through those effects.

With the high dumping margins, it is unlikely that any Ukrainian imports would have entered at fairly traded prices. Domestic shipments may have increased somewhat if subject imports were fairly traded. However, given the extremely small market share of the subject imports and the extremely large and growing market share of nonsubject imports, it is unlikely that U.S. producers could have increased their volume of sales to a significant degree, and it is unlikely that prices would have increased.

For these reasons, we conclude that the domestic industry producing uranium is not materially injured by reason of LTFV imports of uranium from Ukraine.

III. NO THREAT OF MATERIAL INJURY TO THE URANIUM INDUSTRY BY REASON OF LTFV IMPORTS FROM UKRAINE

We have considered the enumerated statutory factors that we are required to consider in our determination.¹⁵ A determination that an industry "is threatened with material injury shall be made

¹⁴ 19 U.S.C. § 1677(C)(iii).

¹⁵ 19 U.S.C. § 1677(F)(i).

on the basis of evidence that the threat of material injury is real and that actual injury is imminent. Such a determination may not be made on the basis of mere conjecture or supposition."¹⁶

We are mindful of the statute's requirement that our determination must be based on evidence, not conjecture or supposition. Accordingly, we have distinguished between mere assertions, which constitute conjecture or supposition, and the positive evidence¹⁷ that we are required by law to evaluate in making our determination.

The evidence on the record indicates that there has been no increase in existing or unused production capacity in Ukraine. Rather, production capacity has decreased and is projected to remain at the lower level in the immediate future. In addition, Ukrainian producers are operating at an extremely high level of capacity utilization. There is no evidence that production capacity will increase in the immediate future. Rather, petitioners assert that production could be expanded within two years. While this assertion addresses the ability to expand, petitioners offer no evidence that expansion is planned or that action to expand has been taken. Therefore, petitioners' assertions are mere speculation. Moreover, this period of time is too far in the future to constitute evidence that actual injury is imminent.

¹⁶ 19 U.S.C. § 1677(7)(F)(ii).

¹⁷ See American Spring Wire Corporation v. United States, 590 F., Supp. 1273 (1984).

The record demonstrates that there were no imports from Ukraine in 1992, the year following Ukraine's independence and after the petition was filed. The record shows that Ukraine exported a significant percentage of its production to countries other than the United States and that the percentage of its home market shipments is substantial and increasing.¹⁸ There is no evidence that this pattern will change. Petitioners offered no evidence to support their assertion that Ukraine can be expected to export 100 percent of its production to the United States, and therefore their assertion is mere conjecture. Given the extremely high level of capacity utilization, sales to markets other than the United States, and the lack of credible evidence to the contrary, we conclude that a significant increase in subject imports is not likely.

Even at its highest, the market share of subject imports was extremely small in 1991. The large percentage increase from 1990 to 1991 is a function of the minuscule base in 1990. Given the extremely high level of capacity utilization in Ukraine and the lack of evidence that subject imports will increase significantly, we conclude that there is a small likelihood that the market share of subject imports will increase to an injurious level in the immediate future, and that there is a low probability that subject imports will enter the United States at prices that will have a depressing or suppressing effect on domestic prices.

There was a substantial increase in inventories of subject

¹⁸ Report at I-46.

imports in the United States between 1990 and 1991. U.S. inventories of subject imports then declined to less than one percent of consumption in 1992 and declined to an even lower level in interim 1993.¹⁹ Because virtually all of the inventories were consumed in 1992, the earlier substantial increase in U.S. inventories does not constitute credible evidence that any threat of material injury is real or that actual injury is imminent.

There is no evidence of any other demonstrable adverse trends that indicate the probability that subject imports will be the cause of actual injury. In this regard, we have considered the following.

The growing importance of the spot market is a condition of competition in the domestic market. Significant percentages of both subject imports and nonsubject imports are sold on the spot market. Domestic prices have been and continue to be affected by this condition of competition, even when subject imports have not been present in the market. Because there is no evidence to link the small market share of subject imports to the increased importance of the spot market, this condition of competition does not constitute relevant evidence to support a threat determination.

Petitioners assert that substantial quantities of HEU owned by Ukraine will be exported to the United States. Under Commerce's scope of investigation imports of enriched uranium, either LEU or HEU, are subject imports from the country in which the uranium was enriched. The record indicates that there are no enrichment

¹⁹ Staff Report at I-44.

facilities in Ukraine. As a result, any imports of existing HEU cannot meet Commerce's definition of subject imports from Ukraine. In fact, the HEU to which petitioners refer was enriched in Russia. Therefore, petitioners' assertion is without merit.²⁰

Petitioners also assert that substantial inventories of Ukraine-origin uranium exist in third countries that will be exported to the United States if antidumping duties are not imposed. Although the statute specifically requires the Commission to consider inventories of subject imports in the United States, it does not refer to inventories held in third countries.²¹ Petitioners offer assertions that inventories in third countries will be exported to the United States. However, petitioners only offer evidence that such inventories exist in one country. Petitioners then offer additional assertions and assumptions to justify their conclusion that these inventories will enter the United States. Petitioners' assertions and assumptions show a possibility that such inventories may enter the United States. However, the limited evidence that inventories exist in one country does not, by itself, meet the requirement that evidence must show more than a "mere possibility" that injury might occur.²²

Finally, we have considered the fact that imports from Russia,

²⁰ Petitioners' assertion that this HEU will displace Ukrainian production and thus make more uranium available for export is speculative because the "de-enrichment" of HEU is only theoretical at this point in time.

²¹ 19 U.S.C. § 1677(7)(F)(i)(IV).

²² See Alberta Gas Chemicals, Inc. v. United States, 515 F. Supp. 780 (1981).

Kazakhstan, Kyrgyzstan, and Uzbekistan are covered by suspension agreements. The fact that Ukraine and Tajikistan have exercised their legal rights to terminate the suspension agreements covering their imports does not constitute evidence of a demonstrable trend that other countries will similarly exercise the legal right to terminate their suspension agreements. Such a conclusion represents speculation and conjecture proscribed by the statute. As discussed above, these imports are not subject to investigation. As such, they are not cumulated with imports from Ukraine and therefore are not subject imports in these investigations. Even if evidence existed that the suspension agreements will be terminated, the imports are not subject to investigation, and thus are not subject imports, unless and until the agreements are in fact terminated. At that point, Commerce would proceed to its final determination, and if affirmative, the Commission would conduct its investigation to determine whether the domestic industry is materially injured or threatened with material injury by reason of the imports covered by the terminated suspension agreements. Therefore, the existence of the suspension agreements and their possible termination are not relevant to our determination in this investigation.

IV. CONCLUSION

Based on our overall evaluation of the record, the volume of subject imports, the effect of subject imports on domestic prices, the impact of subject imports on the domestic industry, and the

statutory threat factors, we determine that the uranium industry is neither materially injured nor threatened with material injury by reason of LTFV imports from Ukraine.

INFORMATION OBTAINED IN THE INVESTIGATIONS

INTRODUCTION

Following notification by the U.S. Department of Commerce (Commerce) that Commerce resumed its antidumping investigations with respect to imports of uranium⁴ from Tajikistan and Ukraine that are being, or are likely to be, sold in the United States at less than fair value (LTFV) (58 F.R. 21144, April 19, 1993; and 58 F.R. 29197, May 19, 1993); the U.S. International Trade Commission (Commission) continued investigations Nos. 731-TA-539-D and 539-E (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) to determine whether an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports of such merchandise. Notice of the continuation of the Commission's investigations and of a public hearing to be held in connection therewith was posted in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and published in the Federal Register on May 5, 1993 (58 F.R. 26798) (Ukraine)) and May 21, 1993 (58 F.R. 29635) (Tajikistan)).⁵ The hearing was held in Washington, DC, on July 1, 1993, and the briefing and vote was held on August 6, 1993.⁶

Commerce's final LTFV determinations were made on June 28, 1993, for both Tajikistan and Ukraine and the Commission was formally notified of the determinations on July 1, 1993. Commerce's determinations were published in the Federal Register of July 8, 1992 (58 F.R. 36640). The applicable statute directs that the Commission make its final injury determination within 120 days after the preliminary determination by Commerce or 45 days after the final determination by Commerce, whichever is later.

A summary of the data collected in these investigations is presented in appendix C.

BACKGROUND

These investigations result from a petition filed by counsel on behalf of the Ad Hoc Committee of Domestic Uranium Producers and the Oil, Chemical and Atomic Workers International Union on November 8, 1991,⁷ alleging that an

⁴ The imports covered by these investigations include natural uranium in the form of uranium ores and concentrates; natural uranium metal and natural uranium compounds; alloys, dispersions (including cermets), ceramic products and mixtures containing natural uranium or natural uranium compounds; uranium enriched in U²³⁵ and its compounds; and alloys, dispersions (including cermets), ceramic products, and mixtures containing uranium enriched in U²³⁵ or compounds of uranium enriched in U²³⁵. Both low-enriched uranium (LEU) and highly-enriched uranium (HEU) are included in the investigations. LEU is uranium enriched in U²³⁵ to a level of less than 20 percent, while HEU is uranium enriched in U²³⁵ to a level of 20 percent or more. Such imports are provided for in subheadings 2612.10.00, 2844.10.10, 2844.10.20, 2844.10.50, and 2844.20.00 of the Harmonized Tariff Schedule of the United States.

⁵ Copies of cited Federal Register notices are presented in app. A.

⁶ A list of witnesses who appeared at the hearing is presented in app. B.

⁷ The names and addresses of the petitioners are as follows: Ferret Exploration Co., Inc., Denver, CO; First Holding Co., Denver, CO; Geomex Minerals, Inc., Denver, CO; IMC Fertilizer, Inc., Northbrook, IL; Malapai
(continued...)

industry in the United States is materially injured or threatened with material injury by reason of LTFV imports of uranium from the U.S.S.R., and each and every republic that was a member of the U.S.S.R. on the filing date of the petition. In response to that petition the Commission instituted investigation No. 731-TA-539 (Preliminary) under section 733 of the Tariff Act of 1930 (19 U.S.C. § 1673b(a)) and, on December 23, 1991, determined that there was a reasonable indication of such material injury. On December 25, 1991, the U.S.S.R. dissolved and the United States subsequently recognized the former republics as new countries.

Following preliminary determinations by Commerce that imports of uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan were being, or were likely to be, sold in the United States at LTFV (57 F.R. 23380, June 3, 1992), the Commission, effective June 2, 1992, instituted investigations Nos. 731-TA-539-A through 539-F (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) (57 F.R. 27065, June 17, 1992). Subsequently, Commerce postponed the date for its final LTFV determinations (57 F.R. 30946, July 13, 1992) and the Commission revised its schedule in the investigations to conform with Commerce's new schedule (57 F.R. 33735, July 30, 1992).

On October 20, 1992, Commerce notified the Commission of Commerce's suspension of the antidumping duty investigations on uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan (57 F.R. 49220, October 30, 1992), and, effective October 21, 1992, the Commission suspended its investigations (57 F.R. 48527, October 26, 1992). On October 26, 1992, Commerce made final determinations that uranium from Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Turkmenistan is not being, nor is likely to be, sold in the United States at LTFV (57 F.R. 48505).

As noted above, upon notification by Commerce of the termination of the suspension agreements with Tajikistan and Ukraine, the Commission resumed the instant investigations.

OTHER COMMISSION INVESTIGATIONS CONCERNING URANIUM

On September 25, 1991, the Commission instituted investigation No. 332-315, Uranium and Uranium Enrichment Services: The Impact on the Domestic Industry of Imports Into the United States from Nonmarket Economy Countries, under section 332(g) of the Tariff Act of 1930 (56 F.R. 49905, October 2, 1991). This investigation was instituted following receipt on July 26, 1991, of a request from the Committee on Finance of the U.S. Senate. On December 4,

⁷ (...continued)

Resources Co., Houston, TX; Pathfinder Mines Corp., Bethesda, MD; Power Resources, Inc., Denver, CO; Rio Algom Mining Corp., Oklahoma City, OK; Solution Mining Corp., Laramie, WY; Total Minerals Corp., Houston, TX; Umetco Minerals Corp., Danbury, CT; Uranium Resources, Inc., Dallas, TX; and Oil, Chemical and Atomic Workers International Union, Denver, CO. Homestake Mining Co., San Francisco, CA, was among the original petitioners; however, on October 13, 1992, counsel for petitioners informed the Commission that Homestake Mining Co. is no longer a petitioner.

1992, the Commission received a letter from the Committee on Finance requesting that the Commission terminate its section 332 investigation on uranium. Accordingly, on December 11, 1992, the Commission terminated investigation No. 332-315 (57 F.R. 59843, December 16, 1992).

THE PRODUCT

Description and Uses⁸

Uranium

For purposes of these investigations, uranium (U) includes natural uranium in the form of uranium ores and concentrates; natural uranium metal and natural uranium compounds; and alloys, dispersions (including cermets), ceramic products and mixtures containing natural uranium or natural uranium compounds; uranium enriched in U²³⁵ and its compounds; alloys, dispersions (including cermets), ceramic products, and mixtures containing uranium enriched in U²³⁵ or compounds of uranium enriched in U²³⁵. Both low-enriched uranium and highly-enriched uranium are included in the investigations.

Uranium is a heavy, naturally radioactive, metallic element (atomic number 92). Uranium metal (elemental uranium) is highly reactive chemically but, because of its slow rate of radioactive decay, uranium is only mildly radioactive. A fresh surface of elemental uranium is silvery gray in color, but rapidly oxidizes to black oxide in air at room temperature. Chips and powder of uranium metal are highly pyrophoric (igniting spontaneously when exposed to air), and the metal is a strong reducing agent.

Uranium is one of the less common elements but its compounds are readily soluble and widely distributed in many mineral and rock types throughout the world. Most of the large economic deposits have a uranium content greater than 0.10 percent triuranium octoxide (U₃O₈). Uranium does not occur in nature in the elemental state but in chemical combinations with other elements. It is an important constituent in 155 minerals and a measurable constituent in nearly 500 minerals.

Relatively small quantities of uranium metal depleted in U²³⁵ are used in specialized nonenergy applications, principally for military ordnance such as armor-piercing munitions. Depleted uranium readily forms alloys with other metals, has a very high density, and is easy to fabricate, which makes it useful for certain applications.

Natural uranium

Natural uranium contains three isotopes--uranium-238 (U²³⁸) (99.285 percent), uranium-235 (U²³⁵) (0.71 percent), and uranium-234 (U²³⁴) (0.005 percent). U²³⁵ is the only naturally occurring fissionable nuclide. Its content in natural uranium varies slightly, from 0.7103 to 0.7113 weight-

⁸ Much of the material for this section was obtained from the U.S. Bureau of Mines, "URANIUM," Mineral Facts and Problems, 1975 ed., Bulletin 667.

percent. Since 1963, the accepted value for natural uranium has been 0.711 percent U^{235} unless an actual measured value is determined.

Natural uranium is mined or recovered from naturally occurring mineral deposits, and "yellowcake" is the term often applied to the concentrates produced at uranium mills. The exact chemical composition of uranium concentrates is variable and the industry generally includes purified natural uranium oxides in its definition of uranium concentrates. In the United States, the terms uranium concentrates, yellowcake, and natural uranium oxides are used interchangeably in the industry. The uranium industry has adopted the practice of expressing the natural uranium content of uranium concentrates in terms of U_3O_8 equivalent. Most uranium concentrates contain a minimum of 75 percent U_3O_8 and average 80 to 85 percent U_3O_8 .

Uranium hexafluoride

Uranium is enriched⁹ by gaseous-diffusion or gas-centrifuge technology.¹⁰ In order to use these processes, the uranium must be present in a compound that can be easily converted to a gas. For a number of technical reasons, uranium hexafluoride is well suited for this purpose. Uranium hexafluoride (UF_6) is a white solid at ambient temperature and pressure and is obtained by the chemical treatment of uranium concentrates or oxides. UF_6 forms a vapor at temperatures above 56 degrees Centigrade and is heated above that temperature for the enrichment process.

Enriched uranium

Low-enriched uranium. -- "Low-enriched uranium" (LEU) is uranium in which the concentration of isotope U^{235} has been increased to a level of less than 20 percent (i.e., the product has been "enriched in U^{235} "). U^{235} is indispensable to the nuclear energy industry because it is the only isotope existing in nature, to any appreciable extent, that is fissionable by thermal neutrons. Enrichment of uranium fuel lowers the size of the "critical mass"¹¹ assemblies of "light-water"¹² nuclear reactors and, therefore, lowers capital cost requirements for the reactors. Enriched uranium for use by commercial power plants in the United States generally has 2 to 5 percent U^{235} by weight. The standard unit of quantity for enriched uranium is kilograms of uranium (kg U).

After enrichment in U^{235} , the uranium hexafluoride is converted to a fuel form for use in the manufacture of nuclear fuel assemblies. These forms include the oxides (usually low-enriched UO_2), or metals, alloys, carbides,

⁹ A process by which the U^{235} isotope is increased above the 0.711 percent found in naturally-occurring uranium.

¹⁰ In the United States, only the gaseous diffusion method is currently in use.

¹¹ The "critical mass" is the minimum amount of fissile material that can sustain a nuclear chain reaction under a given set of conditions.

¹² "Light water" is normal water (H_2O). "Heavy water" is deuterium oxide, consisting chiefly of molecules containing hydrogen with mass number greater than 1.

nitrides, and salt solutions of low-enriched uranium. Pelletized ceramic low-enriched uranium oxide (UO₂) is the most common fuel form used in light-water reactors, which are the type of reactors used by utilities in the United States. LEU is then encapsulated in protective metal sheaths to produce "fuel rods." Fuel rods are then assembled into the required configuration for use in a power plant nuclear reactor. Nuclear fuel for commercial power reactors for the generation of electricity is the predominant commercial application for uranium.¹³

Highly-enriched uranium. -- "Highly-enriched uranium" (HEU) is uranium in which the concentration of isotope U²³⁵ has been increased to a level of 20 percent or more. Both the United States and the former U.S.S.R. amassed large quantities of HEU for military use.¹⁴ Because much of this HEU is considered to be surplus in light of recent arms reduction agreements, a substantial amount of this material can, in theory, be blended with either natural uranium, slightly-enriched LEU,¹⁵ or depleted uranium to produce LEU suitable for use in commercial nuclear power reactors. The United States is attempting to acquire HEU from the former U.S.S.R. republics to allay concerns that the material could be diverted for uses that could pose a threat to national and world security.

In late August 1992, the United States and Russia initialed an agreement calling for the purchase by the U.S. Department of Energy (DOE) of HEU obtained from dismantling of nuclear weapons in Russia. This activity has now been transferred from DOE to the United States Enrichment Corporation (USEC). Over a 20-year period, USEC may obtain 500 metric tons of HEU in terms of contained uranium.¹⁶ ***. ***.

The principal uses for HEU, other than for nuclear weapons, are in research reactors and as fuel for naval propulsion, primarily submarine fuel.¹⁷

Production Processes

Uranium concentrates

For the most part, "conventional" uranium mining involves large earthmoving equipment for open-pit operations and standard underground mining equipment for underground mines. In the United States, stripping of

¹³ According to the petition at p. 14, scientific and medical applications account for less than 0.25 percent of uranium consumption.

¹⁴ Special security safeguards are required in the control and transport of this material. The HEU in nuclear warheads is generally enriched to more than 90 percent U²³⁵.

¹⁵ Slightly enriched LEU is uranium that has been enriched in its U²³⁵ content relative to natural uranium but the degree of enrichment is insufficient to allow this material to be used in most commercial nuclear power plants unless the material is enriched further. In general, slightly enriched LEU has a U²³⁵ content of no more than 1.5 percent.

¹⁶ "William Timbers' Nuclear Test," The Washington Post, June 28, 1993, p. A17.

¹⁷ Hogan & Hartson prehearing brief, p. 20.

overburden for open-pit mining is generally done by tractors with rippers, rubber-tired scrapers and tractor-pushers, diesel power shovels, and large truck fleets. Drilling and blasting are often not necessary. Open-pit mining equipment includes bulldozers, front-end loaders, diesel shovels, draglines, and backhoes.

The principal underground mining methods for the conventional sandstone-type ore bodies have been room-and-pillar, open stope, and long wall. Backfilling is a common practice. Slushers are often used in moving ore to the ore pass. Underground haulage may be either by truck, electric or diesel locomotive, or trackless rubber-tired equipment.

In the uranium industry, the milling operation comprises the entire mechanical and chemical processing from the crushing and grinding of the ore to the precipitation of marketable uranium concentrates. Mine-run ores are crushed before going to the grinding circuit. Jaw or impact-type crushers are commonly used for the primary crush, and impact, cone, or gyratory crushers are used for the secondary crushing stage.¹⁸

"Unconventional uranium mining" includes various leaching methods and byproduct operations. For example, uranium is leached from uranium ore by either alkaline treatment (sodium carbonate or sodium bicarbonate) or acid treatment (usually sulfuric acid). In both techniques, oxidation is necessary to convert uranium to a soluble form. Uranium in leach solutions is recovered and purified by solvent extraction or ion exchange. Uranium is precipitated as uranium concentrates that are then filtered, dried, and packaged for shipment. Uranium concentrates are chemically stable and are usually stored and shipped in 55-gallon steel drums.

In-situ and heap leaching are employed to recover uranium from deposits that may not be economically recoverable by conventional mining methods. The in-situ method involves leaching uranium from mineralized ground in place and is also referred to as "solution mining." The leaching solution is generally a carbonate, and an oxidant, such as oxygen, is added to improve leaching. In-situ leaching is a very cost-effective method of production because of the low capital and labor costs compared with the costs of a conventional mine. However, not all uranium deposits are geologically suitable for in-situ mining. Uranium concentrates are also produced as a byproduct of phosphoric acid production; from gold, copper, and other minerals mining; and from mine water.

Natural Uranium Hexafluoride

Conversion of uranium concentrates to natural uranium hexafluoride (UF_6) is not done in the United States at the mills but is done by "converters." Several processes have been used to convert uranium concentrates to UF_6 . In one such process, uranium concentrates are dissolved in nitric acid, the solution is purified by solvent extraction, the uranium is removed with a dilute nitric acid solution, and the resulting uranium nitrate solution is

¹⁸ Much of the material for this section was obtained from the U.S. Bureau of Mines, "URANIUM," Mineral Facts and Problems, 1975 ed., Bulletin 667.

subjected to heat and converted to an oxide. The oxide is then reacted with hydrofluoric acid and fluorine to produce UF_6 . The natural UF_6 is then held in inventory until instructions are issued for shipment to an enrichment plant. UF_6 is a highly reactive chemical and is stored and transported in heavy-wall steel cylinders.

Enriched Uranium Hexafluoride

Gaseous diffusion enrichment technology originated in the United States in connection with development of the atomic bomb during World War II and, until about 1975, was the only enrichment technology developed on a large commercial scale. Gaseous diffusion operates on the principle that the average velocities of gas molecules at a given temperature depend on the molecular mass. The lighter molecules will more frequently contact the walls of a porous containment vessel through which the molecules are diffused. The barrier contains hundreds of millions of submicroscopic openings per square inch. The degree of enrichment in a single diffusion stage is very small, but the desired enrichment level is achieved by repeating the process through hundreds, or thousands, of stages arranged in cascades. The gaseous diffusion process requires enormous amounts of electricity to run the compressors that force the gaseous UF_6 through the cascades; therefore, the search for more energy-efficient processes led to the development of gas centrifuge technology.

Enrichment by gas centrifuges is based on the principle that a partial separation of the components of a gaseous mixture results when the gas is subjected to a pressure gradient. The isotopic separation of UF_6 is effected by high-speed rotation in centrifuges in which the lighter U^{235} isotope moves at a greater velocity in the pressure gradient in the centrifuges. In 1977, the U.S. Government authorized the construction of a gas centrifuge enrichment plant at Portsmouth, OH, but that plant was never completed. Several countries¹⁹ now have uranium enrichment plants, most of which are gas centrifuge plants. Gas centrifuge plants reportedly use substantially less electricity than gaseous diffusion plants; however, the savings in electricity are partially offset by higher capital costs for gas centrifuge plants.

Currently, isotopic enrichment by laser technology is under development. Laser methods, if practical, may produce a higher level of separation and enrichment than can be attained from established enrichment techniques.

Both LEU and HEU can be produced by these methods but production of HEU requires additional equipment.²⁰ The details of HEU production are not available but are believed to involve processing LEU through hundreds (or thousands) of additional stages in the diffusion or centrifuge processes. In addition to equipment, the production of HEU requires extra security measures, stringent precautions to prevent initiation of fission reactions, and precautions related to increased levels of radiation from U^{234} .

¹⁹ France, Germany, Japan, Netherlands, South Africa, United Kingdom, Russia, and the People's Republic of China, World Nuclear Capacity and Fuel Cycle Requirements 1992, Energy Information Administration, Dec. 1992, p. 115.

²⁰ Hogan & Hartson prehearing brief, p. 25.

Although the precise technology to convert weapons-grade HEU into LEU has not been delineated, many of the steps (including blending) are familiar to nuclear technologists.^{21 22} Initially, the nuclear warheads must be separated from the delivery systems. In one proposed method, HEU metal would be melted and the alloy composition changed so that no classified information about the structure and the composition of the nuclear warhead could be discerned. HEU metal could then be oxidized and fluorinated and the HEU transformed into uranium hexafluoride that would then be vaporized. HEU could then be blended either with natural or slightly enriched uranium hexafluoride to form the final blend of LEU that could be used in the production of nuclear fuel for the generation of electricity. Other blending methods could be used to attain the same end result.

Enriched Uranium Oxide

Enriched uranium hexafluoride from an enrichment plant must be converted to uranium compounds or uranium metal for use in reactor applications.²³ LEU conversion is generally done by fuel fabricators as one step in the production of fuel rods and fuel assemblies to be used in commercial nuclear reactors. Fuel fabricators react uranium hexafluoride with water and hydrogen to obtain uranium dioxide (UO₂) that is used to make fuel rods and assemblies.²⁴

U.S. Tariff Treatment

U.S. imports from all countries of uranium ores and concentrates, natural uranium compounds, and all forms of enriched uranium enter free of duty under subheadings 2612.10.00, 2844.10.20, and 2844.20.00, respectively, of the Harmonized Tariff Schedule of the United States (HTS). U.S. imports of natural uranium metal and forms of natural uranium other than compounds enter under HTS subheadings 2844.10.10 and 2844.10.50 and are subject to a 5-percent ad valorem duty rate if from countries entitled to the column 1-general (most-favored-nation (MFN)) duty rate. A 45-percent ad valorem duty rate is applicable if imported from countries enumerated in general note 3(b) to the HTS, whose products are dutied at the rates set forth in column 2. Imports from Tajikistan are subject to the column 2 rates, while those from Ukraine received MFN status beginning June 23, 1992.

²¹ "Enrichment Blending: An Overview and Analysis," International Conference on Enrichment, Washington, DC, June 13-15, 1993.

²² Julian J. Steyn, "Potential Impact of Arms Reduction on LWR Fuel Cycle: An Update," The Uranium Institute Annual Symposium 1992, pp. 93-102.

²³ LEU is most often converted from uranium hexafluoride to uranium oxide for use in commercial nuclear power reactors, whereas HEU is generally reduced from uranium hexafluoride to uranium metal for use in nuclear weapons or small nuclear reactors.

²⁴ "Uranium and Uranium Compounds," Kirk-Othmer Encyclopedia of Chemical Technology, third ed., vol. 23, pp. 524-528.

THE NATURE AND EXTENT OF SALES AT LTFV

On July 1, 1993, Commerce notified the Commission of its final determinations that imports of uranium from Tajikistan and Ukraine are being, or are likely to be, sold in the United States at LTFV (58 F.R. 36640, July 8, 1993). Commerce's final LTFV margin is 129.29 percent ad valorem for both Tajikistan and Ukraine. Further, Commerce determined that critical circumstances exist with respect to imports of uranium from both countries. For reasons stated in its notice, Commerce used "best information available" to determine the LTFV margin.

THE DOMESTIC MARKET AND CHANNELS OF DISTRIBUTION

The commercial demand for uranium has its primary origin in the utilities that have nuclear reactors for the generation of electric power. These utilities must fuel the reactors with uranium and periodically replace spent uranium fuel with new fuel containing enriched uranium.

Activity in the uranium industry is tracked in annual surveys by the Energy Information Administration (EIA), which is part of the U.S. Department of Energy. EIA reports its survey data in publications, the most recent of which is the Uranium Industry Annual 1991, October 1992.

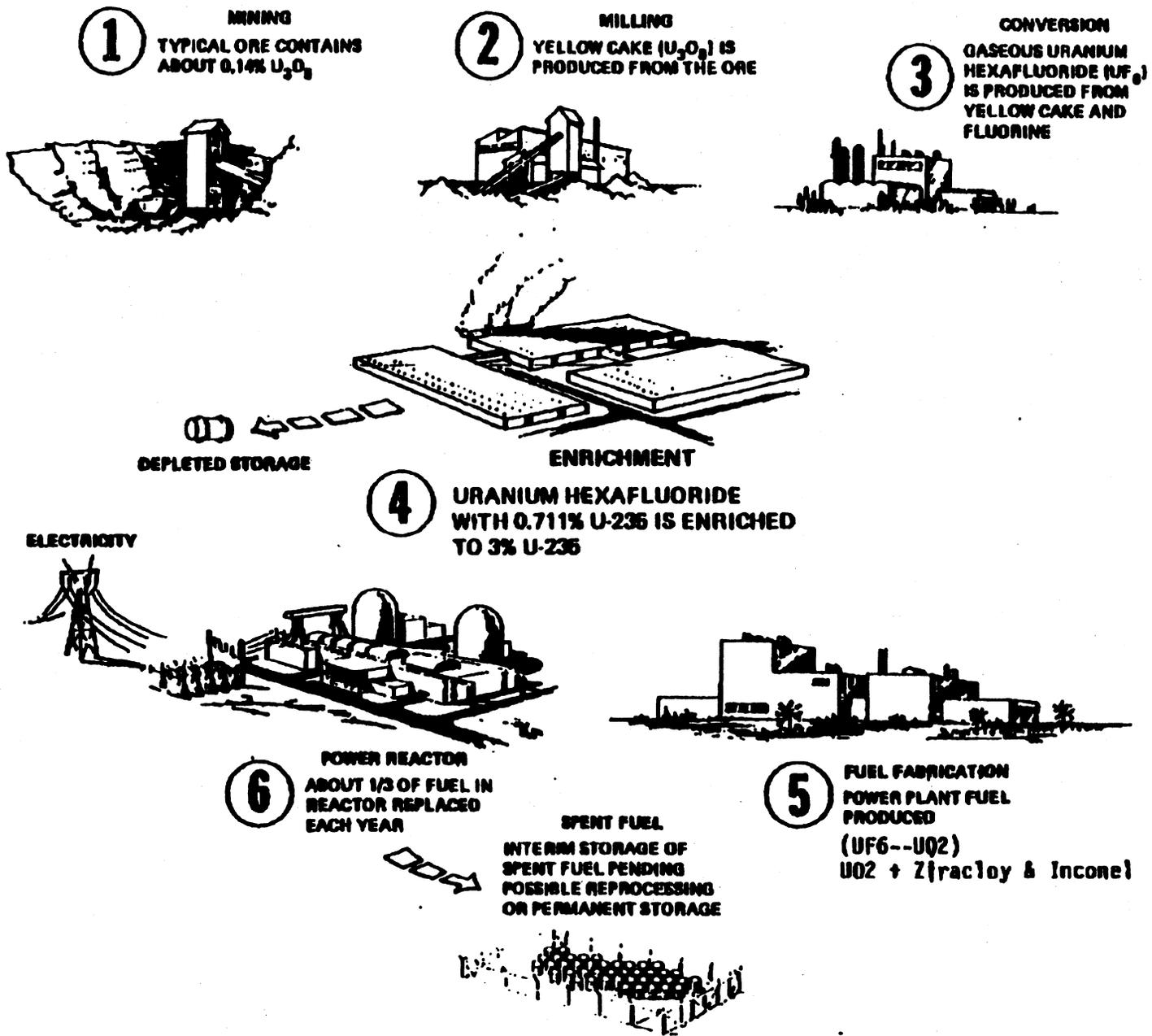
At first glance, the "nuclear fuel cycle" is simple, as illustrated in figure 1. In the United States, uranium is mined from the earth in the form of ores that are milled and processed into uranium concentrates. Uranium concentrates are also recovered as a byproduct, leached from uranium-containing deposits, or recovered from mine water. Uranium concentrates are shipped to a "converter" who converts the uranium concentrates to uranium hexafluoride. Next, the natural uranium goes to an "enricher" who processes the natural uranium hexafluoride into enriched uranium hexafluoride. After enrichment, the enriched uranium hexafluoride goes to a "nuclear fuel fabricator" who converts the enriched uranium hexafluoride to enriched uranium oxide that is then encapsulated into fuel rods and reactor fuel assemblies. Finally, the fuel assemblies are transported to utilities for initial fueling of their nuclear reactors or replacement of spent fuel.

In practice, tracking the movement of uranium is anything but simple. EIA describes "uranium marketing activities" in its annual publication, and an illustration of those activities for natural uranium (published by EIA) is reproduced here as figure 2.²⁵ The marketing of enriched uranium or enrichment "services" is equally complex.

In past years, utilities used less uranium than contracted for; therefore, there was a buildup of inventories. These inventories are generally held for the accounts of utilities at converters, enrichers, and fuel fabricators. Uranium inventories or uranium enrichment services in excess of immediate or projected needs of a utility can be sold, exchanged, or loaned through "paper transactions" without any product movement. Although

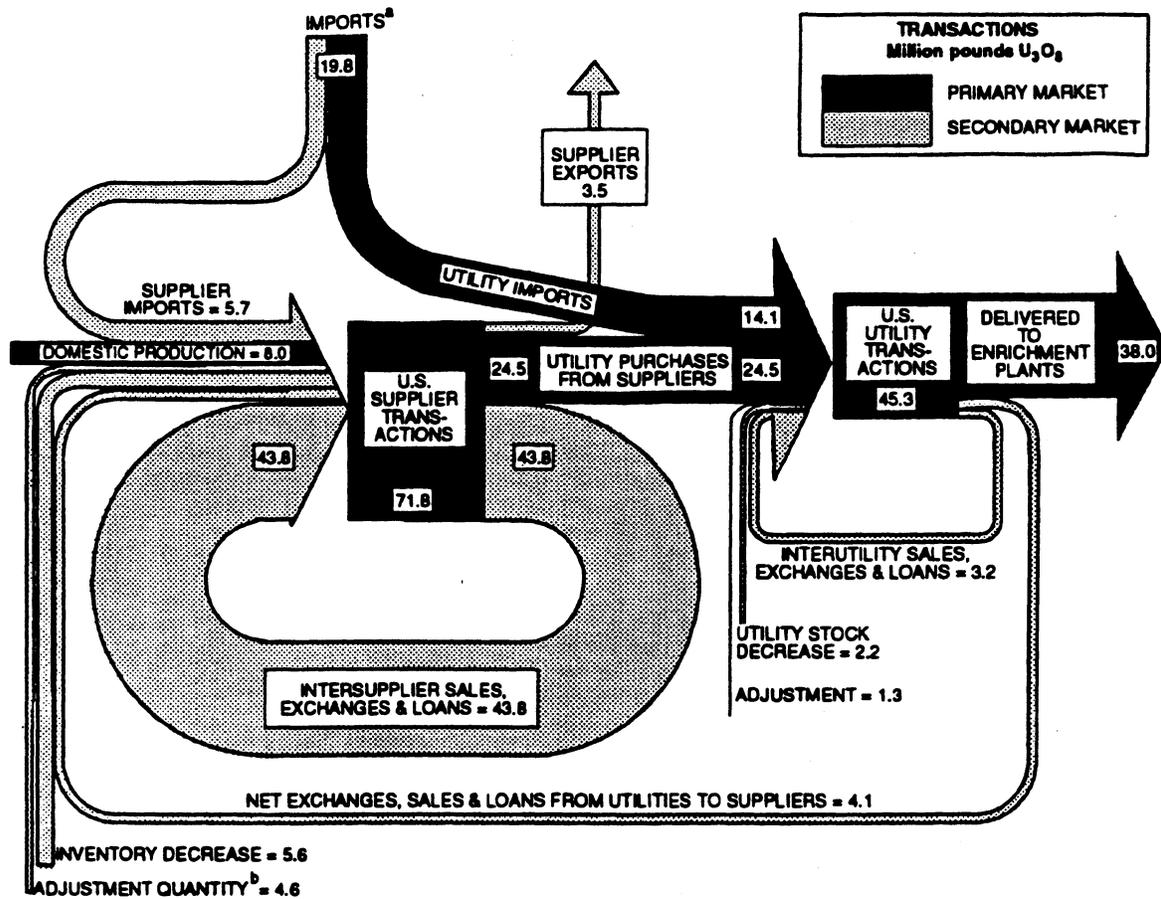
²⁵ EIA, Uranium Industry Annual 1991, Oct. 1992, p. 45.

Figure 1
NUCLEAR FUEL CYCLE



Source: U.S. Department of Energy

Figure 2
Natural Uranium Marketing Activity During 1991



^aIncludes imported natural uranium from purchases and net inflows from loan transactions. Imports from exchange transactions are excluded. The 16.3 million pounds of imports in 1991 in Table ES1 includes both natural and enriched uranium imported under purchase contracts. It does not include loans and exchanges, which are described in the footnote to Table ES1.

^bThe adjustment quantity represents an amount of uranium needed to make the inputs and outputs equal.

Source: Energy Information Administration, Form EIA-858, "Uranium Industry Annual Survey" (1991).

Source: Energy Information Administration/ Uranium Industry Annual 1991 .

these transactions are quite common, they tend to mask the value of the product when it is finally used and to mask the quantity actually consumed. Therefore, actual uranium consumption is difficult to measure through shipment data because transactions exceed consumption. However, it is important to keep in mind that the United States is the world's largest single market for uranium. Existing nuclear power plants in the United States require, and will continue to require, approximately 40 million pounds U_3O_8 annually to replace spent fuel (figure 3).²⁶

U.S. Consumption

Because of the complexity of marketing natural and enriched uranium, the Commission's usual approach for computing apparent consumption from shipment data is difficult to apply in these investigations. Further, trade in natural uranium cannot be simply added to trade in enriched uranium to obtain a meaningful statistic, except possibly for value.

Therefore, questionnaires were sent to all U.S. utilities that have nuclear reactors. Those utilities were asked to report their nuclear reactor requirements for enriched uranium, average enriched product and tails assays for the enriched uranium, separative work units (SWU) associated with the enriched uranium, and natural uranium (U_3O_8) required to produce the enriched uranium. These data provide a direct measurement of uranium consumption and are presented in table 1.²⁷

Questionnaire responses are believed to account for about *** percent of U.S. reactor requirements.²⁸ Data reported by many individual utilities varied significantly from year to year because of variable nuclear reactor reload cycles. According to utility executives, there is a trend toward reload cycles greater than one year. Utilities that reported value data used various methods to arrive at the data. For example, some utilities reported costs associated with uranium concentrate acquisition along with conversion and enrichment costs. Other utilities included fabrication costs.

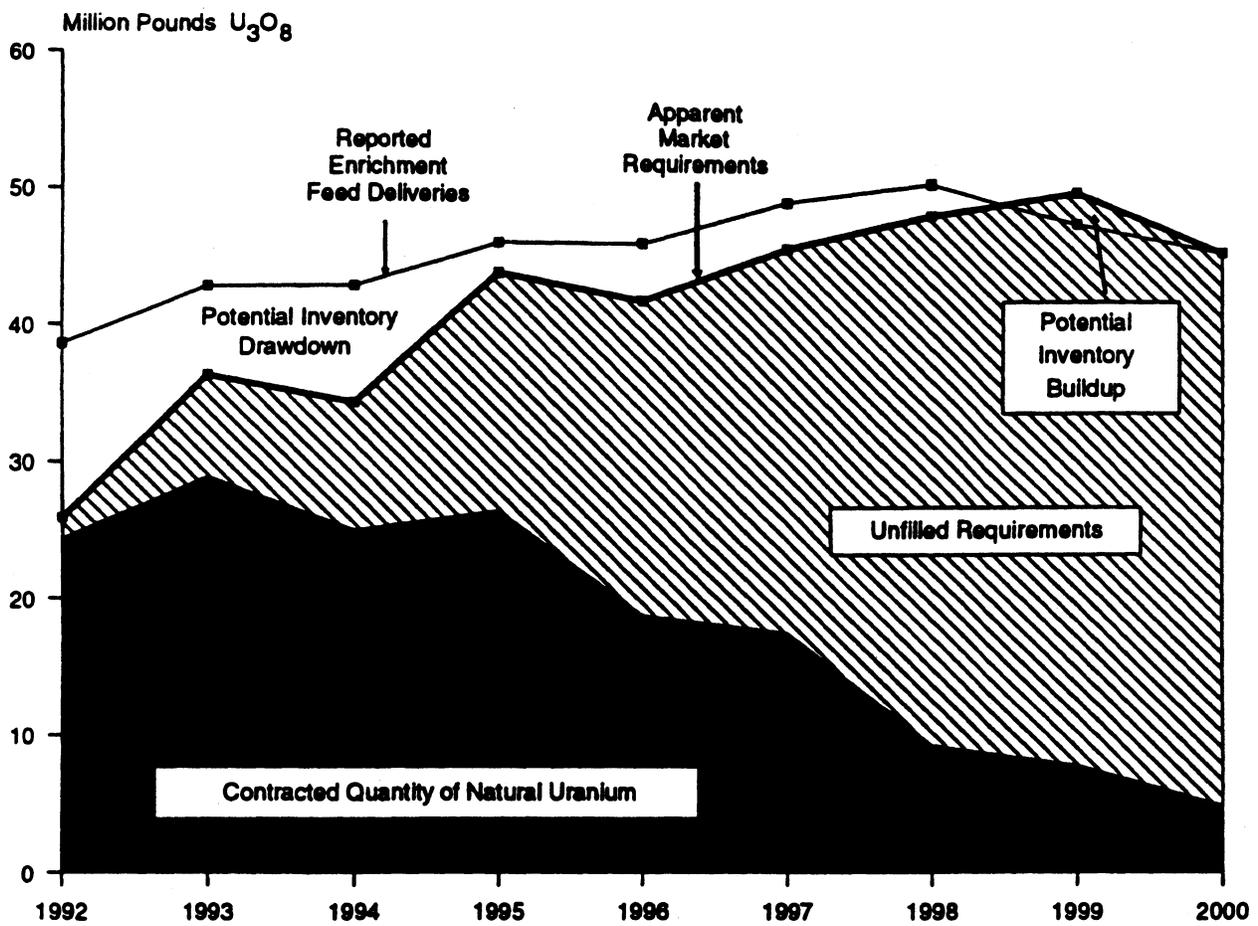
Further, some utilities included "holding costs" or costs associated with storage of uranium during the lengthy processing periods, as well as interest expenses for capital invested in the uranium at the various stages of production. Therefore, value data for consumption, as reported by utilities

²⁶ Ibid, p. 63.

²⁷ Petitioners suggest modifying reactor requirements by adjusting for inventory changes to arrive at what they call "apparent market requirements," similar to those shown in figure 3, as a proxy for apparent consumption (petitioners' prehearing brief, pp. 114-117, and transcript of hearing, pp. 39-40). However, apparent market requirements are projections of future market behavior and change substantially from year to year. Such projections are not applicable to historical data because past market requirements have already been met. In addition, inventories can be sold, traded, loaned, and so forth through paper transactions without actual physical movement of merchandise, and inventory data are subject to considerable variation depending on the source of the data.

²⁸ ***.

Figure 3
Apparent Uranium Market Requirements of Utilities, 1992-2000, as of December 31, 1991



Source: Energy Information Administration.

Table 1

Uranium: U.S. nuclear reactor requirements, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Enriched uranium (1,000 kg U).....	1,938	2,011	1,772	462	497
Average product assay (percent U ²³⁵).....	3.567	3.583	3.628	3.656	3.511
Average tails assay (percent U ²³⁵).....	.295	.300	.299	.298	.298
Separative work units (1,000 SWU).....	8,373	9,663	8,146	2,162	2,451
Natural uranium (1,000 pounds U ₃ O ₈)....	39,176	42,278	37,116	9,643	11,145

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

in response to the Commission's questionnaires, are not sufficiently complete or consistent to be usable.

U.S. Producers

U.S. producers of uranium in various forms, their address, their position with respect to the investigations, and their share (in percent) of U.S. production in 1992, are presented below.

Uranium Concentrate Producers

<u>Company</u>	<u>Address</u>	<u>Position</u>	<u>Share of Production</u>
Chevron	San Francisco, CA	***	***
Energy Fuels	Denver, CO	Opposes	***
Everest	Corpus Christi, TX	***	***
Ferret	Denver, CO	Supports	***
Freeport	New Orleans, LA	***	***
Homestake	San Francisco, CA	***	***
IMC	Northbrook, IL	Supports	***
Malapai	Houston, TX	Supports	***
Pathfinder	Bethesda, MD	Supports	***
Power Resources	Denver, CO	Supports	***
Rio Algom	Oklahoma City, OK	Supports	***
Rio Grande Resources	Hobson, TX	***	***
Total Minerals	Houston, TX	Supports	***
Umetco	Grand Junction, CO	Supports	***
Uranium Resources	Dallas, TX	Supports	***
			<u>100.0</u>

Plant locations and uranium reserve areas in the United States are shown in figure 4. Questionnaires were sent to all of the producers of uranium concentrates and responses have been received from all the firms.

* * * * *

Uranium Concentrate Converters

<u>Company</u>	<u>Address</u>	<u>Position</u>	<u>Share of Production</u>
Allied	Morristown, NJ	*** ¹	***
Sequoyah	Gore, OK	***	***
			<u>100.0</u>

¹ ***.

Allied is a large diversified corporation and Sequoyah is a wholly owned subsidiary of General Atomics, San Diego, CA. ***.

Uranium Enricher

<u>Organization</u>	<u>Address</u>	<u>Position</u>	<u>Share of Production</u>
United States Enrichment Corporation	Washington, DC	***	100

Title IX of Public Law 102-486, October 24, 1992, established USEC to take over all uranium enrichment activities performed by DOE. The "transition date" in the legislation was July 1, 1993; however, the legislation provided for a "transition manager" to be appointed by the President within 30 days of enactment of the legislation. ***.

Uranium Fuel Fabricators

<u>Company</u>	<u>Address</u>	<u>Position</u>	<u>Share of Production</u>
Combustion Engineering	Windsor, CT	***	***
General Electric	Wilmington, NC	*** ¹	***
Siemens	Bellevue, WA	***	***
Westinghouse	Columbia, SC	***	***
			<u>100.0</u>

¹ ***.

Figure 4
Major Uranium Reserve Areas¹ and Status of Mills and Plants, December 31, 1991



¹ Major areas containing reasonably assured resources at \$50-per-pound U₃O₈ or less.
Sources: Based on U.S. Department of Energy, Grand Junction Project Office (GJPO), *National Uranium Resource Evaluation, Interim Report* (June 1979) Figure 3.2; GJPO data files; Energy Information Administration, Form EIA-858, "Uranium Industry Annual Survey" (1991); and site visits by staff of the Analysis and Systems Division, Office of Coal, Nuclear, Electric and Alternate Fuels.

U.S. Importers

Questionnaires were sent to the firms named in the petition and all firms identified through Customs documents as importers of uranium. In addition, importers' questionnaires were sent to all domestic producers and to firms active in trading uranium because these firms were potential importers of uranium. The Commission's questionnaires in these investigations instructed questionnaire recipients to provide separate data for Ukraine and Tajikistan for the entire period January 1990-March 1993. If questionnaire recipients did not have complete data for Ukraine and Tajikistan, they were instructed to provide estimates and explain how the estimates were made.

No importer reported any imports of uranium into the United States from Tajikistan. *** was the only importer that reported imports of uranium from Ukraine in its questionnaire response, and uranium concentrates were the only form of uranium imported from Ukraine. The data from *** questionnaire response was the subject of considerable discussion in petitioners' and respondents' prehearing briefs and at the Commission's hearing;²⁹ therefore, certain pages of *** importers' questionnaire and *** "work sheets" for the data are presented in appendix D.

Questionnaire coverage for imports of uranium from countries other than Tajikistan and Ukraine was not sufficiently complete to use in lieu of official Commerce import statistics.

CONSIDERATION OF ALLEGED MATERIAL INJURY

There are four distinct steps in the uranium fuel cycle and the Commission requested information from producers at each step of the fuel cycle. Therefore, four different types of producers' questionnaires were issued in order to provide the Commission with the maximum amount of information for its determinations.

It is important to note that the data provided by the different producers' questionnaires are, for the most part, not additive. For example, the conversion of uranium concentrates to uranium hexafluoride does not produce any additional uranium or "new" uranium but converts one uranium compound into another compound. At the enrichment stage, however, many more pounds of natural uranium are required than the amount of enriched uranium produced. Therefore, it is generally necessary to separately discuss activities at different points in the nuclear fuel cycle.

For example, financial information was provided on uranium operations by producers of uranium concentrates, converters, the enricher (USEC), and fuel fabricators. Available financial data are presented in separate sections because of the disparate nature of the respective processes.

²⁹ Petitioners' prehearing brief, pp. 110-112; Powell, Goldstein, et. al. prehearing brief, pp. 21-24; and Hogan & Hartson prehearing brief, pp. 34-38.

Uranium Concentrate Producers

U.S. Capacity, Production, and Capacity Utilization for Uranium Concentrates

In accordance with industry practice, quantity data for uranium concentrates are presented in pounds, or thousands of pounds, U_3O_8 . Currently, most of the uranium concentrates are produced by in-situ leaching, as byproducts of phosphoric acid production, from other mineral mining, and from mine water. Consequently, "mine capacity," to the extent it is applicable, does not provide a representative measurement of industry production potential. Instead, data pertaining to facilities that produce uranium concentrates provide the best measure of total U.S. capacity to produce natural uranium.

Average capacity to produce uranium concentrates increased from 1990 to 1991 and declined from 1991 to 1992 (table 2). Reported capacity during January-March 1993 was also less than capacity during January-March 1992.

Production of uranium concentrates fell from 1990 to 1991 and from 1991 to 1992. Production of uranium concentrates during January-March 1993 was less than half of production during January-March 1992.

Capacity utilization dropped from 1990 to 1991 and from 1991 to 1992. Capacity utilization fell during January-March 1993 compared with that during January-March 1992.

U.S. Producers' Shipments and Purchases of Uranium Concentrates

Total U.S. shipments of uranium concentrates (company transfers and domestic market shipments) fell, based on quantity, from 1990 to 1991 and from 1991 to 1992 (table 3). U.S. shipments during January-March 1993 were below shipments during January-March 1992.

On the basis of value, total U.S. shipments fell from 1990 to 1991 and from 1991 to 1992. The value of U.S. shipments during January-March 1993 was below the value of shipments during January-March 1992.

To some extent, company transfers were among joint-venture partners in which a portion of production was transferred to participants for independent marketing, and for which no one entity had complete marketing records. Based on quantity, exports jumped from 1990 to 1991 and declined from 1991 to 1992. The quantity of exports during January-March 1993 was above exports during January-March 1992. Based on value, exports followed the same trends.

Shipments reported in table 3 are shipments of uranium concentrates produced in U.S. producers' plants and do not include shipments of purchased uranium concentrates.

Table 2

Uranium concentrates: U.S. capacity, production, and capacity utilization, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Average-of-period capacity (1,000 pounds).....	26,095	27,145	25,551	6,667	5,712
Production (1,000 pounds)....	8,379	7,995	5,917	2,023	803
Capacity utilization (percent).....	32.1	29.5	28.9	37.5	15.4

Note.--Capacity utilization is calculated using data of firms providing both capacity and production information. Data were collected on a U₃O₈ basis.

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

Table 3

Uranium concentrates: Shipments by U.S. producers, by types, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Quantity (1,000 pounds)					
Company transfers.....	***	***	***	***	***
Domestic shipments.....	***	***	***	***	***
Subtotal.....	7,956	6,891	3,305	1,327	807
Exports.....	2,249	4,018	3,494	675	875
Total.....	10,205	10,909	6,799	2,002	1,682
Value (1,000 dollars)					
Company transfers.....	***	***	***	***	***
Domestic shipments.....	***	***	***	***	***
Subtotal.....	166,196	150,609	62,220	25,727	8,221
Exports.....	55,683	84,463	74,223	13,445	16,232
Total.....	221,879	235,072	136,443	39,172	24,453
Unit value (per pound)					
Company transfers.....	\$***	\$***	\$***	\$***	\$***
Domestic shipments.....	***	***	***	***	***
Average.....	24.60	21.86	18.83	19.39	10.17
Exports.....	24.76	21.02	21.24	19.92	18.55
Average.....	24.64	21.55	20.07	19.57	14.53

Note.--Unit values are calculated using data of firms supplying both quantity and value information. Data were collected on a U₃O₈ basis.

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

U.S. producers' purchases are reported in table 4. As can be seen from table 4, U.S. producers' purchases of uranium concentrates from other producers, importers, brokers, and traders decreased from 1990 to 1991 and then increased from 1991 to 1992. According to some of these producers, when the spot-market price of uranium fell below their cost of production, they reduced or stopped plant production and fulfilled their contractual obligations by purchasing low-cost uranium concentrates.

Table 4
Uranium concentrates: Purchases by U.S. producers, by types, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
<u>Quantity (1,000 pounds)</u>					
Purchases from other producers.....	***	***	***	***	***
Purchases from other sources.....	***	***	***	***	***
Total.....	3,995	2,242	4,306	812	564
<u>Value (1,000 dollars)</u>					
Purchases from other producers.....	***	***	***	***	***
Purchases from other sources.....	***	***	***	***	***
Total.....	63,270	42,816	38,341	8,445	6,730
<u>Unit value (per pound)</u>					
Purchases from other producers.....	\$***	\$***	\$***	\$***	\$***
Purchases from other sources.....	***	***	***	***	***
Average.....	15.84	19.10	8.90	10.40	11.93

Note.--Quantity data were collected on a U₃O₈ basis.

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

U.S. Producers' Inventories of Uranium Concentrates

U.S. producers' inventories of uranium concentrates were high when compared with production during January 1990-March 1993 (table 5).

Employment and Wages of Producers of Uranium Concentrates

The number of production and related workers producing uranium concentrates dropped from 1990 to 1991 and from 1991 to 1992 (table 6). The

Table 5
Uranium concentrates: End-of-period inventories of U.S. producers, 1990-92,
January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Inventories (1,000 pounds)...	11,057	8,143	7,128	8,031	6,247
Ratio of inventories to production (percent).....	132.0	101.9	84.6	73.0	189.7

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information. Part-year inventory ratios are annualized. Data were collected on a U₃O₈ basis.

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

Table 6
Average number of U.S. production and related workers producing uranium concentrates, hours worked, 1/ wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs, 2/ 1990-92, January-March 1992, and January-March 1993 3/

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Production and related workers (PRWs).....	696	603	387	462	205
Hours worked by PRWs (1,000 hours).....	1,302	1,125	786	245	118
Wages paid to PRWs (1,000 dollars).....	16,968	15,624	11,692	3,541	1,947
Total compensation paid to PRWs (1,000 dollars).....	21,927	19,698	15,185	4,619	2,604
Hourly wages paid to PRWs....	\$13.03	\$13.89	\$14.88	\$14.45	\$16.50
Hourly total compensation paid to PRWs.....	\$16.84	\$17.51	\$19.32	\$18.85	\$22.07
Productivity (pounds per hour).....	6.5	7.2	7.5	8.3	7.6
Unit labor costs (per pound).....	\$2.59	\$2.43	\$2.55	\$2.27	\$2.89

1/ Includes hours worked plus hours of paid leave time.

2/ On the basis of total compensation paid.

3/ Firms providing employment data accounted for 100 percent of reported total U.S. shipments (based on quantity) in 1992.

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information. Data were collected on a U₃O₈ basis.

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

number of production and related workers during January-March 1993 was below the number of such workers during January-March 1992. Hours worked, wages paid, and total compensation tracked trends in employment.

A number of producers of uranium concentrates reported substantial reductions in employment during January 1990-March 1993. A summary of those reductions is presented in table 7.

Table 7

Uranium ores and concentrates: Reductions in employment by U.S. producers, January 1990-March 1993

Firm	Date of reduction	Number of workers	Duration of reduction	Reason for reduction
*	*	*	*	*

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

Financial Experience of U.S. Uranium Concentrate Producers

Overall establishment income-and-loss data for uranium concentrate producers are presented in table 8; product income-and-loss in table 9. The difference in the overall and the concentrate operations is primarily related to trading on the spot market and tolling activities that are not shown in the production of uranium concentrates. Both "conventional" and "nonconventional" mining operations are included in table 9. Conventional mining includes open-pit and underground mines, while nonconventional methods include U_3O_8 produced as a coproduct³⁰ of some phosphate and copper mining and in-situ leaching (solution production). Milling operations for conventional mines are usually located close to the mines, and employ mechanical and chemical processing techniques to produce the uranium concentrates from the ore. None of the producers submitted separate income-and-loss data for the uranium ore operations; i.e., these operations were included in the uranium concentrate income-and-loss.

According to some producers, the relatively low price of uranium concentrates on the spot market compared to the costs of producing domestically made it attractive for some operations to shutdown "temporarily," while contract obligations are fulfilled from current inventories and spot-market purchases. Several producers indicated in their questionnaire responses that their income-and-loss experience is primarily the result of long-term contracts effective during the period of investigation; however,

³⁰ The term "coproduct" is used rather than "byproduct" since the former implies a greater accounting significance than the latter, which is generally recognized as having only a net realizable value and is, therefore, treated as an offset to cost of goods sold or as other revenue.

Table 8

Income-and-loss experience of U.S. producers on the overall operations of their establishments wherein uranium ores and concentrates are produced, fiscal years 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	January-March--	
				1992	1993
	*	*	*	*	*

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

these producers stated that the relatively low spot-market price for the uranium products will severely affect their ability to obtain profitable long-term contracts in the future as the current contracts expire, which will require curtailment or possibly shutdown of operations. On a per-unit basis (table 9), the cost of producing U_3O_8 (not including selling, general, and administrative expenses), was approximately \$16 per pound during 1991, more than double the spot market price of approximately \$7 per pound in that year. Selected financial information, by firm, is presented in table 10.³¹

Several of the responding producers indicated significant shutdown expenses and practically all had to write down inventories, mineral rights, and other assets to reflect decreasing values due to current market conditions. Generally Accepted Accounting Principles (GAAP) require that inventories be valued at the "lower of cost or market," which for the affected producers in this case required write downs to the lower market value of the uranium products.

Investment in productive facilities

The value of property, plant, and equipment and return on total assets for the U.S. producers of uranium concentrates are presented in table 11.

Capital expenditures

The capital expenditures reported by the U.S. producers of uranium concentrates are presented in table 12.

Research and development expenses

The research and development expenses by the U.S. producers of uranium concentrates are presented in table 13.

31 ***. ***.

Table 9

Income-and-loss experience of U.S. producers on their operations producing uranium concentrates, fiscal years 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	January-March--	
				1992	1993
<u>Quantity (1,000 pounds U₃O₈)</u>					
Trade sales.....	***	***	***	***	***
Company transfers.....	***	***	***	***	***
Total.....	9,008	10,277	5,909	1,620	1,248
<u>Value (1,000 dollars)</u>					
Net sales:					
Trade sales.....	***	***	***	***	***
Company transfers.....	***	***	***	***	***
Total.....	218,413	224,985	139,362	30,402	16,854
Cost of goods sold.....	155,310	165,471	102,036	27,178	14,464
Gross profit.....	63,103	59,514	37,326	3,224	2,390
Selling, general, and administrative expenses....	19,573	17,906	12,579	5,765	2,101
Operating income or (loss)...	43,530	41,608	24,747	(2,541)	289
Startup or shutdown expense..	***	***	***	***	***
Interest expense.....	4,992	4,588	3,562	948	803
Other income or (expense), net.....	***	***	***	***	***
Net income or (loss) before income taxes.....	32,929	23,617	9,628	(1,098)	(1,483)
Depreciation and amortiza- tion.....	41,819	44,765	35,534	9,797	3,448
Cash flow <u>1/</u>	74,748	68,382	45,162	8,699	1,965
<u>Ratio to net sales (percent)</u>					
Cost of goods sold.....	71.1	73.5	73.2	89.4	85.8
Gross profit.....	28.9	26.5	26.8	10.6	14.2
Selling, general, and administrative expenses....	9.0	8.0	9.0	19.0	12.5
Operating income or (loss)...	19.9	18.5	17.8	(8.4)	1.7
Net income or (loss) before income taxes.....	15.1	10.5	6.9	(3.6)	(8.8)
<u>Value (per pound)</u>					
Net sales:					
Trade sales.....	\$***	\$***	\$***	\$***	\$***
Company transfers.....	***	***	***	***	***
Average.....	24.25	21.89	23.58	18.77	13.50
Cost of goods sold.....	17.24	16.10	17.25	16.73	11.60
Gross profit.....	7.01	5.79	6.33	2.03	1.90

See footnotes at end of table.

Table 9--Continued

Income-and-loss experience of U.S. producers on their operations producing uranium concentrates, fiscal years 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	January-March--	
				1992	1993
	Value (per pound)				
Selling, general, and administrative expenses....	\$2.17	\$1.74	\$1.99	\$3.40	\$1.38
Operating income or (loss)...	4.83	4.05	4.34	(1.37)	.53
Net income or (loss) before income taxes.....	3.66	2.30	2.28	(.38)	.32
	Number of firms reporting				
Operating losses.....	7	6	4	9	6
Net losses.....	7	7	6	8	6
Data.....	12	13	12	12	11

1/ Cash flow is defined as net income or loss plus depreciation and amortization.

Note.--Because of rounding, figures may not add to the totals shown. Unit values and other ratios are calculated using data of firms supplying both numerator and denominator information, and thus may not be derivable from figures presented above.

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

Table 10

Income-and-loss experience of U.S. producers on their operations producing uranium concentrates, by firms, fiscal years 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	January-March--	
				1992	1993
	Value (1,000 dollars)				
Net sales:					
Conventional:					
* * * * *					
Subtotal.....	57,846	53,496	***	***	***
Coproduct:					
* * * * *					
In-situ:					
* * * * *					
Total.....	218,413	224,985	139,362	30,402	16,854

Table continued on next page.

Table 10--Continued
 Income-and-loss experience of U.S. producers on their operations producing uranium concentrates, by firms, fiscal years 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	January-March--		
				1992	1993	
	Value (1,000 dollars)					
Operating income or (loss):						
Conventional:						
* *	*	*	*	*	*	
Subtotal.....	(8,828)	(14,999)	***	***	***	
Coproduct:						
* *	*	*	*	*	*	
In-situ:						
* *	*	*	*	*	*	
Total.....	43,530	41,608	24,747	(2,541)	289	
Net income or (loss) before income taxes:						
Conventional:						
* *	*	*	*	*	*	
Subtotal.....	(8,830)	(20,255)	***	***	***	
Coproduct:						
* *	*	*	*	*	*	
In-situ:						
* *	*	*	*	*	*	
Total.....	32,929	23,617	9,628	(1,098)	(1,483)	
	Ratio to net sales (percent)					
Operating income or (loss):						
Conventional:						
* *	*	*	*	*	*	
Conventional average...	(15.3)	(28.0)	***	***	***	
Coproduct:						
* *	*	*	*	*	*	
In-situ:						
* *	*	*	*	*	*	
Total average.....	19.9	18.5	17.8	(8.4)	1.7	
Net income or (loss) before income taxes:						
Conventional:						
* *	*	*	*	*	*	
Conventional average...	(15.3)	(37.9)	***	***	***	
Coproduct:						
* *	*	*	*	*	*	
In-situ:						
* *	*	*	*	*	*	
Total average.....	15.1	10.5	6.9	(3.6)	(8.8)	

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

Table 11

Value of assets and return on assets of U.S. producers' operations producing uranium concentrates, fiscal years 1990-92, January-March 1992, and January-March 1993

Item	As of the end of fiscal year--			As of Mar. 31--	
	1990	1991	1992	1992	1993
	Value (1,000 dollars)				
All products:					
Fixed assets:					
Original cost.....	***	***	***	***	***
Book value.....	***	***	***	***	***
Total assets <u>1/</u>	***	***	***	***	***
Uranium concentrates:					
Fixed assets:					
Original cost.....	629,065	660,590	542,042	602,355	550,799
Book value.....	210,705	202,876	186,808	187,138	194,653
Total assets <u>1/</u>	491,315	495,967	466,500	461,423	460,801
	Return on total assets (percent) <u>2/</u>				
All products:					
Operating return <u>3/</u>	***	***	***	***	***
Net return <u>4/</u>	***	***	***	***	***
Uranium concentrates:					
Operating return <u>3/</u>	6.6	5.8	2.1	(3.1)	1.1
Net return <u>4/</u>	4.6	2.4	(0.4)	(1.0)	2.4

1/ Total establishment assets are apportioned, by firm, to uranium concentrates on the basis of the ratios of the respective book values of fixed assets.

2/ Computed using data from only those firms supplying both asset and income-and-loss information, and as such, may not be derivable from data presented.

3/ Defined as operating income or (loss) divided by segment total assets.

4/ defined as net income or loss divided by segment total assets.

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

Table 12

Capital expenditures by U.S. producers of uranium concentrates, by products, fiscal years 1990-92, January-March 1992, and January-March 1993

Item	(In thousands of dollars)				
	1990	1991	1992	January-March-- 1992	1993
	*	*	*	*	*

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

Table 13

Research and development expenses of U.S. producers of uranium concentrates, by products, fiscal years 1990-92, January-March 1992, and January-March 1993

(In thousands of dollars)

Item	1990	1991	1992	January-March--	
				1992	1993
All products.....	***	***	***	***	***
Uranium concentrates.....	10,201	14,930	10,794	2,289	2,048

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

Capital and investment

The Commission requested the U.S. producers to describe any actual or potential negative effects of the subject imports on the firm's growth, investment, ability to raise capital, and production efforts. The responses are presented in appendix E.

Uranium Concentrate Converters

U.S. producers of uranium concentrates do not have the specialized equipment required to convert their concentrates to uranium hexafluoride; therefore, the converters provide an essential service. Uranium hexafluoride is, at present, the only form of uranium used in the enrichment process, so all uranium concentrates and oxides of natural uranium, domestic or imported, are processed into natural uranium hexafluoride, which is then sent to an enrichment plant.

Nuclear Regulatory Commission (NRC) regulations require that the converters account for the country of origin of the uranium entering their conversion process. Domestic and imported concentrates are commingled during the conversion process, because the concentrates are required to meet converters' specifications for fungibility. At the end of the conversion process, the converter holds the uranium for the owners' accounts, by country of origin, until instructions are issued for the disposition of the product. The actual uranium atoms cannot be identified by country of origin; therefore, all accounting is on a "book transaction" basis. Converters generally do not own the material, but charge a processing fee for converting uranium concentrates into uranium hexafluoride. Converters tend to hold large inventories of natural uranium concentrates and converted uranium hexafluoride. Uranium concentrates and uranium hexafluoride held by converters can, and frequently do, change ownership through book transactions at the converters.

**U.S. Capacity, Production, and Capacity Utilization
for Natural Uranium Hexafluoride**

U.S. producers' capacity to produce natural uranium hexafluoride and production are presented in table 14. ***.

Table 14

Natural uranium hexafluoride: U.S. capacity, production, and capacity utilization, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	*	*	*	*	*

Note.--Capacity utilization is calculated using data of firms providing both capacity and production information. Data were collected on a U₃O₈ basis.

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

U.S. Converters' Shipments of Natural Uranium Hexafluoride

Shipment data are presented in table 15.

Table 15

Natural uranium hexafluoride: Shipments by U.S. producers, by types, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	*	*	*	*	*

Note.--Unit values are calculated using data of firms supplying both quantity and value information. Data were collected on a U₃O₈ basis.

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

**U.S. Converters' Inventories of Unconverted Uranium Concentrates
and Natural Uranium Hexafluoride**

U.S. producers of natural uranium hexafluoride maintain large inventories of unconverted uranium concentrates. Such inventories are presented in table 16.

Table 16

Uranium concentrates: End-of-period inventories held by U.S. converters, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
*	*	*	*	*	*

Note.--Data were collected on a U_3O_8 basis. ***.

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

U.S. producers' inventories of natural uranium hexafluoride are presented in table 17.

Table 17

Natural uranium hexafluoride: End-of-period inventories of U.S. converters, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
*	*	*	*	*	*

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information. Part-year inventory ratios are annualized. Data were collected on a U_3O_8 basis.

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

Employment and Wages of Producers of Natural Uranium Hexafluoride

Employment data are presented in table 18.

Financial Experience of Converters

The income-and-loss data for the two active converters, Allied and Sequoyah, are presented in table 19. Converters typically do not produce or purchase uranium concentrates, but essentially provide a "service" for owners of the uranium. Accordingly, the income-and-loss data presented for the converters represents income-and-loss for services performed in the conversion of uranium concentrates to UF_6 . Consequently, their "net sales" are actually service revenues for the value added in the conversion process; they do not add to the total quantity of natural uranium produced.

Table 18

Average number of U.S. production and related workers producing natural uranium hexafluoride, hours worked, 1/ wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs, 2/ 1990-92, January-March 1992, and January-March 1993 3/

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	*	*	*	*	*

1/ Includes hours worked plus hours of paid leave time.

2/ On the basis of total compensation paid.

3/ Firms providing employment data accounted for 100 percent of reported total U.S. shipments (based on quantity) in 1992.

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information. Data were collected on a U₃O₈ basis.

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

Table 19

Income-and-loss experience of U.S. converters on their operations producing natural uranium hexafluoride, fiscal years 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	January-March--	
				1992	1993
	*	*	*	*	*

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

Uranium Enricher

USEC is, at present, the only organization in the United States that enriches natural uranium hexafluoride.³² USEC keeps its normal production and accounting records on a U.S. Government fiscal year (October 1 through September 30) basis.

³² Another organization, Louisiana Energy Services, has announced plans to develop the first privately owned uranium enrichment plant in the United States. The planned capacity is 1.5 million SWU per year with a projected startup date in 1998. The plant would use gas centrifuge technology currently in use in Germany, the Netherlands, and the United Kingdom. Louisiana Energy Services is a "joint-venture limited partnership" among Duke Power, Northern States Power, Louisiana Power & Light, Fluor Daniel, and Urenco.

USEC "enrichment services" are provided in terms of separative work units (SWU), which are a measure of the work expended in separating a quantity of uranium (in kilograms) at a given assay into two fractions--one enriched in U^{235} to a specified grade, and the other deficient or depleted in U^{235} to a specified tailings grade. Specifically, the effort expended in separating a mass F of feed assay x_f into a mass P of product of assay x_p and waste of mass W and assay x_w is expressed in terms of the number of separative work units needed, given by the expression:

$$SWU = W V(x_w) + P V(x_p) - F V(x_f)$$

where $V(x)$ is the "value function," defined as:³³

$$V(x) = (1-2x) \ln ((1-x)/x).$$

It is important to recognize that a given quantity of enriched uranium does not actually contain separative work. Rather, separative work was accomplished in producing the enriched uranium and a corresponding quantity of depleted uranium. Therefore, an enrichment "customer" must specify the required kilograms of enriched uranium and pick a "transaction" product assay and a tails assay in percent U^{235} . The following examples are presented to help grasp the significance of the SWU concept:³⁴

Customer A wants 1,000 kg U product with an assay 3.6 percent U^{235} , and customer A picks a transaction tails assay of 0.2 percent U^{235} . Then, customer A must provide USEC with (or pay for) 6,654 kg U natural uranium feed and pay USEC for 5,635 SWU.

Customer B wants 1,000 kg U product with an assay 3.6 percent U^{235} , and customer B picks a transaction tails assay of 0.3 percent U^{235} . Then, customer B must provide USEC with (or pay for) 8,029 kg U natural uranium feed and pay USEC for 4,525 SWU.

The cost of SWU is high; therefore, if the cost of natural uranium is low, a customer will pick the highest tails assay allowed by USEC and substitute feed for SWU. According to USEC, this is frequently done.³⁵

U.S. Capacity, Production, and Capacity Utilization For Enriched Uranium Hexafluoride

In addition to uranium enriched for use in commercial nuclear power plants,³⁶ ***. Commerce's preliminary determinations excluded HEU from the scope of the investigations but Commerce's continuation and final notices

³³ Although $V(x)$ is "value" per unit of material, it should never be confused with price or cost of material.

³⁴ App. F demonstrates the financial significance of these two scenarios on each industry sector.

³⁵ Transcript of conference, pp. 72-73.

³⁶ Commercial nuclear power plants in the United States use uranium enriched to 5 percent, or less, U^{235} .

included HEU. Therefore, the data presented here include HEU. Separate data for LEU and HEU are presented in appendix C, tables C-4 and C-5.

As shown in table 20, USEC has *** capacity to produce SWU. ***.

Table 20

Enriched uranium hexafluoride: 1/ U.S. capacity, production, and capacity utilization, fiscal years 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	*	*	*	*	*

1/ Includes LEU and HEU.

Note.--Ratios are calculated using data for LEU and HEU combined and may not be derivable from figures presented above. ***.

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

As previously noted, the United States is negotiating with Russia to import HEU from Russian nuclear weapons diluted to LEU for use in commercial reactors. Reportedly, the future supply rate and reliability of this source of supply will influence a likely USEC decision on which of its two remaining enrichment plants to close, with one plant likely to be closed within the next 2 years.³⁷

USEC's Shipments of Enriched Uranium Hexafluoride

Government transfers *** percent, based on quantity, from fiscal year 1990 to fiscal year 1991 and then *** percent from fiscal year 1991 to fiscal year 1992 (table 21). Domestic SWU shipments *** percent from fiscal year 1990 to 1991 and *** percent from fiscal year 1991 to 1992. Export SWU shipments *** percent from fiscal year 1990 to fiscal 1991 and *** percent from fiscal year 1991 to 1992. The value of SWU shipments followed the same trends as quantity.

The SWU concept is useful in setting the terms of transactions involving enriched uranium but is of limited value as a measurement of trade because SWU are not "products." Therefore, in the Commission's questionnaire, USEC was requested to provide data on the basis of kilograms of enriched uranium so that the USEC data could be compared directly with data from other sources; however, such data were not provided.

³⁷ "William Timbers' Nuclear Test," The Washington Post, June 28, 1993, p. A17.

Table 21
 Enriched uranium hexafluoride: 1/ Shipments by USEC, by types, fiscal years
 1990-92

Item	1990		1991		1992	
	*	*	*	*	*	*

1/ Includes LEU and HEU.

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

USEC's Inventories

USEC holds large inventories of natural uranium hexafluoride in addition to inventories of enriched uranium hexafluoride (table 22). Reported inventories of natural uranium hexafluoride *** percent from fiscal year 1990 to fiscal year 1991 and *** percent from fiscal year 1991 to fiscal year 1992. Reported inventories of enriched uranium hexafluoride *** percent from fiscal year 1990 to fiscal year 1991 and *** percent from fiscal year 1991 to fiscal year 1992.

USEC's Employment and Wages

Employment of workers producing enriched uranium hexafluoride in USEC's enrichment plants *** percent during fiscal years 1990-92 (table 23). Hours worked *** percent during fiscal years 1990-92, whereas total compensation *** percent. According to USEC, the enrichment of uranium hexafluoride ***, ***. The production and related workers at USEC's enrichment plants are represented by the Oil, Chemical and Atomic Workers International Union and the United Plant Guard Workers of America.

Financial Experience of USEC

Income-and-loss data for uranium enriching operations are presented in table 24. In the U.S. commercial nuclear fuel market, electric utilities do not purchase enriched uranium from USEC. Typically, utilities purchase natural uranium in concentrate (U_3O_8) form from a producer or broker. The utility then contracts separately with conversion service companies and USEC to convert and enrich the U_3O_8 it has purchased from the producer or broker.

The gaseous diffusion process used by USEC results in two product streams. One stream is enriched (i.e., it contains an increased concentration of U^{235}) and the other is "depleted" (i.e., it contains a decreased concentration of U^{235}). The enriched uranium is used to fabricate nuclear fuel, while the depleted uranium is currently being stored. There may eventually be a significant cost for removal of radioactive waste. USEC's

Table 22
Natural and enriched uranium hexafluoride: 1/ End-of-period inventories of USEC, fiscal years 1990-92

Item	1990		1991		1992	
	*	*	*	*	*	*

1/ Includes LEU and HEU.

Note.--Ratios are calculated using data for LEU and HEU combined and may not be derivable from figures presented above.

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

Table 23
Average number of U.S. production and related workers producing enriched uranium hexafluoride, hours worked, 1/ wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs, 2/ fiscal years 1990-92, January-March 1992, and January-March 1993 3/

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	*	*	*	*	*

1/ Includes hours worked plus hours of paid leave time.

2/ On the basis of total compensation paid.

3/ USEC accounted for 100 percent of reported total U.S. shipments (based on quantity) in 1992.

Note.-- Unit values and other ratios are calculated using data for LEU and HEU combined and may not be derivable from figures presented above.

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

Table 24
Income-and-loss experience of USEC on its operations producing all enriched uranium hexafluoride, 1/ fiscal years 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	January-March--	
				1992	1993
	*	*	*	*	*

1/ Includes LEU and HEU.

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

financial statements show environmental restoration costs that include expenses for current periods and accruals for future periods. Domestic and foreign uranium concentrates are fungible and are processed identically.

USEC indicated in its questionnaire response that low uranium prices have a direct effect on its enrichment sales. When uranium prices are low, utilities will order high tails assays, which requires fewer enrichment SWU but more natural uranium feed. USEC indicated that the average tails assay selected by U.S. utilities was *** weight-percent U²³⁵ in FY 1988. By 1991, the percentage had increased to *** as the result of lower uranium prices. To USEC, the change in average transaction tails resulted in an annual ***.³⁸ ***.

Capital and Investment

The Commission requested USEC to describe any actual or potential negative effects of the subject imports on its growth, investment, ability to raise capital, and production efforts. USEC's response is presented in appendix E.

Uranium Fuel Fabricators

Uranium fuel fabricators receive enriched uranium hexafluoride from USEC or imported enriched uranium hexafluoride from importers, traders, brokers, or utilities. The fuel fabricators generally do not own or take title to the enriched uranium at their facilities. Like the converters and USEC, the fuel fabricators maintain accounts in which enriched uranium product can be sold, traded, loaned, and so forth through paper transactions without the product moving from their plants.

Ultimately, the fuel fabricators convert enriched uranium hexafluoride into a stable solid form, usually uranium oxide, which is then further processed into finished fabricated fuel assemblies suitable for installation in nuclear reactors. The enriched uranium oxide produced by fuel fabricators is, for the most part, used captively by the fabricators in the production of fuel rods and fabricated fuel assemblies. Consequently, some nuclear fuel fabricators were unable to provide value data for shipments.³⁹

U.S. Capacity, Production, and Capacity Utilization for Enriched Uranium Oxide

The reported domestic capacity to produce enriched uranium oxide was constant during January 1990-March 1993 (table 25). Production, based on quantity, increased from 1990 to 1991 before decreasing from 1991 to 1992. Production during January-March 1993 was less than production during January-March 1992.

³⁸ ***.

³⁹ ***.

Table 25

Enriched uranium oxide: 1/ U.S. capacity, production, and capacity utilization, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Average-of-period capacity (1,000 kg U).....	3,800	3,800	3,800	950	950
Production (1,000 kg U).....	2,503	2,622	2,593	807	728
Capacity utilization (percent).....	65.9	69.0	68.2	85.0	76.6

1/ LEU only.

Note.--Capacity utilization is calculated from unrounded figures, using data of firms providing both capacity and production information.

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

U.S. Producers' Shipments of Enriched Uranium Oxide

U.S. producers' U.S. shipments, based on quantity, of enriched uranium oxide increased from 1990 to 1991 and from 1991 to 1992 (table 26). U.S. shipments during January-March 1993 dropped from the level of such shipments during January-March 1992.

Export shipments of enriched uranium oxide decreased from 1990 to 1991 and from 1991 to 1992. Exports during January-March 1993 decreased when compared with exports during January-March 1992.

U.S. Producers' Inventories of Enriched Uranium Oxide

U.S. producers' inventories of enriched uranium oxide increased from 1990 to 1991 and decreased from 1991 to 1992 (table 27). Inventories decreased during January-March 1993 when compared with inventories during January-March 1992.

Employment and Wages of Producers of Enriched Uranium Oxide

The number of production and related workers producing enriched uranium oxide increased from 1990 to 1991 and from 1991 to 1992 (table 28). ***. Production and related workers increased during January-March 1993 when compared with such workers during January-March 1992. Hours worked increased from 1990 to 1991 and from 1991 to 1992. Hours worked increased during January-March 1993 when compared with hours worked during January-March 1992.

Table 26
Enriched uranium oxide: 1/ Shipments by U.S. producers, by types, 1990-92,
January-March 1992, and January-March 1993

Item	(In 1,000 kg U)				
	1990	1991	1992	Jan.-Mar.-- 1992	1993
Company transfers.....	***	***	***	***	***
Domestic shipments.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Exports.....	***	***	***	***	***
Total.....	2,529	2,474	2,892	991	795

1/ LEU only.

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

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

Table 27
Enriched uranium oxide: 1/ End-of-period inventories of U.S. producers,
1990-92, January-March 1992, and January-March 1993

Item	(In 1,000 kg U)				
	1990	1991	1992	Jan.-Mar.-- 1992	1993
Inventories (1,000 kg U).....	1,028	1,121	997	984	929
Ratio of inventories to production (percent).....	41.1	42.7	38.4	30.5	31.9

1/ LEU only.

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

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

Total compensation increased from 1990 to 1991 and from 1991 to 1992. Compensation during January-March 1993 increased when compared with compensation during January-March 1992.

Table 28

Average number of U.S. production and related workers producing enriched uranium oxide, 1/ hours worked, 2/ wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs, 3/ 1990-92, January-March 1992, and January-March 1993 4/

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	*	*	*	*	*

1/ LEU only.

2/ Includes hours worked plus hours of paid leave time.

3/ On the basis of total compensation paid.

4/ Firms providing employment data accounted for *** percent of reported total U.S. production in 1992. ***.

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

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

Financial Experience of Fuel Fabricators

Income-and-loss experience for uranium fuel fabrication operations is presented in table 29. The data provided by *** represent approximately *** percent of 1992 uranium processing by U.S. fuel fabricators. After enrichment, the enriched uranium is processed into nuclear reactor fuel in the form of solid, cylindrical-pellets that are placed in zirconium-stainless steel hollow rods at nuclear fabrication plants. These uranium-filled rods provide the basic form of nuclear fuel used by nuclear power plants. The fuel fabricators were requested to provide only the income-and-loss as related to the uranium processing from UF₆ to enriched uranium oxides since total fuel assembly costs were considered to include substantial costs unrelated to the uranium processing. ***.

Table 29

Income-and-loss experience of U.S. fuel fabricators on their operations producing enriched uranium oxide, 1/ fiscal years 1990-92, January-March 1992, and January-March 1993 2/

Item	1990	1991	1992	January-March--	
				1992	1993
	*	*	*	*	*

1/ LEU only.

2/ Fuel fabricators and their respective yearends are ***.

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

CONSIDERATION OF THE QUESTION OF
THREAT OF MATERIAL INJURY

Section 771(7)(F)(i) of the Tariff Act of 1930 (19 U.S.C. § 1677(7)(F)(i)) provides that--

In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of any merchandise, the Commission shall consider, among other relevant economic factors⁴⁰--

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

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

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

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

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

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

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

⁴⁰ Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "Any determination by the Commission under this title that an industry in the United States is threatened with material injury shall be made on the basis of evidence that the threat of material injury is real and that actual injury is imminent. Such a determination may not be made on the basis of mere conjecture or supposition."

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

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

(X) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the like product.⁴¹

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

U.S. Inventories of Uranium from Tajikistan and Ukraine

*** reported end-of-period inventories of uranium concentrates are presented in table 30. There were no reported inventories of other forms of uranium from the subject countries.

⁴¹ Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other GATT member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

Table 30

Uranium from Tajikistan and Ukraine: *** end-of-period inventories, by sources, December 31, 1990-92, March 31, 1992, and March 31, 1993

Item	Dec. 31--			Mar. 31--	
	1990	1991	1992	1992	1993
	*	*	*	*	*

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

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

Tajikistan and Ukraine are represented by counsel who was requested to provide the Commission with information on the producers in those countries. The information requested consisted of the number and names of producing entities; production, capacity, capacity utilization, home-market shipments, exports to the United States, and total exports for each of the periods 1990-92, January-March 1992, and January-March 1993; projected changes in production, capacity, or capacity utilization in 1993 and 1994; and intentions or projections as to the quantity of exports of the subject uranium in its various forms to the United States in 1993 and 1994. Uranium producing and processing locations in Tajikistan, Ukraine, and the other former soviet republics are shown in figure 5.

According to material received from counsel and testimony at the Commission's hearing, Tajikistan's uranium mines were shutdown during January 1990-March 1993, and Tajikistan does not intend to reopen the mines.⁴² ***. According to information provided by counsel, Tajikistan processed ore produced in other Central Asian republics,⁴³ but 1993 is the last year Tajikistan intends to produce uranium concentrates. In 1992, Tajikistan produced *** million pounds U₃O₈ from ore mined elsewhere, and in 1993 it expects to produce *** million pounds U₃O₈ as uranium concentrates. ***. Counsel for Tajikistan stated that none of the uranium concentrates produced in Tajikistan was shipped to the United States. ***.

Data provided by counsel for Ukraine are presented in table 31. Production of uranium concentrates in Ukraine *** percent from 1990 to 1991 and *** from 1991 to 1992. Capacity utilization ***. Counsel for Ukraine stated that ***. ***. Ukraine has a number of nuclear reactors for the generation of electricity and home-market shipments⁴⁴ accounted for ***

⁴² Transcript of hearing, pp. 100 and 108-109.

⁴³ Transcript of hearing, p. 109. However, the posthearing brief of Powell, Goldstein, et. al. (app. 5) indicates that, during January 1990-March 1993, there were inventories of uranium concentrates in Tajikistan that were produced from ore mined in Tajikistan.

⁴⁴ ***.

Figure 5

Location of Uranium Resources and Production Centers in the Commonwealth of Independent States

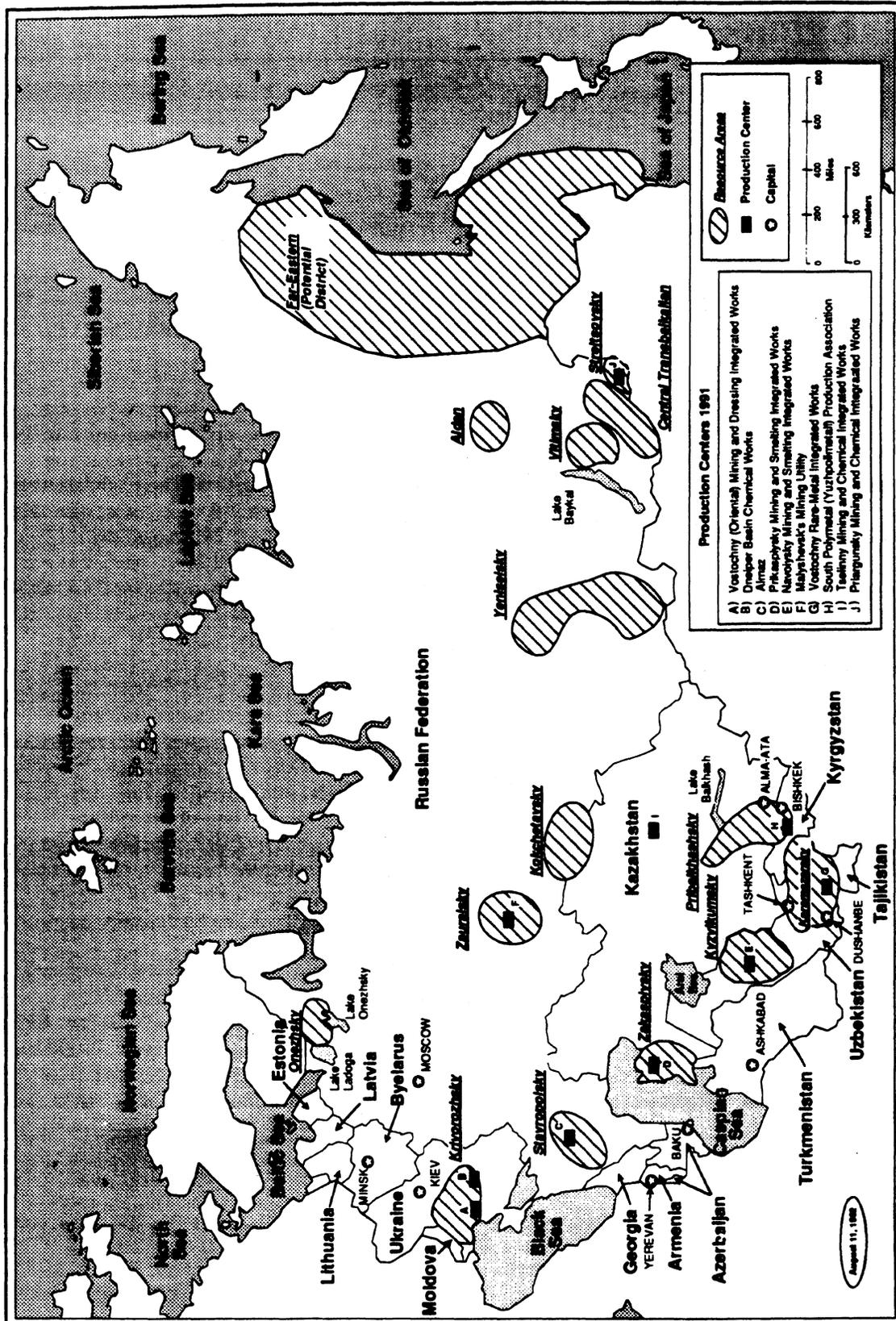


Table 31

Uranium concentrates: Ukraine's capacity, production, inventories, and shipments, 1990-92, January-March 1992, January-March 1993, and projected 1993-94

Item	Actual experience					Projected	
	1990	1991	1992	Jan.-Mar. 1992	Jan.-Mar. 1993	1993	1994
	*	*	*	*	*	*	*

Note.--Because of rounding, figures may not add to totals shown. Inventory ratios are annualized.

Source: Compiled from data submitted in response to a Commission request.

percent of production in 1992. Home-market shipments are projected to *** percent of production by 1994. There was no reported capacity to produce natural uranium hexafluoride or enriched uranium in Ukraine.

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

U.S. Imports

Official Commerce import data for natural and enriched uranium are presented in appendix G. Several problems arose when using the Commerce trade statistics. First, there are numerous HTS numbers involved. Second, quantity data are in gross weight and overstate uranium (or U₃O₈) content. Third, there are apparent errors in the data. Fourth, simply adding together natural and enriched uranium introduces additional errors in the interpretation of quantity data. Nevertheless, the official statistics are the most comprehensive information for some purposes, such as considering imports from countries other than the subject countries.

*** questionnaire data are used for imports from the subject countries.⁴⁵ No importer reported imports of uranium from Tajikistan. ***

⁴⁵ As previously noted, all parties have questioned the accuracy of *** questionnaire response. Petitioner contends that reported imports from Ukraine should, as a minimum, be substantially increased (petitioners' prehearing brief, pp. 96-97), whereas respondents insist that Tajikistan and Ukraine didn't exist prior to December 25, 1991, and that there have been no subsequent shipments to the United States from those countries. Petitioners proposed that, based upon petitioners' estimated uranium production in the republics of the former U.S.S.R., imports from Ukraine should be *** pounds in 1990, *** pounds in 1991, and *** pounds in 1992. Respondents' counsel for Tajikistan and Ukraine have not proposed specific adjustments to the data reported by ***.

(continued...)

data for Ukraine were subtracted from official Commerce data for the former U.S.S.R. to obtain the "other former U.S.S.R." data. According to official Commerce monthly data, there were no imports of uranium from Tajikistan or Ukraine during January-April 1993.

The following tables present imports for the various industrial segments in the nuclear fuel cycle.

Uranium Concentrates

There were no reported imports of uranium concentrates from Tajikistan during January 1990-March 1993, whereas imports from Ukraine *** (table 32). Quantities of imports from Ukraine are in 1,000 pounds U_3O_8 , but imports from other sources are in 1,000 pounds gross weight. Therefore, imports from other sources may be overstated by roughly 15 percent.

Imports of uranium concentrates from all other sources increased, based on quantity, from 1990 to 1991 and fell from 1991 to 1992. Imports from sources other than the subject countries fell during January-March 1993 when compared with such imports during January-March 1992. Principal sources of uranium concentrates in 1992, reported in official Commerce statistics as natural uranium oxide, were Canada (9.6 million pounds), Australia (5.7 million pounds), the former U.S.S.R. (*** million pounds, excluding imports from Ukraine), and South Africa (2.3 million pounds).

Natural Uranium Hexafluoride

There were no reported imports of natural uranium hexafluoride from Tajikistan or Ukraine (table 33). Natural uranium hexafluoride is more costly to ship and store than uranium concentrates and most imports of natural uranium hexafluoride are from Canada (87.7 percent of total imports in 1992 based on quantity). Natural uranium hexafluoride is a specific chemical compound (UF_6); therefore, gross weight, as reported in official Commerce statistics, was multiplied by 0.79739 to convert to weight as U_3O_8 , the industry standard for natural uranium.

⁴⁵ (...continued)

*** indicated in its questionnaire response that *** percent of 1991 imports reported for Ukraine were specifically identifiable as being from that country; therefore, relatively small percentages of "unidentified" imports from the former U.S.S.R. were allocated to Ukraine based upon production estimated by ***. When available, specifically identifiable import data are preferable to estimates based on production because production shares may not correlate well with export shares. Further, *** estimated 1992 imports from Ukraine are more consistent with the data reported by Ukraine than with petitioners' estimated data.

Table 32

Uranium concentrates: U.S. imports, by sources, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan. -Mar. --	
				1992	1993
<u>Quantity (1,000 pounds)</u>					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	4,099	12,265	2,919	2,919	591
Other (nonformer U.S.S.R.)...	20,737	18,966	21,151	3,189	3,042
Total.....	24,836	31,232	24,070	6,108	3,633
<u>Value (1,000 dollars)</u>					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	36,071	111,815	25,205	25,205	5,964
Other (nonformer U.S.S.R.)...	263,056	276,146	278,770	41,454	30,615
Total.....	299,128	387,961	303,975	66,659	36,578
<u>Unit value (per pound)</u>					
Tajikistan.....	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>
Ukraine.....	\$***	\$***	\$***	\$***	\$***
Average.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Average.....	8.80	9.12	8.64	8.64	10.10
Other (nonformer U.S.S.R.)...	12.69	14.56	13.18	13.00	10.06
Average.....	12.04	12.42	12.63	10.91	10.07

1/ Not applicable.

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

Source: Compiled from questionnaires of the U.S. International Trade Commission and official statistics of the U.S. Department of Commerce.

Table 33
 Natural uranium hexafluoride: U.S. imports, by sources, 1990-92,
 January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
<u>Quantity (1,000 pounds) 1/</u>					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	60	2/	0	0	0
Subtotal.....	60	2/	0	0	0
Other (nonformer U.S.S.R.)...	16,522	14,256	10,305	2,743	5,138
Total.....	16,582	14,256	10,305	2,743	5,138
<u>Value (1,000 dollars)</u>					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	15,721	2	0	0	0
Subtotal.....	15,721	2	0	0	0
Other (nonformer U.S.S.R.)...	214,623	229,255	148,886	69,292	51,891
Total.....	230,344	229,258	148,886	69,292	51,891
<u>Unit value (per pound)</u>					
Tajikistan.....	3/	3/	3/	3/	3/
Ukraine.....	3/	3/	3/	3/	3/
Average.....	3/	3/	3/	3/	3/
Other former U.S.S.R.....	\$263.79	\$52.43	3/	3/	3/
Average.....	263.79	52.43	3/	3/	3/
Other (nonformer U.S.S.R.)...	12.99	16.08	\$14.45	\$25.26	\$10.10
Average.....	13.89	16.08	14.45	25.26	10.10

1/ Official data have been multiplied by 0.79739 to put on a U₃O₈ basis.

2/ Less than 500 pounds.

3/ Not applicable.

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

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

Enriched Uranium Hexafluoride

There were no imports of enriched uranium hexafluoride from Tajikistan or Ukraine (table 34). Enriched uranium hexafluoride is a specific chemical compound (UF_6); therefore, gross weight, as reported in official Commerce statistics, was multiplied by 0.67618 to convert to weight as U, the industry standard for enriched uranium. The enriched uranium industry also uses SWU when discussing enrichment services; therefore, SWU expended to obtain the enriched uranium hexafluoride imported into the United States was computed by assuming average product assays of 3.6 percent U^{235} with tails assays of 0.3 percent U^{235} (table 35). Values of imports are likely to include the value of natural uranium required to produce enriched uranium in addition to SWU cost; therefore, unit values per SWU are overstated.

Enriched Uranium Oxide

There is, at present, little trade in enriched uranium oxide (table 36), and no imports of uranium oxide from Tajikistan or Ukraine were reported. However, the accuracy of official Commerce statistics for enriched uranium oxide is suspect; therefore, little significance should be attached to the data in table 36. Quantities reported in official Commerce statistics were in gross weight and were multiplied by 0.88149 to convert to kilograms uranium.

Uranium

To correctly arrive at total imports of uranium is not easy and, in the absence of complete and accurate data for all countries, some assumptions must be made. Table 37 was constructed by adding natural uranium imported as concentrates to natural uranium imported as uranium hexafluoride and by assuming certain product and tails assays for enriched uranium. Total imports of U_3O_8 in each year from 1990 to 1992 exceed U.S. reactor requirements (table 1); however, large quantities of imported natural uranium are used by USEC in its enrichment process and are used to produce enriched uranium hexafluoride that is exported. Further, large inventories of natural uranium are held at converters and at USEC.

U.S. Market Penetration by the Subject Imports

The Commission's usual methodology was used to develop apparent consumption of uranium based on activities at different levels of the nuclear fuel cycle. These results are presented in the following tables and then analyzed in view of reactor requirements for uranium reported by utilities. This presentation is intended to allow the Commission to consider the argument that the Commission should find multiple like products (i.e. uranium concentrates, natural uranium hexafluoride, and enriched uranium) as well as the argument that the Commission should find one like product, uranium.

Table 34

Enriched uranium hexafluoride: 1/ U.S. imports, by sources, 1990-92,
January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
<u>Quantity (kilograms) 2/</u>					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	88,413	0	42,931	42,931	0
Subtotal.....	88,413	0	42,931	42,931	0
Other (nonformer U.S.S.R.)...	316,459	583,046	540,443	117,586	87,348
Total.....	404,872	583,046	583,374	160,517	87,348
<u>Value (1,000 dollars)</u>					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	71,430	0	12,325	12,325	0
Subtotal.....	71,430	0	12,325	12,325	0
Other (nonformer U.S.S.R.)...	181,589	346,317	414,899	109,349	81,398
Total.....	253,019	346,317	427,224	121,674	81,398
<u>Unit value (per kilogram)</u>					
Tajikistan.....	3/	3/	3/	3/	3/
Ukraine.....	3/	3/	3/	3/	3/
Average.....	3/	3/	3/	3/	3/
Other former U.S.S.R.....	\$807.92	3/	\$287.09	\$287.09	3/
Average.....	807.92	3/	287.09	287.09	3/
Other (nonformer U.S.S.R.)...	573.82	\$593.98	767.70	929.95	\$931.88
Average.....	624.94	593.98	732.33	758.01	931.88

1/ ***.

2/ Official data have been multiplied by 0.67618 to put on a U basis.

3/ Not applicable.

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

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

Table 35

Enriched uranium hexafluoride: 1/ Estimated U.S. imports in SWU, by sources, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Quantity (1,000 SWU)					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	400	0	194	194	0
Subtotal.....	400	0	194	194	0
Other (nonformer U.S.S.R.)...	1,432	2,638	2,446	532	395
Total.....	1,832	2,638	2,640	726	395
Value (1,000 dollars)					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	71,430	0	12,325	12,325	0
Subtotal.....	71,430	0	12,325	12,325	0
Other (nonformer U.S.S.R.)...	181,589	346,317	414,899	109,349	81,398
Total.....	253,019	346,317	427,224	121,674	81,398
Unit value (per SWU)					
Tajikistan.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Ukraine.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Average.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Other former U.S.S.R.....	\$178.55	<u>2/</u>	\$63.44	\$63.44	<u>2/</u>
Average.....	178.55	<u>2/</u>	63.44	63.44	<u>2/</u>
Other (nonformer U.S.S.R.)...	126.81	\$131.27	169.66	205.51	\$205.94
Average.....	138.11	131.27	161.84	167.52	205.94

1/ ***.

2/ Not applicable.

Note.--Because of rounding, figures may not add to the totals shown; unit values are calculated from unrounded figures. Values of imports are likely to include the value of natural uranium required to produce enriched uranium in addition to SWU costs; therefore, unit values per SWU are overstated.

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

Table 36
Enriched uranium oxide: 1/ U.S. imports, by sources, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
<u>Quantity (1,000 kilograms) ^{2/}</u>					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	0	0	0	0	0
Former U.S.S.R.....	0	0	0	0	0
Other (nonformer U.S.S.R.)...	180	6,063	56	10	4
Total.....	180	6,063	56	10	4
<u>Value (1,000 dollars)</u>					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	0	0	0	0	0
Former U.S.S.R.....	0	0	0	0	0
Other (nonformer U.S.S.R.)...	40,496	27,831	24,747	5,124	840
Total.....	40,496	27,831	24,747	5,124	840
<u>Unit value (per kilogram)</u>					
Tajikistan.....	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>
Ukraine.....	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>
Average.....	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>
Other former U.S.S.R.....	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>
Average.....	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>	<u>3/</u>
Other (nonformer U.S.S.R.)...	\$224.55	\$4.59	\$439.52	\$519.27	\$193.52
Average.....	224.55	4.59	439.52	519.27	193.52

1/ ***.

2/ Official data have been multiplied by 0.88149 to put on a U basis.

3/ Not applicable.

Note.--Because of rounding, figures may not add to the totals shown; unit values are calculated from unrounded figures. The quantity of imports from other sources in 1991 appears to be overstated in official statistics of the U.S. Department of Commerce.

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

Table 37

Uranium: U.S. imports, by types, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan. -Mar. --	
				1992	1993
Natural uranium (1,000 pounds U ₃ O ₈).....	41,416	45,486	34,374	8,850	8,770
Enriched uranium <u>1/</u> (1,000 kg U).....	405	583	583	161	87
Product assay (percent U ²³⁵).....	3.60	3.60	3.60	3.60	3.60
Tails assay (percent U ²³⁵).....	.30	.30	.30	.30	.30
Separative work (1,000 kg SWU).....	1,832	2,638	2,639	726	395
Natural uranium feed <u>2/</u> (1,000 pounds U ₃ O ₈).....	8,452	12,171	12,178	3,351	1,823
Total natural uranium equivalent <u>3/</u> (1,000 pounds U ₃ O ₈).....	49,868	57,657	46,552	12,201	10,593

1/ Imports of enriched uranium hexafluoride only. There were no reported imports from Tajikistan or Ukraine.

2/ The amount of natural uranium required to produce the imported enriched uranium, computed from estimated product and tails assays.

3/ The sum of imports of natural uranium and the natural uranium feed required to produce the imported enriched uranium.

Note.--SWU expended to obtain the enriched uranium hexafluoride imported into the United States was computed by assuming average product assays of 3.6 percent U²³⁵ with tails assays of 0.3 percent U²³⁵.

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

Uranium Concentrates

As shown in table 38, there were no reported imports from Tajikistan and the share of apparent consumption of uranium concentrates held by imports from Ukraine ***, based on quantity. The share of apparent consumption held by the domestic producers declined rapidly during 1990-92, while the share of apparent consumption accounted for by imports from countries other than the subject countries increased. As noted in table 1, utilities require about 40 million pounds of natural U₃O₈ equivalent annually; however, utility requirements can be met by importing uranium in forms other than concentrates.

Table 38

Uranium concentrates: U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Quantity (1,000 pounds)					
Producers' U.S. shipments....	7,956	6,891	3,305	1,327	807
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	4,099	12,265	2,919	2,919	591
Other (nonformer U.S.S.R.).....	20,737	18,966	21,151	3,189	3,042
Total.....	24,836	31,232	24,070	6,108	3,633
Apparent consumption...	32,792	38,123	27,375	7,435	4,440
Value (1,000 dollars)					
Producers' U.S. shipments....	166,196	150,609	62,220	25,727	8,221
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	36,071	111,815	25,205	25,205	5,964
Other (nonformer U.S.S.R.).....	263,056	276,146	278,770	41,454	30,615
Total.....	299,128	387,961	303,975	66,659	36,578
Apparent consumption...	465,324	538,570	366,195	92,386	44,799
Share of the quantity of U.S. consumption (percent)					
Producers' U.S. shipments....	24.3	18.1	12.1	17.8	18.2
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	12.5	32.2	10.7	39.3	13.3
Other (nonformer U.S.S.R.).....	63.2	49.7	77.3	42.9	68.5
Total.....	75.7	81.9	87.9	82.2	81.8

Table continued on next page.

Table 38--Continued

Uranium concentrates: U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Share of the value of U.S. consumption (percent)					
Producers' U.S. shipments....	35.7	28.0	17.0	27.8	18.4
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	7.8	20.8	6.9	27.3	13.3
Other (nonformer U.S.S.R.).....	56.5	51.3	76.1	44.9	68.3
Total.....	64.3	72.0	83.0	72.2	81.6

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

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

Natural Uranium Hexafluoride

As shown in table 39, there were no reported imports of natural uranium hexafluoride from Tajikistan or Ukraine. ***.

Enriched Uranium Hexafluoride

As shown in table 40, there were no reported imports of enriched uranium hexafluoride from Tajikistan or Ukraine. The share of apparent consumption held by USEC *** from 1990 to 1991 and *** from 1991 to 1992. USEC did not provide data for January-March 1992 or January-March 1993. As noted in table 1, utilities require approximately 8 to 10 million SWU per year to enrich the uranium required by their nuclear reactors. The apparent consumption in SWU reported in table 40 is overstated because ***.

Table 39

Natural uranium hexafluoride: U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Quantity (1,000 pounds)					
Producers' U.S. shipments....	***	***	***	***	***
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	60	1/	0	0	0
Subtotal.....	60	1/	0	0	0
Other (nonformer U.S.S.R.).....	16,522	14,256	10,305	2,743	5,138
Total.....	16,582	14,256	10,305	2,743	5,138
Apparent consumption...	***	***	***	***	***
Value (1,000 dollars)					
Producers' U.S. shipments....	***	***	***	***	***
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	15,721	2	0	0	0
Subtotal.....	15,721	2	0	0	0
Other (nonformer U.S.S.R.).....	214,623	229,255	148,886	69,292	51,891
Total.....	230,344	229,258	148,886	69,292	51,891
Apparent consumption...	***	***	***	***	***
Share of the quantity of U.S. consumption (percent)					
Producers' U.S. shipments....	***	***	***	***	***
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other (nonformer U.S.S.R.).....	***	***	***	***	***
Total.....	***	***	***	***	***

See footnotes at end of table.

Table 39--Continued

Natural uranium hexafluoride: U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	Share of the value of U.S. consumption (percent)				
Producers' U.S. shipments....	***	***	***	***	***
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other (nonformer U.S.S.R.).....	***	***	***	***	***
Total.....	***	***	***	***	***

1/ Less than 500 pounds.

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

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

Enriched Uranium Oxide

Fabricators convert enriched uranium hexafluoride to enriched uranium oxide which they then further process into fuel rods and finished fuel assemblies for nuclear reactors. No imports of enriched uranium oxide from the subject countries were reported.

Uranium

U.S. nuclear reactor fuel requirements approximate consumption of uranium. Because of the difficulties associated with trying to build apparent consumption from shipment, import, export, inventory, conversion, and enrichment data, reactor requirements as presented in table 1 are used as the best measure for consumption of uranium in these investigations (table 41). Reactor requirements are presented in terms of natural uranium equivalents. Reactor requirements take into account transaction assays (enrichment product and tails assays) as well as variable reactor load and burn rates and variable refueling cycles. Total domestic shipments and imports of natural uranium from all sources exceed annual reactor requirements which, for this industry, is not unusual because USEC uses natural uranium in the enrichment process and large quantities of natural uranium are used by USEC to produce enriched uranium that is exported.

Table 40
Enriched uranium hexafluoride: U.S. shipments of domestic product, U.S. imports, and
apparent U.S. consumption, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Quantity (1,000 SWU)					
Producers' U.S. shipments....	***	***	***	1/	1/
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	400	0	194	194	0
Subtotal.....	400	0	194	194	0
Other (nonformer U.S.S.R.).....	1,432	2,638	2,446	532	395
Total.....	1,832	2,638	2,640	726	395
Apparent consumption...	***	***	***	1/	1/
Value (1,000 dollars)					
Producers' U.S. shipments....	***	***	***	1/	1/
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	71,430	0	12,325	12,325	0
Subtotal.....	71,430	0	12,325	12,325	0
Other (nonformer U.S.S.R.).....	181,589	346,317	414,899	109,349	81,398
Total.....	253,019	346,317	427,224	121,674	81,398
Apparent consumption...	***	***	***	1/	1/
Share of the quantity of U.S. consumption (percent)					
Producers' U.S. shipments....	***	***	***	1/	1/
U.S. imports from--					
Tajikistan.....	0	0	0	1/	1/
Ukraine.....	0	0	0	1/	1/
Subtotal.....	0	0	0	1/	1/
Other former U.S.S.R.....	***	0	***	1/	1/
Subtotal.....	***	0	***	1/	1/
Other (nonformer U.S.S.R.).....	***	***	***	1/	1/
Total.....	***	***	***	1/	1/
Share of the value of U.S. consumption (percent)					
Producers' U.S. shipments....	***	***	***	1/	1/
U.S. imports from--					
Tajikistan.....	0	0	0	1/	1/
Ukraine.....	0	0	0	1/	1/
Subtotal.....	0	0	0	1/	1/
Other former U.S.S.R.....	***	0	***	1/	1/
Subtotal.....	***	0	***	1/	1/
Other (nonformer U.S.S.R.).....	***	***	***	1/	1/
Total.....	***	***	***	1/	1/

1/ Not available.

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

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

A basic assumption of table 41 is that all imports of natural uranium from Tajikistan and Ukraine are destined for use in U.S. utility nuclear reactors and are not exported after enrichment by USEC. Based on this assumption, the market penetration by imports of uranium from Tajikistan was zero during January 1990-March 1993, and imports from Ukraine ***.

Domestic uranium-concentrate producers' share of reactor requirements dropped from 20.3 percent in 1990 to 16.3 percent in 1991 and 8.9 percent in 1992.

Table 41

Uranium: U.S. reactor requirements, 1/ imports from Tajikistan and Ukraine, 2/ U.S. producers' domestic shipments of concentrates, ratios of imports from Tajikistan and Ukraine to reactor requirements, and ratios of U.S. producers' domestic shipments to reactor requirements, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan. -Mar. --	
				1992	1993
	<u>Quantity (1,000 pounds U₃O₈)</u>				
U.S. reactor requirements.....	39,176	42,278	37,116	9,643	11,145
U.S. imports from--					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
U.S. producers'					
U.S. shipments.....	7,956	6,891	3,305	1,327	807
	<u>Ratio to U.S. reactor requirements</u>				
	<u>(percent)</u>				
U.S. imports from--					
Tajikistan.....	0.0	0.0	0.0	0.0	0.0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
U.S. producers'					
U.S. shipments.....	20.3	16.3	8.9	13.8	7.2

1/ Domestic reactor requirements in quantities of natural U₃O₈ equivalent.

2/ ***.

Note.--Reactor requirements from table 1, imports from table 32, and U.S. producers' shipments from table 3.

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

Prices

Prices and processing fees of the various subject domestic and imported uranium products⁴³ vary among customers because prices/processing fees associated with earlier contracts were negotiated when market conditions were different than prices/processing fees associated with more recent contracts. Over the last few years, many U.S. producers of uranium concentrates have taken advantage of falling prices of uranium in the United States by fulfilling an increasing share of their supply contracts by purchasing uranium concentrates; such purchase prices have reportedly sometimes been lower than their production costs.⁴⁴ Prices and processing fees may also vary because of differences in quantities purchased or committed, and because some purchasers perceive differences in the reliability of various suppliers.⁴⁵ U.S. enrichment fees also vary depending on the specific product stream U²³⁵ assay (enrichment level) and the tails U²³⁵ assay; the higher the product stream assay and/or the lower the tails assay the higher the total enrichment fee.⁴⁶ On the other hand, prices and processing fees of the domestic and imported uranium products do not appear to vary because of any variations in product quality. All these products are produced to standard industry specifications and are sold or toll-processed based on the output product being acceptable to the next downstream processor.⁴⁷

Marketing Practices

U.S.-produced and imported uranium concentrates from Ukraine are sold on both a spot and a multiyear contract basis, with some multiyear contracts involving domestic uranium concentrates specifying that prices, in some way, are related to market prices at the time of delivery. Prices of the domestic and subject imported uranium concentrates are negotiated between buyer and seller and are related, in varying degrees, to several different sources of published world market prices.⁴⁸ According to questionnaire responses of

⁴³ ***. ***.

⁴⁴ Some of the contract prices were negotiated *** and are frequently much higher than market prices in the last few years.

⁴⁵ Prices of uranium concentrates could also vary as a result of litigation settlements. ***.

⁴⁶ Discussion of enriched uranium hexafluoride in this section involves only LEU; ***. In addition, there is no discussion of pricing of enriched uranium oxide because there are no separate commercial sales of this product; rather the conversion cost to produce this product is included in the fabrication fee. (The costs to convert LEU to enriched uranium oxide account for about *** percent of the fabricator's total fee to produce fuel rods).

⁴⁷ Any added downstream-processor costs resulting from poor quality of upstream uranium products are the responsibility of the upstream processor.

⁴⁸ The Nuexco exchange value (NEV) is the oldest and most widely used published price for information on current world spot market prices of uranium concentrates. The NEV is published monthly and is Nuexco's judgement of the spot price of uranium concentrates based on its observed prices of sales of significant quantities on the last day of the month. Nuexco and other firms also publish world prices of maturing contracts for uranium concentrates. In

(continued...)

domestic uranium concentrate producers, the various published spot-market prices have become increasingly important in the U.S. uranium concentrate market, as spot sales have reportedly become a larger share of total sales and many new multiyear contracts reference spot-market prices at the time of delivery.⁴⁹ Payment terms for the domestic and imported uranium concentrates from Ukraine are generally 30 days from the date of shipment.

U.S. conversion and enrichment fees are almost always offered on a contract basis with prices either ***.⁵⁰ ***. Payment for conversion and enrichment services is typically 30 days from the date the output product is shipped.

Swaps are exchanges of ownership titles of the subject uranium products among market participants.⁵¹ Swaps of uranium products between firms occur frequently and make it difficult to track sales values, actual consumption levels, and countries of origin. Swaps typically require a high level of homogeneity of products within a specific uranium product category,⁵² or a readily agreeable basis for exchanging products in different product categories.⁵³ Swaps allow the U.S. uranium market to operate more efficiently

⁴⁸ (...continued)

addition, the reporting firms publish world spot and maturing-contract prices for enriched and natural uranium hexafluoride, as well as for the conversion and enrichment fees. USEC publishes enrichment fees for its maturing contracts.

*** stated in its questionnaire response that prices reported by the various uranium price-reporting firms vary substantially in their coverage and the types of transactions covered, such that no one price-reporting system represents 'the world market price' for any uranium product category.

⁴⁹ In addition to their use as price barometers in spot sales transactions, the published spot prices of uranium concentrates are used as one component of information in determining prices in new multiyear contracts. Published spot prices at the time of shipment are sometimes included as a part of price formulations in recent multiyear contracts. Published spot prices are also used in long-term-contract release provisions for the seller or buyer if the contract price differs by more than a specified amount from the prevailing spot market price, as shown in a specified published price series.

⁵⁰ In addition, ***.

⁵¹ Participants include producers of uranium concentrates, converters, fabricators, electric utilities, and traders, which may be located in different countries. Brokers frequently help facilitate swaps among the different participants, but do not take title to the products themselves. Transaction costs associated with swaps are minimal, adding less than 1 percent to the cost of the material being traded.

⁵² ***, a U.S. producer of uranium concentrates, reported in its questionnaire response that swaps most frequently involve uranium concentrates and natural uranium hexafluoride because of the high degree of product uniformity within each product category. Swaps of enriched uranium hexafluoride are more complicated because enrichment levels/tails assays are seldom the same from transaction to transaction.

⁵³ Natural uranium hexafluoride is exchanged for the amount of uranium concentrates used as an input and cash for the conversion service; enriched

(continued...)

by reducing supply costs associated with production inflexibilities and inventory shortfalls and by minimizing freight movement.⁵⁴ ***, a U.S. producer of uranium concentrates, indicated in its questionnaire response that swaps also lead to more price uniformity and stability, and do not inherently affect the price of uranium. On the other hand, *** asserted that swaps have destabilized the U.S. uranium market by easing entry of uranium concentrates allegedly from Tajikistan and Ukraine into the U.S. market, thereby contributing to the already existing oversupply and low prices of uranium in the United States. The level of swap activity in uranium products in the U.S. market may be high in recent years because of reportedly large uranium inventories worldwide as well as in the United States. See appendix H for a discussion of the various types of swaps.

Contracts

Uranium concentrates.--Contracts to supply/purchase domestic and imported Ukrainian uranium concentrates are negotiated for single-year or multiyear commitments, although a majority of the ***.⁵⁵ Older multiyear contracts for uranium concentrates were generally for contract periods of 10 years or more and had either fixed prices or base-price escalators and no price floors or ceilings. In the last few years, new multiyear contracts have typically ranged from 3 to 7 years, with options to terminate after 2 years or to extend the period under similar terms. Prices specified in the recent multiyear contracts often are at least partially related to market conditions at the time of shipment. Some recent contracts also specify price floors and ceilings.⁵⁶ Some market participants still negotiate fixed and base-price escalated contracts to assure future deliveries.⁵⁷ These latter contracts tend to have higher prices than prices in the spot market or in contracts that reference market conditions prevailing at the time of shipment.

Selling prices of uranium concentrates are in dollars per pound of U_3O_8 , and cover the uranium concentrates, the containers, weighing and sampling at the mill and at the converter, and freight to the converter. Contract quantities in multiyear contracts are either requirements-based or a fixed/estimated amount with delivery dates specified to fulfill a specific order.⁵⁸ If an estimated amount, shipment quantities can be adjusted up or

⁵³ (...continued)

uranium hexafluoride is exchanged for the natural uranium hexafluoride used as an input and cash for the enrichment service.

⁵⁴ Once inventories have been established at converters', enrichers', and fabricators' locations, swaps minimize the physical movement of products as they are sold or used.

⁵⁵ Single-year contracts are typically for a single delivery within 12 to 18 months of the contract date.

⁵⁶ Price floors and ceilings are sometimes also subject to specified escalator adjustments over the life of the contract.

⁵⁷ These purchasers are generally those electric utilities that place a high value on security of supply.

⁵⁸ A requirements-type contract specifies that the purchaser, typically an electric utility company, must purchase a certain percentage, usually 70

(continued...)

down by the purchaser by as much as 30 percent with 6-month advance notice.⁵⁹ Contracts require the purchaser to notify the supplier within a prescribed lead time about which conversion facility to send the uranium concentrates to. Contracts also specify the country(ies) of origin acceptable to the purchaser. All contract sales (and spot sales) of uranium concentrates require that the supplier's uranium concentrates must meet the converter's specifications.⁶⁰

U.S. conversion services.--Contract periods for conversion services in the United States generally range from *** years. Conversion fees typically include the conversion service, weighing and sampling, shipment to USEC, and the use and return of containers to the converter. Fees charged by U.S. converters to process the uranium concentrates into natural uranium hexafluoride are in dollars per kilogram or pound of uranium contained in the natural UF₆ compound.

The contract usually specifies a minimum and maximum amount of natural uranium hexafluoride to be toll-produced over the total period of the agreement, as well as a yearly minimum and maximum amount of the product to be toll-produced.⁶¹ In addition, the contract requires that converters must meet USEC's specifications for the natural uranium hexafluoride.

U.S. enrichment services.--All USEC's enrichment shipments during January 1990-March 1993 were based on contracts that began in ***.⁶² The enrichment service contracts allow USEC to change the contract enrichment fee, but it must provide *** advance notice to do so. ***.

Contract enrichment fees typically include the enrichment service, ***.

Enrichment fees charged by USEC to process the natural uranium hexafluoride into enriched uranium hexafluoride are in dollars per SWU for a given number of kilograms of total uranium enriched to a specified level in the U²³⁵ isotope⁶³ and contained in the enriched UF₆ compound.⁶⁴

⁵⁸ (...continued)

percent or more, of its annual volume requirements of uranium concentrates during the contract period from the particular supplier that it contracts with.

⁵⁹ Annual deliveries of a quantity-based contract can be accelerated or deferred for up to 12 months with 6- to 12-month advance notice by the purchaser.

⁶⁰ Uranium concentrates generally average 80-85 percent U₃O₈ by weight.

⁶¹ The contract requires the purchaser to notify the converter within a prescribed lead time exactly how much natural uranium hexafluoride will be needed in the upcoming year and the months that delivery must be made.

⁶² ***.

⁶³ USEC enriches the natural uranium hexafluoride to a product stream U²³⁵ assay (enrichment) level and a tails U²³⁵ assay level specified by the electric utility customer. These assay levels combined with the amount of enriched uranium requested determine the number of SWUs contracted for and hence the total charge for the enrichment. ***.

⁶⁴ Although the industry uses the term enriched uranium product (EUP) to denote enriched uranium, some refer to EUP as only the uranium in the enriched
(continued...)

The contracts require electric utilities to specify shipment dates, quantities of enriched uranium hexafluoride, and the particular product stream and tails assays;⁶⁵ contracts specify notification lead times ranging from *** prior to delivery. ***.

Transportation and Packaging

The U.S. producers (including toll producers) and *** sell the subject uranium products nationwide and reported in their questionnaire responses that U.S. inland freight costs are less than *** percent of the delivered selling price.⁶⁶ Both the domestic and subject imported products are shipped by truck, typically in full-truckload quantities. Uranium concentrates are sold most frequently in U.S. Department of Transportation (DOT)-approved 55-gallon steel drums (DOT No. 17H), but some imported concentrates from Ukraine are also sold in DOT-approved 330-liter steel drums.⁶⁷ The natural uranium hexafluoride is sold in DOT-approved steel cylinders (DOT 30B and DOT 48Y) and the enriched uranium hexafluoride is sold in the DOT 30B cylinders.⁶⁸ The portion of the selling price or toll fee accounted for by the cost or use of the various containers to transport the different uranium products is less than 1 percent and not considered a significant pricing factor by purchasers.⁶⁹

⁶⁴ (...continued)

UF₆ compound, whereas others refer to EUP as the entire enriched UF₆ compound. To prevent confusion, the EUP term is not used in this section.

⁶⁵ USEC allows purchasers to specify a tails assay within the range of *** percent U²³⁵.

⁶⁶ Actual shipments to a converter or USEC designated by the purchasing electric utility frequently take place prior to the delivery request of the utility. Beginning with converters, firms at each stage of uranium processing usually store the upstream input product at no cost, and other times at a nominal cost, to the input suppliers. As a result, delivery of the product to a designated processor's location (per an electric utility's instructions) typically occurs as a book transfer (change of ownership for a specified quantity of the uranium product in inventory at the processor's facility from the input supplier to the electric utility); actual shipments occur less frequently to effect delivery.

⁶⁷ The 55-gallon drums hold about 900-1,000 pounds of uranium concentrates, while the 330-liter drums hold about 1,600 pounds.

⁶⁸ The 30B cylinder holds 2,273 kilograms of natural uranium hexafluoride and the DOT 48Y cylinder holds about 12,000 kilograms of natural uranium hexafluoride. The 30B cylinder holds about 1,500 kilograms of uranium as enriched uranium hexafluoride.

⁶⁹ ***. The use of the cylinders to transport the natural uranium hexafluoride to USEC is *** in the conversion fees. Use of the cylinders to transport the U.S.-produced enriched uranium hexafluoride to the fabricators is *** in the enrichment fee, but is *** in the fabrication fee.

Questionnaire Price Data

The Commission requested quarterly price data for the following uranium products.

PRODUCT 1: Uranium concentrates (U_3O_8), commonly called yellowcake, which have NOT been converted or enriched.

PRODUCT 2: Uranium hexafluoride (UF_6) in the natural (unenriched) state.

PRODUCT 3: Uranium hexafluoride (UF_6) enriched in the U^{235} isotope.

The Commission requested quarterly selling price data to U.S. electric utilities for product 1 from U.S. producers of uranium concentrates and for products 1-3 from U.S. importers during January 1990-March 1993. The Commission requested U.S. converters and USEC to report processing charges to U.S. electric utilities for their U.S. toll-produced products 2 and 3, by quarters, during January 1990-March 1993. The Commission also requested U.S. electric utilities to report quarterly purchase price data for the U.S.-produced and subject imported product 1 and the subject imported products 2 and 3, and U.S. conversion and enrichment fees paid to obtain U.S.-produced products 2 and 3, by quarters, during January 1990-March 1993. The price/processing-fee data were generally requested on a net U.S. delivered basis for the responding firms' total quarterly sales/purchases; USEC's enrichment fees were requested on a U.S. f.o.b. basis.⁷⁰

Thirteen U.S. producers of uranium concentrates provided the requested net delivered price data for U.S.-produced uranium concentrates, but not necessarily for each type of sales agreement or quarter.⁷¹ Of the two U.S.

⁷⁰ All the requested selling and purchase price/processing-fee data were requested by the following three types of sales/purchase-price agreements. Spot market agreements: Combined sales/purchases of (1) uranium that was shipped on an immediate or near-term basis from the time of order, where such orders were not subject to any prearranged supply contract, and (2) uranium that was shipped on a contract basis, but prices were based on market conditions at the time of shipment and the contract DID NOT specify a price floor and/or ceiling. Restricted spot market-related contract agreements: Uranium that was shipped on a contract basis where prices were related to market conditions at the time of shipment SUBJECT to a contract-specified price floor and/or ceiling. Fixed-price or escalated-price contract agreements: Uranium that was shipped on a contract basis where prices were fixed or base-period prices were subject to an escalator adjustment specified in the contract.

In addition, responding U.S. producers, importers, and purchasers were requested to report the pricing data separately for each contract in multiyear contracts and to show the contract date, contract period, and the total contract quantity.

⁷¹ These 13 firms are believed to account for virtually all U.S. producers' domestic shipments of U.S.-produced uranium concentrates during January 1990-March 1993.

converters, ***.⁷² USEC provided net f.o.b. enrichment-fee data for the LEU. The converters and USEC *** when they toll-produce the natural and low-enriched uranium hexafluoride. As a result, the natural and low-enriched uranium hexafluoride that is toll-produced in the United States frequently ***.

***. ***.⁷³

Thirty-two U.S. electric utilities reported purchaser price/fee data, which were almost exclusively for U.S.-produced/processed uranium; three U.S. utilities reported purchase prices of uranium concentrates from Ukraine for a total of four shipments.⁷⁴ The U.S. utilities did not report any purchases of uranium imported from Tajikistan. The limited purchaser price data are discussed briefly in the price comparisons section.

Price trends

Uranium concentrates.--Price trends of the U.S.-produced and imported Ukrainian uranium concentrates are based on net U.S. delivered selling prices during January 1990-March 1993 that were reported in producer and importer questionnaire responses. Quarterly selling prices and quantities of the U.S.-produced uranium concentrates are shown in table 42 for spot market sales,⁷⁵ table 43 for restricted spot-market-related contract sales,⁷⁶ and table 44 for

⁷² Sequoyah accounted for about *** percent of all U.S. conversion services to produce natural uranium hexafluoride during January 1990-March 1993 and Allied accounted for *** percent.

⁷³ Production shares may be a weak basis for estimating export shares and should be viewed with caution. For example, U.S. uranium concentrate producers' 1992 domestic production shares are only partially correlated with their 1992 export shares; the correlation coefficient is *** percent. Although the correlation of production and export shares of the countries of the former U.S.S.R. is not known, actual imports from Ukraine may be significantly lower or higher than the figures estimated by *** (and by the petitioners in their prehearing brief) and based on production shares.

⁷⁴ Two other U.S. utilities reported prices of three shipments of natural uranium hexafluoride converted in the United States from uranium concentrates imported from Ukraine. ***.

⁷⁵ Spot sales and contract sales where prices were set at the spot market prices. Spot sales price data for uranium concentrates reported by U.S. producers and the importer were each comprised of about *** percent spot sales arrangements and *** percent contract-market agreements where prices were based on market prices at the time of shipment for the domestic and for the imported products. Hence, about *** percent of the domestic and of the imported Ukrainian uranium concentrates shown as spot sales data were shipped relatively contemporaneous with the sale.

⁷⁶ Contract sales where prices could vary with market conditions at the time of shipment subject to floor and/or ceiling level(s). Some of these contracts also allowed prices to drop by a negotiated amount below the floor if market prices at the time of shipment were significantly below the specified floor level.

Table 42

Net delivered selling prices and quantities of U.S.-produced uranium concentrates for spot market sales, 1/ by quarters, January 1990-March 1993 2/

* * * * *

1/ Combined sales of (1) uranium concentrates that were shipped on an immediate or near-term basis from the time of order, where such orders were not subject to any prearranged supply contract, and (2) uranium concentrates that were shipped on a contract basis, but prices were based on market conditions at the time of shipment and the contract DID NOT specify a price floor or ceiling.

2/ Prices of the domestic uranium concentrates are based on the net U.S. delivered quarterly selling prices of the responding U.S. producers' total quarterly sales. For quarters where more than one firm reported price data, prices shown are the average weighted by each reporting firm's total quarterly sales quantity of its uranium concentrates. Ten firms reported the sales price data, but not necessarily for every shipment period.

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

Table 43

Net delivered selling prices and quantities of U.S.-produced uranium concentrates for restricted spot market-related contract sales, 1/ by quarters, January 1990-March 1993 2/

* * * * *

1/ Uranium concentrates that were shipped on a contract basis where prices were based on market conditions at the time of shipment SUBJECT to a contract-specified price floor and/or ceiling.

2/ Prices of the domestic uranium concentrates are based on the net U.S. delivered quarterly selling prices of the responding U.S. producers' total quarterly sales, by contract-year sales. For quarters where more than one firm reported the requested price data for a particular contract year, prices shown are the average weighted by each reporting firm's total quarterly sales quantity of its uranium concentrates for that contract year. Five firms reported the sales price data, but not necessarily for every contract year or shipment period.

Note: Numbers in parentheses () next to quarterly prices for each contract year indicate the number of firms reporting prices for the quarter shown.

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

Table 44

Net delivered selling prices and quantities of U.S.-produced uranium concentrates for fixed-price or escalated-price contract sales, 1/ by quarters, January 1990-December 1992 2/

* * * * *

1/ Uranium concentrates that were shipped on a contract basis where prices were fixed or where a base-period price subject to an escalator adjustment was specified in the contract.

2/ Prices of the domestic uranium concentrates are based on the net U.S. delivered quarterly selling prices of the responding U.S. producers' total quarterly sales, by contract-year sales. For quarters where more than one firm reported the requested price data for a particular contract year, prices shown are the average weighted by each firm's total quarterly sales quantity for that contract year. Nine firms reported the sales price data, but not necessarily for every contract year or shipment period.

Note: Numbers in parentheses () next to the quarterly prices for each contract year indicate the number of firms reporting prices for the contract year and quarter shown.

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

fixed-price or escalated-price contract sales.⁷⁷ Price data in tables 42-44 do not include selling prices that were controlled by court settlements and reported by ***; these latter price data are shown in appendix table I-1. Quarterly selling price data for U.S. sales of uranium concentrates imported from Ukraine are shown for spot and fixed-price contract sales in table 45.⁷⁸

Because prices based on both restricted spot-market-related contracts and fixed-price/escalated-price contracts are mid- and long-term agreements negotiated in various years, prices associated with the reported quarterly shipments during January 1990-March 1993 are shown separately by the year the prices were contracted (tables 43-45).⁷⁹ An average price is also shown for each contract year, weighted by the total quarterly shipments corresponding to

⁷⁷ Contract sales where prices were fixed for the full contract period or where base prices were subject to a specified escalator during the contract period.

⁷⁸ ***.

⁷⁹ Quarter-to-quarter comparisons of the reported prices involving shipments contracted in a single year still do not measure price trends in the current period, but vary instead according to differing contract sales volumes, contract lengths, and contract-based price escalations determined in a previous period and not in the quarters for which shipment data were reported.

Table 45

Net delivered selling prices and quantities of uranium concentrates imported from Ukraine, by types of sales agreement and by quarters, October 1990-March 1993 1/

* * * * *

1/ Prices of the subject imported uranium concentrates are the net U.S. delivered quarterly selling prices of *** total quarterly sales. ***.

Note: ***.

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

the specific contract year;⁸⁰ trends in prices negotiated in various multiyear contract agreements are based on the average prices for each contract year. Hence, the multiyear-contract price data shown are on a sales basis and reflect actual shipments.

By type of U.S. sales agreement, about *** percent of domestic producers' total reported domestic shipments of U.S.-produced uranium concentrates during January 1990-March 1993 were based on fixed- or escalated-price contracts, *** percent were based on spot sales, *** percent were based on restricted spot-market-related agreements, and *** percent were based on price agreements ***. Of *** total reported U.S. shipments of its imported uranium concentrates from Ukraine during January 1990-March 1993, *** percent were spot sales and *** percent were sales based on fixed-price contracts. U.S. producers' price data by type of market sales agreement show that prices based on spot sales are typically the lowest,⁸¹ prices based on fixed-price/escalated-price contracts are the highest, and prices based on restricted spot-market-related agreements lie between the other two. *** reported prices of its imported Ukrainian uranium concentrates ***.

Reported spot sales prices of the U.S.-produced and subject imported uranium concentrates fluctuated but generally fell during the quarters reported; although spot sales prices of the domestic product increased in January-March 1993. Long-term agreement prices of the U.S.-produced uranium

⁸⁰ The price data segregated into sets of prices by contract year and then aggregated by contract year more easily show changes in competition between contract periods than if the quarterly data were not segregated. Unsegregated quarterly prices mix sales contracted in different periods and do not reflect changes in competition from quarter to quarter.

⁸¹ ***. ***.

concentrates fluctuated between contract years, but generally fell from the initial contract years to the final contract years reported. ***.

United States.--Quarterly spot market selling prices of the U.S.-produced uranium concentrates initially rose from *** per pound in January-March 1990 to a period high of *** per pound in July-September 1990, then generally fell to a period low of *** per pound by April-June 1992, or *** percent below the initial-period price (table 42).⁸² Prices then generally increased to end the period at *** per pound, or *** percent above the initial-period value.⁸³

U.S. producers reported selling prices of U.S.-produced uranium concentrates based on restricted spot-market-related contract agreements for shipments during January 1990-March 1993 that involved contract prices negotiated during 1986-90 (table 43).⁸⁴ The 1986 contract price was *** per pound based on a selling price for the single reported shipment, 1987 contract prices averaged *** per pound based on selling prices of multiple quarterly shipments, 1988 contract prices averaged *** per pound, 1989 contract prices averaged *** per pound, and the 1990 contract price was *** per pound based on a selling price reported for the single reported shipment. Contract-year prices peaked at *** per pound for 1988 contracts and then fell by *** percent to *** per pound for ***s.

U.S. producers reported selling prices of U.S.-produced uranium concentrates based on fixed-price or escalated-price contract agreements for shipments during January 1990-December 1992 (the most recent shipment period for which these data were reported) that involved contract prices negotiated in 1978 and during 1985-90 (table 44).⁸⁵ The 1978 contract prices averaged *** per pound based on selling prices of multiple quarterly shipments, the 1985 contract prices averaged *** per pound, the 1986 contract price was *** per pound based on a selling price for the single reported shipment, the 1987 contract prices averaged *** per pound, the 1988 contract prices averaged *** per pound, the 1989 contract prices averaged *** per pound, and the 1990 contract price was *** per pound based on a selling price for the single reported shipment. Contract-year prices initially fell from the 1978-contract-price peak of *** per pound to the 1985 contract price of *** per pound, or by *** percent. The 1986 contract price *** per pound, or by an additional *** percent. Contract prices then rose each of the next 3 years with the 1989 contract prices averaging *** per pound. The 1990 contract price *** per pound, or *** percent *** than 1989 contract prices.

⁸² ***. ***. ***.

⁸³ Ten U.S. producers reported spot-market selling prices, but not necessarily for every shipment period.

⁸⁴ Five U.S. producers reported prices based on restricted spot-market-related contract sales, but not necessarily for every contract year or shipment period.

⁸⁵ Nine U.S. producers reported prices based on fixed-price/escalated-price contract agreements, but not necessarily for every contract year or shipment period.

Ukraine.--Quarterly spot market selling prices of the imported uranium concentrates from Ukraine fluctuated during the periods reported, ***. ***(table 45). ***.

Natural uranium hexafluoride.--Of the two U.S. converters, ***.⁸⁶ Because conversion fees are based on fixed-fee or escalated-fee long-term contract agreements negotiated in various years,⁸⁷ conversion fees associated with the quarterly shipments during January 1990-March 1993 were calculated by the year the fees were contracted and are shown in table 46.⁸⁸ Trends in the U.S. converters' fees for processing uranium concentrates into natural uranium hexafluoride are discussed by comparing fees contracted in one year with fees contracted in other years.

The reported shipments of natural uranium hexafluoride during January 1990-March 1993 represented fee contracts negotiated in various years during 1974-92. Conversion fees averaged *** per kilogram of uranium in the natural UF₆ for the 1974 contract year, *** per kilogram in the 1982 contract year, *** per kilogram in 1988, and then *** through the 1992 contract year. Average annual conversion fees for the 1989-92 contract years were *** than those in the earlier contract years; conversion fees averaged *** per kilogram for 1989 contracts, *** per kilogram for 1990 contracts, *** per kilogram for 1991 contracts, and *** per kilogram for 1992 contracts.

Enriched uranium hexafluoride.--Quarterly U.S. enrichment fees, expressed in both dollars per kilogram of uranium in enriched UF₆ and dollars per SWU, and the quantities of the toll-produced uranium in enriched UF₆, are shown in table 47 for USEC's total quarterly U.S. shipments during January 1990-March 1993. These fees are based on fixed-price contract agreements entered into in ***.

USEC's reported U.S. quarterly shipments of its toll-produced enriched UF₆ during January 1990-March 1993 involved various average product stream assays, ranging from *** percent across quarters, while tails assays ranged from *** percent each quarter. The U.S. enrichment fees in dollars per kilogram of uranium in enriched UF₆ fluctuated during this period, ranging from *** per kilogram of uranium in enriched UF₆ during April-June 1990 to *** per kilogram of uranium in enriched UF₆ during October-December 1992. USEC's U.S. enrichment fees in dollars per SWU also fluctuated, ranging from *** per SWU during July-September 1990 to *** per SWU during October-December 1992.⁸⁹

⁸⁶ The reported U.S. conversion fee data were based on the converters' total quarterly U.S. shipments of toll-produced natural UF₆ to U.S. utilities during the quarters reported.

⁸⁷ The reported quarterly shipments and the associated conversion fees reflect competition in various previous periods and not in the quarters that the shipment data were reported.

⁸⁸ The average fee for each contract-year was weighted by the total quarterly shipments corresponding to the specific contract year. The weighted-average fees reflect changes in competition among the various contract periods and not among the quarters for which shipments were reported.

⁸⁹ Prices of SWU are based on the number of SWU that would nominally be used for a given tails assay specified by the purchaser, ***.

Table 46

Net delivered U.S. toll fees and quantities of U.S.-produced natural uranium hexafluoride for fixed-price or escalated-price contract sales, 1/ by quarters, January 1990-December 1993 2/

* * * * * * *

1/ Natural uranium hexafluoride that was shipped on a contract basis where prices were fixed or where a base-period price subject to an escalator adjustment was specified in the contract.

2/ Prices of the domestic natural uranium hexafluoride are based on the net U.S. delivered tolling fees reported by the two U.S. converters for their total quarterly U.S. shipments, by contract-year sales. For quarters where more than one shipment was reported for a particular contract year, toll fees shown are the average weighted by the total quarterly sales quantity for that contract year. ***.

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

Table 47

U.S. enrichment fees and quantities of U.S-enriched uranium hexafluoride, by quarters, January 1990-March 1993 1/

* * * * * * *

1/ Quarterly U.S. enrichment fees were reported by USEC and are the net U.S. quarterly fees of USEC's total quarterly U.S. toll-processed sales. The quantities shown represent USEC's reported total quarterly sales of its processed enriched uranium hexafluoride. U.S. enrichment fees do not include delivery of the enriched uranium hexafluoride to the fabricator. All of USEC's enrichment fees are based on fixed-price or base-price-escalator contracts, ***. All sales shown in the above table are based on *** contracts.

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

Enrichment fee trends could not be developed on a weight basis from these data because average product and tails assays varied by quarter. Fee trends could not be developed on a SWU basis because prices of all the reported shipments were based on a single contract year. Fluctuations in average weight-based and SWU prices also resulted from quarter-to-quarter differences in the proportion of total shipments receiving incentive discounts.⁹⁰

Price comparisons

Quarterly net delivered price comparisons between U.S.-produced uranium concentrates and those imported from Ukraine were possible based on spot market sales and on fixed-price contract sales for 1989 contract prices, developed from U.S. producer and importer questionnaires, and are shown in table 48. In addition, net delivered purchase prices of U.S.-produced and imported Ukrainian uranium concentrates, reported by U.S. electric utilities, resulted in two spot-market quarterly price comparisons. These latter data are discussed below but not shown in a table. The spot sales data reported in producer, importer, and purchaser questionnaires allowed price comparisons of the domestic and imported products on a common sales and shipment basis.⁹¹

Based on spot-market delivered sales prices from U.S. producer and importer questionnaire responses, nine quarterly price comparisons were possible between the domestic and the imported Ukrainian uranium concentrates. Three of the nine quarterly price comparisons showed the imported product to be priced lower than the domestic product during October 1990-March 1993. The three margins of underselling averaged *** percent and ranged from *** percent during *** to *** percent during ***. Six quarterly price comparisons showed the imported product to be priced higher than the domestic product during ***, with prices of the imported product averaging *** percent above prices of the domestic product.⁹²

Table 48

Margins of under/overselling 1/ between U.S.-produced and imported uranium concentrates from Ukraine, based on quarterly net delivered selling prices, by types of sales agreement and by quarters, October 1990-March 1993

* * * * * * *

1/ The percentage price differences between the U.S. and imported uranium concentrates from Ukraine were calculated as differences from the U.S. producers' price, and were based on the prices shown in tables 42, 44, and 45. Figures in parentheses indicate that the price of the imported product was higher than the price of the domestic product during that quarter.

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

⁹¹ About *** percent of the domestic and of the imported Ukrainian uranium concentrates shown as spot sales data were shipped relatively contemporaneous with the sale; this is the proper and customary basis on which the Commission typically compares spot prices of domestic and subject imported products.

⁹² Of 32 U.S. electric utilities reporting price data, 15 reported delivered purchase prices of uranium concentrates that resulted in 2 quarterly price comparisons, on a spot market basis, between the domestic and the imported Ukrainian products. Both quarterly price comparisons showed the imported product to be priced higher than the domestic product during ***; prices of the imported product averaged *** percent, respectively, above prices of the domestic product. The quantity of domestic uranium concentrates purchased in the reported transactions totaled *** pounds compared with *** pounds of the imported Ukrainian product.

Based on fixed-price contract delivered sales prices reported by U.S. producers and the importer in their questionnaire responses, two quarterly price comparisons were possible between the domestic and the imported Ukrainian uranium concentrates. The quarterly price comparisons were for *** contracts and showed the imported product to be priced *** percent and *** percent less than the domestic product during ***.

Exchange Rates

Usable market exchange-rate data for Tajikistan and Ukraine are not available.⁹³

Lost Revenues And Lost Sales

In general it is difficult for U.S. producers of the uranium products to identify specific instances of lost revenues or lost sales that may have resulted from competition with any imported uranium from Tajikistan or Ukraine. Confidentiality of sales agreements and the widespread use of swaps and exchanges of products among the various market participants make it difficult to identify the country of origin of competing uranium products in individual sales transactions. Such difficulties were reported most frequently in questionnaire responses of U.S. uranium concentrate producers.⁹⁴

⁹³ Beginning in January 1991, the former U.S.S.R. Government reduced the ruble's more than 2,000 officially administered exchange rates to 3 administered rates and allowed for a separate market rate to be determined at currency auctions in the U.S.S.R. Instability in the country, leading to the dissolution of the country into independent states on Dec. 25, 1991, however, retarded full development of the currency auction market.

⁹⁴ U.S. producers of the uranium products commented that specific instances of lost revenues and lost sales are extremely difficult to document because most sales agreements in the industry, both spot and long term, contain strict confidentiality provisions that prevent the dissemination of information. In addition to confidentiality, the U.S. producers of uranium concentrates noted that the country identity of competing products in specific sales is difficult to determine because many sales agreements made within the last 3 years by brokers or traders provide for the delivery of "open origin" uranium concentrates. Open origin is usually defined as any origin legally acceptable for use in the utility's nuclear reactors. Accordingly, a utility customer may not know until a very short time before actual delivery the origin of the uranium concentrates that it will receive. In some cases, the producers assert that the origin may actually be from Tajikistan or Ukraine, but, in other cases, it is possible to swap or exchange uranium from the subject countries to someone else and deliver a different origin product to the customer.

Lost Revenues

U.S. producers of uranium concentrates were unable to identify specific lost revenue allegations involving competition with uranium concentrates imported specifically from Tajikistan or Ukraine. The two U.S. converters and USEC indicated in their questionnaire responses that ***, ***, ***.

USEC asserted in its questionnaire response that ***,⁹⁵

One U.S. producer, ***, cited specific spot sales transactions where it asserted that its prices would have been higher if alleged uranium imports from the countries of the former U.S.S.R. were not available; no direct competition with any uranium imports from Tajikistan or Ukraine was cited, however. *** reported shipments of U.S.-produced uranium concentrates during 1990-91 to *** different U.S. purchasers totaling *** pounds of uranium concentrates. The firm claimed that the low price level in the spot market led the firm to lower its revenues on these sales by a total of *** from what it initially attempted to get.^{96 97} The Commission staff contacted a purchaser accounting for *** pounds of the alleged lost revenues; the conversation with the purchaser is discussed below.

*** reportedly sold *** pounds of its U.S.-produced uranium concentrates during ***, but asserted that it had to lower its price from *** per pound to *** per pound to make the sale, allegedly because of low U.S. import market prices. *** indicated that *** purchased *** pounds of U.S.S.R.-origin uranium concentrates at *** per pound during *** through a trader, ***;⁹⁸ *** did not know what price changes, if any, were made by the supplier. *** indicated that during this period the firm also purchased a total of *** pounds of *** uranium concentrates from *** at *** per pound and *** pounds of U.S.S.R. uranium concentrates from *** at *** per pound.

⁹⁵ ***.

⁹⁶ Three other U.S. producers of uranium concentrates, ***, asserted that their prices would have been higher if alleged uranium imports from Tajikistan, Ukraine, and the other former Soviet republics were not available; no direct competition with any uranium imports from Tajikistan or Ukraine was cited. ***, ***.

⁹⁷ Five other U.S. producers of uranium concentrates alleged that they had lost revenues but were unable to cite specific instances, noting that it is very difficult to know the country of origin of competing uranium concentrates. On the other hand, four U.S. producers reported that they had not lost revenues from sales of their uranium concentrates due to any imports of uranium from Tajikistan or Ukraine.

⁹⁸ *** did not know which firm(s) the trader was representing or the country(ies) of origin of the material it was offering at the time of the purchase. It learned of the country of origin when notified by *** of the book transfer to the electric utility's account. The volume and price figures for the purchased U.S.S.R. uranium concentrates are the same as those alleged by *** for its domestic product. It is likely that ***.

Lost Sales

One U.S. producer of uranium concentrates was able to identify specific lost sales allegations involving competition with uranium concentrates allegedly imported from Tajikistan, Ukraine, or from other former Soviet republics. The two U.S. converters and USEC indicated in their questionnaire responses that ***, ***, ***,

*** cited specific sales of uranium concentrates that it asserted it lost to alleged imports of uranium concentrates from Tajikistan, Ukraine, or the other former Soviet republics.⁹⁹ These lost sales allegations occurred during 1990-92 and totaled about *** million pounds of uranium concentrates valued at *** (based on *** rejected price quotes). The Commission contacted five purchasers, which accounted for *** million pounds of the alleged lost sales of uranium concentrates; conversations with the purchasers are discussed below.

*** reportedly offered *** pounds of its U.S.-produced uranium concentrates during *** and *** pounds during *** at *** per pound, respectively, but asserted that it lost the sales to lower priced imported U.S.S.R. uranium concentrates. *** indicated that a trader, ***, quoted *** the figures cited above, possibly for a U.S. producer.¹⁰⁰ *** purchased uranium concentrates from *** in both of these transactions, which involved *** purchases. In the *** transaction, *** purchased a total of *** pounds of uranium concentrates from *** at *** per pound. In the *** transaction, *** purchased a total of *** pounds of uranium concentrates at *** per pound. Of this latter quantity, *** pounds were from Ukraine and the remaining *** pounds were from former Soviet republics other than Tajikistan and Ukraine.

*** reportedly offered *** a total of *** pounds of its U.S.-produced uranium concentrates in four transactions during ***, but asserted that it lost these sales to lower priced imported U.S.S.R. uranium concentrates. *** reported that in *** it offered *** pounds of U.S.-produced uranium concentrates at *** per pound and another *** pounds at *** per pound. In *** reportedly offered *** pounds at *** per pound; in ***, the U.S. producer offered *** pounds at *** per pound, and in *** it offered *** pounds at *** per pound.

⁹⁹ Eight other U.S. producers of uranium concentrates alleged that they had lost sales but were unable to cite specific instances, noting that it is very difficult to know the country of origin of competing uranium concentrates. On the other hand, four U.S. producers reported that they had not lost sales of their uranium concentrates to any imports of uranium from Tajikistan or Ukraine.

¹⁰⁰ *** did not pursue the higher priced bids of *** and, therefore, does not know which firm(s) the trader was representing or the country(ies) of origin of the material it was offering.

*** indicated that *** purchased uranium concentrates produced in the United States and imported from *** during January 1990-March 1993; the firm did not buy uranium concentrates from Tajikistan, Ukraine, or any of the other former Soviet republics.¹⁰¹ *** noted that the *** offers were unsolicited bids; *** was not in the market for uranium concentrates at these times and therefore did not purchase the offered domestic material or any other uranium concentrates during these periods. *** reported that the *** transaction was a spot purchase wherein *** purchased uranium concentrates that were priced lower than those of ***; the purchased material was from one or more of the following countries--***. The *** transaction involved a multiyear contract for delivery during ***. *** indicated that *** purchased uranium concentrates that were priced lower than those of ***; the latter purchased material was from one or more of the following countries--***.

*** reportedly offered *** a total of *** pounds of its U.S.-produced uranium concentrates in ***, but asserted that it lost these sales to lower priced imported U.S.S.R. uranium concentrates. *** reported that in *** it offered *** pounds of U.S.-produced uranium concentrates at *** per pound and in *** it offered the *** pounds at *** per pound.

*** indicated that the firm had no records of the *** transaction. In the *** transaction, a trader, ***, quoted the electric utility the figures cited above, possibly for a U.S. producer.¹⁰² In this latter transaction, *** purchased *** pounds of *** uranium concentrates at *** per pound instead of the *** pounds quoted by ***.

*** reportedly offered *** pounds of its U.S.-produced uranium concentrates during *** at *** per pound, but asserted that it lost the sale to lower priced imported U.S.S.R. uranium concentrates. *** indicated that a trader, ***, quoted the electric utility the figures cited above, possibly for a U.S. producer.¹⁰³ *** reported that the *** transaction was a spot purchase and his firm bought *** uranium concentrates from *** per pound, which was the lowest price bid. He commented that ***, another bidder, had offered *** open-origin uranium concentrates at *** per pound.

*** reportedly offered *** pounds of its U.S.-produced uranium concentrates during *** at *** per pound, but asserted that it lost the sale to lower priced imported U.S.S.R. uranium concentrates. *** indicated that *** made an unsolicited bid to ***, at the alleged volume and price for the producer's uranium concentrates. Just prior to this unsolicited bid, *** had concluded a spot purchase of uranium concentrates from *** at *** per pound

¹⁰¹ *** considers it too risky to purchase uranium concentrates from the former Soviet republics.

¹⁰² *** did not pursue the bid of *** and, therefore, does not know which firm(s) the trader was representing or the country(ies) of origin of the material it was offering.

¹⁰³ *** quoted *** prices of *** per pound for *** pounds of uranium concentrates. *** did not pursue the higher priced bids of *** and, therefore, does not know which firm(s) the trader was representing or the country(ies) of origin of the material it was offering.

for delivery by ***.¹⁰⁴ *** noted that *** unsolicited bid came at a time when *** did not require any additional uranium concentrates and, therefore, was not considered by ***.

¹⁰⁴ ***. *** had specified open-origin material and until it receives delivery will not know the country of origin of the uranium concentrates that it purchased from ***.

APPENDIX A
FEDERAL REGISTER NOTICES

application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

EFFECTIVE DATE: May 13, 1993.

FOR FURTHER INFORMATION CONTACT: Tedford Briggs (202-205-3181), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

SUPPLEMENTARY INFORMATION:

Background

This investigation is being continued as a result of notification by the Department of Commerce that the Government of Tajikistan has terminated the suspension agreement on uranium from Tajikistan and that Commerce has resumed its antidumping investigation. Consequently, the Commission is continuing its investigation.

Participation in the Investigation and Public Service List

Persons wishing to participate in the investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in § 201.11 of the Commission's rules, not later than twenty-one (21) days after publication of this notice in the Federal Register. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to this investigation upon the expiration of the period for filing entries of appearance.

Limited Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and BPI Service List

Pursuant to § 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in this final investigation available to authorized applicants under the APO issued in the investigation, provided that the application is made not later than twenty-one (21) days after the publication of this notice in the Federal Register. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

INTERNATIONAL TRADE COMMISSION

(Investigation No. 731-TA-539-D (Final))

Uranium From Tajikistan

AGENCY: United States International Trade Commission.

ACTION: Continuation and scheduling of a final antidumping investigation.

SUMMARY: The Commission hereby gives notice of the continuation of final antidumping investigation No. 731-TA-539-D (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. 1673d(b)) (the Act) to determine whether 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 Tajikistan of uranium, provided for in subheadings 2612.10.00, 2844.10.10, 2844.10.20, 2844.10.50, and 2844.20.00 of the Harmonized Tariff Schedule of the United States.

For further information concerning the conduct of this investigation, hearing procedures, and rules of general

Staff Report

The prehearing staff report in this investigation will be placed in the nonpublic record on June 18, 1993, and a public version will be issued thereafter, pursuant to § 207.21 of the Commission's rules.

Hearing

The Commission will hold a hearing in connection with this investigation beginning at 9:30 a.m. on July 1, 1993, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before June 17, 1993. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 9:30 a.m. on June 23, 1993, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by §§ 201.8(b)(2), 201.13(f), and 207.23(b) of the Commission's rules. Parties are strongly encouraged to submit as early in the investigation as possible any requests to present a portion of their hearing testimony *in camera*.

Written Submissions

Each party is encouraged to submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of § 207.22 of the Commission's rules; the deadline for filing is June 25, 1993. Parties may also file written testimony in connection with their presentation at the hearing, as provided in § 207.23(b) of the Commission's rules, and posthearing briefs, which must conform with the provisions of § 207.24 of the Commission's rules. The deadline for filing posthearing briefs is July 12, 1993; witness testimony must be filed no later than three (3) days before the hearing. In addition, any person who has not entered an appearance as a party to the investigation may submit a written statement of information pertinent to the subject of the investigation on or before July 12, 1993. A supplemental brief addressing only the final antidumping determination of the Department of Commerce is due on July 16, 1993. All written submissions must conform with the provisions of § 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of

§§ 201.6, 207.3, and 207.7 of the Commission's rules.

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

Authority: This investigation is being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to § 207.20 of the Commission's rules.

Issued: May 17, 1993.

By order of the Commission.

Paul R. Bardos,

Acting Secretary.

[FR Doc. 93-12061 Filed 5-20-93; 8:45 am]

BILLING CODE 7021-02-U

[Investigation No. 731-TA-539-E (Final)]

Uranium From Ukraine

AGENCY: International Trade Commission.

ACTION: Continuation and scheduling of a final antidumping investigation.

SUMMARY: The Commission hereby gives notice of the continuation of final antidumping investigation No. 731-TA-539-E (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. 1673d(b)) (the Act) to determine whether 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 Ukraine of uranium, provided for in subheadings 2612.10.00, 2844.10.10, 2844.10.20, 2844.10.50, and 2844.20.00 of the Harmonized Tariff Schedule of the United States.

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

EFFECTIVE DATE: April 19, 1993.

FOR FURTHER INFORMATION CONTACT: Tedford Briggs (202-205-3181), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

SUPPLEMENTARY INFORMATION:

Background

This investigation is being continued as a result of notification by the Department of Commerce that the Government of Ukraine has terminated the suspension agreement on uranium from Ukraine and that Commerce has resumed its antidumping investigation (58 FR 21144, April 19, 1993). Consequently, the Commission is continuing its investigation.

Participation in the Investigation and Public Service List

Persons wishing to participate in the investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in § 201.11 of the Commission's rules, not

later than twenty-one (21) days after publication of this notice in the Federal Register. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to this investigation upon the expiration of the period for filing entries of appearance.

Limited Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and BPI Service List

Pursuant to § 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in this final investigation available to authorized applicants under the APO issued in the investigation, provided that the application is made not later than twenty-one (21) days after the publication of this notice in the Federal Register. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

Staff Report

The prehearing staff report in this investigation will be placed in the nonpublic record on June 18, 1993, and a public version will be issued thereafter, pursuant to § 207.21 of the Commission's rules.

Hearing

The Commission will hold a hearing in connection with this investigation beginning at 9:30 a.m. on July 1, 1993, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before June 17, 1993. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 9:30 a.m. on June 23, 1993, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by §§ 201.6(b)(2), 201.13(f), and 207.23(b) of the Commission's rules. Parties are strongly encouraged to submit as early in the investigation as possible any requests to present a portion of their hearing testimony *in camera*.

Written Submissions

Each party is encouraged to submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of § 207.22 of the Commission's rules; the deadline for

filing is June 25, 1993. Parties may also file written testimony in connection with their presentation at the hearing, as provided in § 207.23(b) of the Commission's rules, and posthearing briefs, which must conform with the provisions of § 207.24 of the Commission's rules. The deadline for filing posthearing briefs is July 12, 1993; witness testimony must be filed no later than three (3) days before the hearing. In addition, any person who has not entered an appearance as a party to the investigation may submit a written statement of information pertinent to the subject of the investigation on or before July 12, 1993. All written submissions must conform with the provisions of § 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of §§ 201.6, 207.3, and 207.7 of the Commission's rules.

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

Authority: This investigation is being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to § 207.20 of the Commission's rules.

Issued: April 26, 1993.

By order of the Commission.

Paul R. Bardos,

Acting Secretary.

[FR Doc. 93-10566 Filed 5-4-93; 8:45 am]

BILLING CODE 7020-02-P

DEPARTMENT OF COMMERCE

International Trade Administration
[A-823-802, A-843-802]

Final Determination of Sales at Less Than Fair Value: Uranium From Ukraine and Tajikistan

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

EFFECTIVE DATE: July 8, 1993.

FOR FURTHER INFORMATION CONTACT: Lawrence P. Sullivan or Carole A. Showers, Office of Countervailing Investigations, Import Administration, U.S. Department of Commerce, room B099, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone (202) 482-0114 or 482-3217, respectively.

FINAL DETERMINATIONS: The Department determines that imports of uranium from Ukraine and Tajikistan are being, or are likely to be, sold in the United States at less than fair value (LTFV), as provided in section 735 of the Tariff Act of 1930, as amended (the Act). Because respondents failed to provide adequate information in a timely manner, we have based our LTFV calculations on the best information otherwise available (BIA). The estimated margin is shown in the *Suspension of Liquidation* section of this notice.

Case History

Since the publication of our preliminary determinations in the Federal Register on June 3, 1992, (57 FR 23380), the following events have occurred.

Pursuant to a request made by V/O Technabexport (Tenex), Nusocco Trading Corporation (Nusocco), Global Nuclear Services and Supply (GNSS), and Energy Fuels Nuclear (EFN) (collectively referred to herein as Tenex), the Department postponed the final determinations for these investigations until October 16, 1992 (57 FR 30946, July 13, 1992).

On July 15, 1992, the Department received an untimely response from Ukraine to our questionnaire. This

response stated that no uranium has been shipped from Ukraine to the United States since December 1, 1991, and before that date Ukraine was not an independent country. Therefore, it did not have responsibility for its exports.

On September 16, 1992, the Department initiated a proposed suspension agreement with the Governments of Ukraine and Tajikistan. On October 7, 1992, we received comments regarding the proposed suspension agreement from Ukraine and Tajikistan, petitioners, and the U.S. Department of Energy. On October 15, 1992, we received a letter from petitioners in which they conditionally waived their right to comment on a proposed agreement which might be initiated by Tajikistan.

On September 21, 1992, we received case briefs from petitioners, Tenax, the Yankee Group, Ukraine, and Tajikistan. We received rebuttal briefs from these parties on September 28, 1992.

On September 25, 1992, the United States Court of International Trade (CIT) sustained the Department's decision to continue these investigations against Ukraine and Tajikistan, formerly constituent republics of the former Union of Soviet Socialist Republics (USSR). See, *Technobexport, Ltd. et al. v. United States*, 802 F. Supp. 469 (CIT 1992).

On October 13, 1992, Homestake Mining Company withdrew as a petitioner in these investigations.

On October 16, 1992, the Governments of the United States and the Governments of Ukraine and Tajikistan signed agreements suspending these investigations. On April 19, 1993, pursuant to a request by the Government of Ukraine (GOU), the Department published a notice in the Federal Register terminating the suspension agreement and resuming the investigation with respect to Ukraine effective April 12, 1993 (58 FR 21144). On May 19, 1993, pursuant to a request by the Government of Tajikistan (GOT), the Department published a notice in the Federal Register terminating the suspension agreement and resuming the investigation with respect to Tajikistan effective April 26, 1993 (58 FR 29197). We stated in both of those notices that we would only use information already submitted in the investigations.

On May 25, 1993, the GOU and GOT submitted letters requesting that the Department postpone the final determinations in their respective investigations by 60 days, in accordance with section 353.20(b) of the Department's regulations (19 CFR § 353.20(b)). On May 26, 1993, petitioners objected to these requests on

the grounds that the Department had compelling reasons to deny them. On June 4, 1993, the Department determined that no additional time was needed for any parties to review the preliminary determinations nor was any additional time needed for the Department to reach its final determinations and, therefore, found compelling reasons to deny the requests for postponement.

Scope of the Investigation

We have determined that the merchandise covered by these investigations constitutes one class or kind of merchandise (see *DOC Position to Comment 3*, below). We have further determined that highly enriched uranium (HEU) is included in the scope of these investigations. For the Department's rationale regarding this issue, see Memorandum to Alan M. Dunn from Francis J. Sailer dated October 16, 1992, and *DOC Position to Comment 4*, below. The above-referenced memorandum and all other memoranda cited in this notice can be found in the public file in the Central Records Unit, Room B099 of the Main Commerce Building.

Since the preliminary determinations, the Department has clarified the scope of these investigations for the U.S. Customs Service. "Milling" or "conversion" performed in a third country does not confer origin for purposes of these investigations. Milling consists of processing uranium ore into uranium concentrate. Conversion consists of transforming uranium concentrate into natural uranium hexafluoride (UF₆). Since milling or conversion does not confer origin, uranium ore or concentrate of Ukrainian or Turk origin that is subsequently milled and/or converted in a third country will be considered of Ukrainian or Turk origin, respectively. The Department continues to regard enrichment of uranium as conferring origin.

The merchandise covered by these investigations includes natural uranium in the form of uranium ore and concentrates; natural uranium metal and natural uranium compounds; alloys, dispersions (including ceramics), ceramic products and mixtures containing natural uranium or natural uranium compounds; uranium enriched in U₂₃₅ and its compounds; alloys, dispersions (including ceramics), ceramic products, and mixtures containing uranium enriched in U₂₃₅ or compounds of enriched uranium (LEU) and HEU enriched uranium (UEU). Both low enriched uranium (LEU) and HEU are included within the scope of these investigations. LEU is uranium enriched

in U₂₃₅ to a level of up to 20 percent, while HEU is uranium enriched in U₂₃₅ to a level of 20 percent or more. The uranium subject to these investigations is provided for under subheadings 2612.10.00.00, 2844.10.10.00, 2844.10.20.10, 2844.10.20.25, 2844.10.20.50, 2844.10.20.55, 2844.10.50.00, 2844.10.00.10, 2844.20.00.20, 2844.20.00.30, and 2844.20.00.50, of the Harmonized Tariff Schedule (HTS). Although the HTS subheadings are provided for convenience and customs purposes, our written description of the scope of these proceedings is dispositive.

Period of Investigation

The period of investigation (POI) is June 1 through November 30, 1991.

Best Information Available

We have determined, in accordance with section 776(c) of the Act, that the use of BIA is appropriate in these investigations. In deciding whether to use BIA, section 776(c) provides that the Department may take into account whether the respondent provided the information requested in a timely manner and in the form required.

As stated in our preliminary determinations, Tenax, the sole exporter of the subject merchandise during the POI, submitted certain information with respect to U.S. prices. However, the Department did not receive adequate and timely factors of production information, despite extensive efforts by the Department to obtain such information. We eventually received a partial response from Tenax with regard to factors of production information that was unusable for many reasons. First, the information provided in the response was severely deficient on its face in that it did not provide the data requested by the Department in its questionnaire. The data provided was primarily cost data, not factors of production data. Second, Tenax is not a producer of the subject merchandise. It is merely an exporter and, as such, does not have first-hand knowledge of the production enterprises. Verification of second-hand knowledge would be a futile endeavor. Third, at the time of our preliminary determinations, the response was not certified by officials at the production enterprises. Although the Department did receive an untimely certification (two months after the information was filed), it was from an official of only one of several production enterprises in question. Since the preliminary determinations, the Department received a response from Ukraine. This response did not provide the information sought by the

Department and was submitted well after the Department's deadline.

The incomplete and untimely nature of these responses requires the Department to use BIA. BIA is based on information submitted in the petition and detailed in our initiation notice. Limited modifications to this information were made, as appropriate, in response to the comments submitted by interested parties and two other parties from which the Department solicited information (see *United States Price, Foreign Market Value, and Interested Parties Comments* sections, below, and Memorandum from Linda K. Eads and Lawrence P. Sullivan to Marie Parker and Susan H. Kuback dated May 27, 1992).

Tenex has argued that it should not be held responsible for the lack of response from the production enterprises and, therefore, it should not be penalized for the inaction of those entities. However, in a nonmarket economy (NME) case, the Department presumes control of all production and exporting facilities (see, e.g., *Frad Determination of Sales at Less Than Fair Value: Tungsten Ore Concentrates from the People's Republic of China* (Tungsten), 56 FR 47738 (September 20, 1991)). Thus, the Department holds each country's central government responsible for providing an adequate response to all sections of the Department's questionnaire. With respect to Ukraine and Tajikistan, the Department requires a response which provides complete and accurate data on U.S. sales and factors of production in order to consider any response for a determination. Tenex's response represents only a small part of the information required by the Department to perform an LTPV analysis, and is, therefore, substantially deficient.

Fair Value Comparisons

To determine whether sales of uranium from Ukraine and Tajikistan to the United States were made at less than fair value, we compared the United States prices (USP) to the foreign market value (FMV), as specified in the *United States Price and Foreign Market Value* sections of this notice. As stated above, the margin is based entirely on BIA.

The Department's practice is to base BIA on a simple average of the margins based on petition data, as opposed to the highest margin based on petition data, when we determine that respondents have attempted to cooperate with the Department's investigations (see, e.g., *Preliminary Determination of Sales at Less Than Fair Value: Circular Welded Non-Alloy Steel Pipe From Taiwan*, 57 FR 17892

(April 28, 1992)). We continue to believe that Tenex attempted to cooperate in these proceedings because it supplied the Department with USP data and attempted to provide FMV data. Therefore, we are basing the final margin on an average of the margins for uranium concentrates and enriched uranium derived from the petition.

United States Price

Petitioners' calculation of USP is based on an estimated weighted average f.o.b. import price taken from U.S. Bureau of Census statistics on imports of natural and enriched uranium from the former USSR during the period January 1990 through August 1991.

Foreign Market Value

Petitioners alleged, and the Department determined, that the former USSR was an NME country during the POI within the meaning of section 773(c) of the Act (see Memorandum from David Mueller to Carole Showers dated March 24, 1992). In accordance with section 771(16)(C) of the Act, any determination that a foreign country is an NME shall remain in effect until revoked. This determination covers a geographic area, each part of which assumes the previous NME character in the event of dissociation. *cf.* *Technobepport*, 802 F. Supp. at 472 ("[I]n order to fully effectuate the antidumping laws, imports from successor countries may bear the duties calculated based on the imports from the predecessor nations.") Therefore, Ukraine and Tajikistan will be treated as NMEs until the Department reverses its determination. In these investigations, no information has been presented which would permit the Department to reconsider the NME status of Ukraine or Tajikistan.

Accordingly, petitioners calculated FMV on the basis of constructed value (CV), using the factors of production methodology specified in section 773(c) of the Act. Petitioners calculated separate CVs for mined and enriched uranium.

We have followed the methodology used in the initiation of these investigations (56 FR 63711, 63712, December 5, 1991), as modified in the preliminary determinations, except in the following instances: (1) For mined uranium, we adjusted the Ukrainian labor value for a holiday bonus which was incorrectly excluded, and (2) for enriched uranium, we calculated the CV based on the British Nuclear Fuels Ltd. (BNFL) 1991 financial statement because the 1991 statement covers a period nearly concurrent with calendar year 1990, in the preliminary

determinations, the Department stated its intention to express, where possible, all factors and value in 1990 terms, as BIA, in order to ensure consistency.

Interested Party Comments

All written comments submitted by the interested parties in these investigations which have not been previously addressed in this notice are addressed below. The comments by petitioners, Tenex, and the Yankee Group were submitted in the context of all 12 investigations involving uranium from the newly independent states of the former USSR (NIS). Hence, while reference is made to the NIS or to certain states of the NIS, we are only concerned here with Ukraine and Tajikistan.

Comment 1

Tenex asserts that the Department has improperly transformed its single investigation of uranium imports from the USSR into separate investigations of such imports from each of the NIS. Specifically, Tenex asserts the following: (1) The International Trade Commission's (ITC) preliminary injury determination with respect to uranium imports from the USSR does not support the Department's preliminary determinations or its order to suspend liquidation of entries of such imports from the NIS; (2) the Department issued its preliminary determinations without properly initiating investigations with respect to uranium imports from the NIS; (3) the record contains no factual information sustaining investigations of or supporting determinations of LTPV sales of uranium imports from any of the six uranium-producing NIS; and (4) the Department has failed to make a separate fair value comparison for each NIS. Each of these, according to Tenex, results in a violation of the antidumping law and is legally invalid.

Ukraine and Tajikistan argue that these investigations are unlawful and should be terminated. Additionally, they argue that 19 U.S.C. § 1677b(c) provides that NME determinations must be made on a country-specific basis. Nowhere in the statute are "geographic area" or "geopolitical boundaries" discussed.

Petitioners claim to have demonstrated in various submissions to the Department and the CIT that antidumping investigations processed against unfairly traded merchandise, not the "country" in which the merchandise is produced or from which it is exported. They argue that the statutory mandate that imports of unfairly traded merchandise be investigated and, if appropriate,

antidumping duties imposed, does not disappear because of political changes in the territory in which the merchandise is produced or exported. The Department's determination not to terminate its investigations, and the CIT's affirmation of that determination in *Teichsnaborport*, were proper.

DOC Position

On September 25, 1992, the CIT confirmed that the Department had the legal authority to continue these investigations against the NIS of the former USSR, including Ukraine and Tajikistan. The basis for the Department's decision is described below.

First, there is no requirement in the antidumping law that an ongoing investigation be rescinded when the country named in the petition ceases to exist. This is not to say that there are no geographical aspects to an antidumping order. Indeed, Commerce and the FTC make determinations regarding LTFV sales and injury concerning

merchandise produced within certain geopolitical boundaries. When an order is issued, merchandise produced within such boundaries is subject to the order unless expressly excluded from it. However, Congress did not consider the possibility of the dissolution of a country during an antidumping duty investigation. Therefore, it was the Department's task to determine what Congress would have intended had it considered such a situation. The effect of terminating a case, based on the dissolution of the country named in the petition, would be to create a gap in the coverage of the antidumping law. The newly emerging states would be able to dump with impunity until sufficient information developed for the petitioners to file new petitions.

Because the purpose of the antidumping law is to provide the U.S. domestic industry relief from injuriously dumped merchandise, the Congress could not have intended for the law to be interpreted to allow the dissolution of a certain country to create a gap in the law's coverage which would effectively prevent the U.S. domestic industry from obtaining relief for a certain period of time.

Comment 2

Ukraine and Tajikistan assert that the Department has ignored the procedural requirements of the statute for conducting an investigation (see, e.g., 19 U.S.C. 1673b(e), (b), and (c)), because the FTC's preliminary determination only addressed imports from the USSR. The individual countries were not provided the opportunity to present

evidence or argue to the ITC that: (1) Their data should not be cumulated with the data from the other republics; (2) their imports were nonexistent or negligible; or, (3) there was no evidence of injury to the domestic industry by reason of imports from that particular country. Lacking a valid preliminary injury determination by the ITC, the Department may not suspend liquidation.

Petitioners argue that the ITC's preliminary injury determination is sufficient to permit the Department to issue preliminary and final affirmative determinations as to LTFV sales of uranium from the NIS of the former USSR. Petitioners assert that the respondents' arguments were rejected by the ITC and raised unsuccessfully before the CIT. They state that political changes in an exporting territory do not render the ITC's preliminary determination null and void.

DOC Position

Respondents' challenge to the preliminary determination is premature and without legal merit. The ITC's preliminary injury determination was issued on December 23, 1991, prior to recognition by the United States of the independent republics. The ITC specifically stated in its preliminary determination that for "[p]urposes of the investigation, the USSR includes each and every Republic that was a member of the USSR on November 8, 1991." Respondents do not dispute that uranium was produced within their borders both prior to and after November 8, 1991, nor do they contend that there was any deficiency in the injury determination at the time it was issued. Accordingly, it is clear that imports of uranium coming from the geographic area now comprised of the NIS were considered in the ITC's preliminary determination.

However, like the Department's antidumping duty investigation, the ITC's injury determination focuses upon imported merchandise, not upon the country from which the merchandise is exported. Accordingly, for the same reasons discussed above with regard to the validity of the Department's antidumping duty determination, the ITC's preliminary injury determination remains valid.

The continuing validity of the preliminary determination is evidenced by the ITC's recent preliminary determination in *Ferrosilicon from Argentina, Kazakhstan, the People's Republic of China, Russia, Ukraine and Venezuela*, Inv. No. 303-TA-23, 731-TA-565-570, (Prelim.) USITC Pub. 2535 (July 1992). In *Ferrosilicon, Russia*,

Ukraine and Kazakhstan argued that imports to the United States from those regions prior to the dissolution of the USSR could not be considered by the ITC in reaching its injury determination. In rejecting this argument, the ITC stated that "[i]f the Commission were to accept respondents' argument that it cannot even consider imports from these regions prior to the time they became countries, that might prevent an industry otherwise entitled to relief from receiving any protection from unfairly traded imports from the same factories that are allegedly continuing to export dumped ferrosilicon to the United States simply because the political status of these areas had changed. The occurrence of other events changing the legal status of a foreign producer during the period of investigation, such as a change in ownership of the facility or the imposition of an export quota by the country in question, would not preclude the Commission from considering the consequences of the product that had been exported to the United States prior to such an event."

Finally, respondents' perceived error in the Department's preliminary determinations does not require the termination of the investigation. Any error in the preliminary determinations can be fully addressed in the final determinations. See *NTN Bearing Corp. v. United States*, ___ CIT ___, 757 F. Supp. 1425 (1991).

Comment 3

Tenax and the Yenkee Group contend that the Department should find three separate classes or kinds of merchandise. Tenax bases its statement on Department precedent and the 1993 CIT decision in *Diversified Products Corp. v. United States*, 6 CIT 155, 572 F. Supp. 983 (Ct. Int'l Trade 1993) (*Diversified*) which establishes certain criteria. Tenax alleges that the Department misapplied the *Diversified* criteria in the preliminary determinations when it found that there was only one class or kind of merchandise.

In support of their arguments, both Tenax and the Yenkee Group cite *Final Determination of Sales at Less Than Fair Value: Dextrinic Acid and its Chlorinated Derivatives From Japan Used in the Swimming Pool Trade (Gyauric Acid)* 49 FR 7424, (February 29, 1984), where the Department found three separate classes or kinds of merchandise. The Yenkee Group posits that each of the three products subject to the *Gyauric Acid* investigation had different end uses even though two of the products were derivatives of the

third. The situation in uranium is analogous in that concentrates are the raw material used to produce uranium hexafluoride (UF₆) and LEU. They also argue that the ultimate consumers and the ultimate use for all three products in *Cyranuric Acid* were the same. In this case, utilities are the ultimate customers and the ultimate use is fuel for their nuclear reactors. Similarly, the raw materials in both cases cannot perform the end uses that the derivatives are able to perform. Therefore, the logic in *Cyranuric Acid* can be extended to this case.

With respect to physical characteristics, the Yankee Group argues that the Department's reasoning is flawed. Despite the fact that all three forms of uranium share a common fundamental attribute, the U²³⁵ isotope, they can still be determined to constitute separate classes or kinds of merchandise. The concentration levels of the U²³⁵ isotope vary greatly between uranium concentrates and UF₆, on the one hand, and LEU, on the other hand. In *Cyranuric Acid*, all of the products shared the fundamental attribute of chlorine. The differences in the chlorine levels of the derivative products in *Cyranuric Acid* were less than the different concentration levels of U²³⁵.

Further, the Yankee Group contends that petitioners' analysis concerning physical differences is inaccurate and misleading and should be rejected. The physical differences between the various forms of uranium are significant. Petitioners' emphasis on the common presence of the U²³⁵ isotope ignores the different chemical structures and physical properties between concentrates, UF₆, and LEU. The Department found three classes or kinds of merchandise in *Cyranuric Acid* based on the fact "that the chemical compositions of these products are distinct." Considering the different chemical compositions between the three forms of uranium, the Department should make a finding of three separate classes or kinds.

With respect to the different uses for these products, the Yankee Group argues that the Department may only find a single class or kind of merchandise when the raw material has "no other use than for" producing the derivative product (see, e.g., *3F Microdroids and Coated Media Therapy from Japan*, 54 FR 6,433, 6,434 (February 10, 1989)). In this case, concentrates and UF₆ are the raw materials used in producing LEU which is used as a feedstock for light-water nuclear reactors. Concentrates are also used in the glass industry, specialty metals industry, the manufacture of fuel

for heavy-water reactors, plutonium production for nuclear weapons, and in producing uranium tetrafluoride. The Department should reconsider its decision and assign greater weight to the different uses for concentrates and UF₆.

With respect to end users, the Yankee Group asserts that uranium purchasers and their expectations differ greatly.

Purchasers of uranium range from utility companies to brokers and traders to converters to enrichers to governmental entities. Purchaser expectations vary with the end use and costs associated with conversion and enrichment.

Finally, with respect to channels of trade, the Yankee Group states that concentrates, UF₆, and LEU are distributed, stored, and shipped differently. Therefore, they are sold in distinct channels of trade.

Petitioners assert that the Department correctly determined in its preliminary determinations that all forms of uranium constitute one class or kind of merchandise. This decision, they contend, is supported by the application of the criteria set forth in *Diversified and Kyoto Gas Chemical Industry Co. Ltd. v. United States*, 582 F. Supp. 857 (CIT 1984). The ultimate use, expectations of the ultimate purchasers, essential physical characteristics, and channels of trade are the same for all forms of uranium. Moreover, the similarity of the relative costs of the different forms require a finding of one class or kind of merchandise. The ultimate use for all forms of uranium is as commercial nuclear fuel. This includes HEU previously committed to weapons programs whose only application today is as fuel material to produce LEU and then commercial nuclear fuel. All forms of uranium are purchased with the expectation of its use as commercial fuel. Limited processing is required to produce LEU from HEU. All forms of uranium share the same essential physical attribute—the U²³⁵ isotope. Lastly, the channels of trade are the same for each form of uranium. Therefore, all forms of uranium are one class or kind of merchandise.

DOC Position

The Department disagrees with the Yankee Group and Tenex. *Cyranuric Acid* differs from the present situation in that the different chemical compositions of the three products in *Cyranuric Acid* resulted in three distinct end uses. While these uses were all related to the swimming pool trade, each of the derivatives of *Cyranuric Acid* could be used independently. Despite the different physical characteristics of uranium concentrates, UF₆, and LEU,

concentrates and UF₆ have virtually no other use than as inputs in the production of LEU which in turn is used as feedstock in nuclear reactor fuel assemblies. The only physical characteristic of consequence is the concentration level of the U²³⁵ isotope. Consumers of concentrates and UF₆ purchase these products only with a view to increasing the concentration level of the U²³⁵ isotope to obtain LEU. The ITC preliminarily determined that the subject merchandise constitutes one like product based on the ITC's semi-finished product analysis. Consistent with that concept, we find there to be a direct line of production from concentrates through the fuel assemblies, i.e., the concentrates and UF₆ can be treated as semi-finished products, whereas the two derivatives of *Cyranuric Acid* are produced independent of one another. This is the critical difference between *Cyranuric Acid* and this case.

The Yankee Group's analysis regarding the marginal uses of concentrates is misplaced. Every product has alternative uses or the potential for alternative uses. For purposes of a class or kind analysis, it is the Department's responsibility to determine not the number of alternative uses but rather the significance of any or all of those alternatives. According to the ITC preliminary determination, less than one percent of uranium concentrates consumption is used other than for the production of nuclear fuel. Therefore, while the Yankee Group may provide a list of several alternative uses of concentrates, the significance of those uses is minimal. It is proper, then, for the Department to analogize those cases with the Final Determination of Sales at Less Than Fair Value: Certain Forged Steel Crankshafts from the Federal Republic of Germany, 52 FR 28170 (July 28, 1987), in which the Department found there to be one class or kind of merchandise based, *inter alia*, on the fact that unmachined crankshafts have no other use than for machining into finished crankshafts.

In addition, as petitioners point out, the expectations of the ultimate purchaser (the electric utilities) are the same for all forms of uranium, i.e., for eventual production into nuclear fuel assemblies for use in nuclear reactors. Contrary to the assertions of the Yankee Group, the channels of trade for all uranium products are the same. While traders and brokers participate in the market in addition to utilities, all uranium is mined and milled, then shipped to a conversion facility for conversion into UF₆, then to an enrichment facility, then to a fuel

fabricator, than to the ultimate customer—utilities. (For a more detailed discussion of this issue, see Memorandum to Francis J. Sailer from Team, dated May 27, 1992.) For the Department's position with respect to HEU, see *DOC Position to Comment 4*, below.

Comment 4

Petitioners argue that contrary to the Department's preliminary scope determination, HEU is within the same class or kind of merchandise as the other forms of uranium subject to these investigations. The petition unequivocally covers uranium in all of its forms and the Department's notice of initiation included all "uranium enriched in U-235 and its compounds." According to petitioners, any exclusion of HEU from these investigations will severely compromise the relief to which they are entitled under the statute.

Petitioners hold that arguments proffered by Tenex on this issue are not persuasive and should be rejected. Specifically, unlike the case cited by Tenex, *Smith Corona Corp. v. United States*, 796 F. Supp. 1532 (CIT 1992), the petition included all forms of uranium, the Department initiated an all forms of uranium, and a respondent expressly stated that it understood that all forms of uranium were included in the scope. Even *Smith Corona*, however, would not preclude the Department from amending the scope of these investigations. The court did not state that the Department may not redefine the scope of an investigation after a preliminary determination.

Petitioners also state that the comments of the Department of Energy (DOE) on this issue are factually and legally insupportable. Moreover, DOE's comments illustrate that HEU and other forms of uranium are physically similar and commercially interchangeable. Petitioners allege that the DOE failed to explain that it was engaged in negotiations to import HEU from the Russian Federation to be blended down for use in commercial reactors and that the DOE misled the Department by implying that military applications constituted the only significant use for HEU.

Tenex agrees with the Department's preliminary determination that HEU is not within the scope of these investigations. Tenex disagrees with petitioners' claim that the Department included HEU in its initiation merely because HEU was not specifically excluded. Petitioners' subsequent efforts to include HEU within the scope of these investigations not only are

untimely, but reflect their determination to make the results of this determination as devastating as possible to the NIS, regardless how illegal, illogical, and unfair such results would be. Tenex insists that petitioners not be allowed to amend the petition to include HEU within these investigations.

Tenex also agrees with DOE's May 19, 1992, letter identifying natural uranium and LEU as a single class or kind of merchandise and HEU as a separate class or kind of merchandise. The radically different physical characteristics, and uses, expectations of the ultimate purchasers, channels of trade, and notably higher production costs make these products distinct from one another. While HEU is capable of sustaining a nuclear reaction of a magnitude that renders it uniquely capable of being used in nuclear weapons, a distinctly military application, LEU can only sustain reactions in light-water commercial nuclear reactors.

Tenex argues that HEU has uses that are unique to that product. HEU is typically used as a weapons grade nuclear fuel, a use which is not shared by any of the other uranium products. Although HEU can be blended down to produce LEU, its primary use is almost exclusively as a weapons-grade nuclear fuel. HEU and LEU have radically different physical characteristics, i.e., differing concentrations of the U-235 isotope. HEU and LEU differ radically in cost as well. HEU costs nearly eight times as much. These differences, in addition to their different ultimate uses, compel a finding that HEU and LEU are separate classes or kinds of merchandise.

The Yankee Group argues that LEU and HEU are the same class or kind of merchandise, and should be excluded from these investigations. As confirmed by the recent agreement between the United States and the Russian Federation to import HEU and blend it down to LEU for use in nuclear reactors, the end use, expectations, and distribution channels of both LEU and HEU are the same. Since the Department has treated HEU and LEU interchangeably and excluded HEU from its investigation, LEU should also be excluded.

DOC Position

The Department agrees with petitioners. Because the uses of HEU have changed only recently and because HEU was not expressly excluded from the petition, neither the petition nor the TIC and Department determinations previously rendered provide a definitive answer as to whether HEU is within the

scope of these investigations. Therefore, application of the *Diversified* criteria is necessary. As explained in greater detail in Memorandum to Alan M. Dunn from Francis J. Sailer dated October 16, 1992, the general physical characteristics, ultimate use and expectations of the ultimate purchaser indicate that HEU should be considered as part of the same class or kind of merchandise as LEU, U²³⁵, and concentrates.

Comment 5

Tenex argues that imports of uranium have not been massive and that the Department has no basis to ignore the data submitted by Tenex in making its critical circumstances determinations. Moreover, in considering this issue, the Department has not analyzed imports on a country-by-country basis nor has it provided a sufficient basis to depart from its normal comparison month. The Department also has no basis for finding "knowledge of dumping" because a margin based on imports of uranium from the USSR bears no legal relationship to the imports of uranium from the NIS. Therefore, the Department cannot reasonably conclude either that imports have been massive or that knowledge of dumping exists.

Petitioners reject as meritless Tenex's arguments regarding critical circumstances. Petitioners assert that the Department properly used official U.S. Government import statistics rather than the information proffered by Tenex. It would have been inconsistent and inequitable for the Department to accept unverified critical circumstances data from the same respondent that refused to submit a United States price database in proper form. Additionally, petitioners support the Department's application of the knowledge "test" that it uses in other NME cases. Margins of the magnitude in these proceedings are sufficient to constitute notice of dumping to an importer even under the most restricted knowledge test. Therefore, the Department's critical circumstances findings should be affirmed in the final determinations.

DOC Position

As explained above, we determined that we could not use Tenex's response for purposes of these investigations, including for critical circumstances purposes. In light of the absence of timely and adequate responses regarding exports to the United States, we used the margin from the petition and public import statistics maintained by the Department concerning imports from the USSR as BIA. (No public information regarding NIS state-specific imports to the United States during the

relevant time periods is available.) This analysis resulted in the finding of massive imports and a knowledge of dumping, based on the Department's regulations and established practices.

Additionally, the Department was justified in the comparison periods used to determine whether imports have been massive. The subject merchandise is transported by ship from the NIS to the United States, a journey of 17 days to over one month according to data submitted by petitioners. Therefore, any subject merchandise shipped on or after the filing date of the petition (November 8, 1991) would almost certainly enter the United States after December 1.

Otherwise, any shipments leaving the NIS before that date would enter the United States before December 1. Therefore, we determined it appropriate to use for comparison the periods December 1991 through March 1992 and August through November 1991.

Comment 6

Tenex, citing Final Determination of Sales at Less Than Fair Value: Certain Fresh Cut Flowers from Colombia, 52 FR 6642, 6644 (March 5, 1987), states that the period of investigation is not representative of, and is irrelevant to, prospective imports of uranium from the NIS because the USSR was in existence during the POI.

DOC Position

The POI in these investigations was selected according to section 353.42(b) of our regulations. While a different period may be chosen to reflect special circumstances, it would be neither correct nor possible to move the POI to post-date the initiation. First, to do so would allow respondents to change their behavior to avoid a finding of dumping. Second, as an administrative matter, it is necessary to pick a historic period so that all terms of the sales being investigated can be reported and analyzed.

Comment 7

Tenex states that even assuming the NIS are NMEs, the Department should have calculated FMV's using the export price exception set forth in section 773(c)(2) of the Act. Tenex stresses that since factors of production information is unavailable, the Department must therefore calculate FMV using the export prices.

Petitioners reject Tenex's argument that the statute suggests that the lack of respondents' factors data alone warrants use of third-country prices. Such an interpretation, petitioners state, would effectively allow respondents, self-servingly, to choose the method the

Department would use to calculate FMV's by deciding whether to submit a factors response to the Department's questionnaire.

DOC Position

We disagree with Tenex. As stated above, we received no timely and complete factors information from Ukraine or Tajikistan. This type of data is necessary in order to calculate FMV using the factors of production methodology, which is preferred under the statute. The export price exception generally should be used only when the Department lacks information to value the NME producer's factors of production in a comparable market economy which is a significant producer of the subject merchandise (see *Turgenan* at 47759). Thus, the alternative FMV methodology provided by section 773(c)(2) of the Act is for the Department to use only when we are unable to obtain valuation information, not factors information which is solely within the power of respondents to provide and which, in these investigations, respondents did not provide. If we were to accept Tenex's interpretation, we would effectively be allowing respondents to choose the method for calculating FMV simply by their decision of whether or not to submit a factors response. We do not believe that this is the purpose of the alternative provided by section 773(c)(2).

Comment 8

Petitioners state that the Department was incorrect in computing the preliminary margin as a simple average of the margins for two "such or similar" categories of merchandise. In petitioners' view, Tenex has been absolutely uncooperative in the investigations. If, however, the Department continues to base its final determination on an average of the margins, rather than take the highest margin calculated, it must calculate a single weighted-average margin based on imports of the subject merchandise during the POI.

Tenex asserts that the Department has correctly recognized that respondents have tried in good faith to cooperate with the Department's efforts to obtain factual information and, thus, should find respondents to be cooperative and apply a non-prejudicial BIA.

Additionally, petitioners' suggestion to weight-average the margins calculated for natural uranium and for enriched uranium is inappropriate because it raises upon the selective use of Tenex's data.

The Yankee Group asserts that the Department's calculation methodology is flawed and results in an overstated margin. The Department failed to calculate a potential uncollected dumping duty, as is usual in a dumping case, and instead calculated a simple average of the percentage dumping margins for each product. The Yankee Group asserts that, at the very least, the Department should sum the FMV's for each product, subtract the sum of the U.S. prices, and divide the result by the U.S. prices.

DOC Position

Petitioners and the Yankee Group argue explicitly or implicitly for weighting two BIA margins, rather than taking a simple average. While there are numerous ways in which these two numbers could be combined, the Department has stated that it will not fine-tune its BIA methodology (see *DOC Position to Comment 9*, below). In this case, we have simply followed Department precedent which directs the Department to use a simple average for BIA when the respondent has attempted to cooperate. Therefore, we have continued to take a simple average.

Comment 9

Tenex states that, as determined in *N.A.R. S.P.A. v. U.S.*, 741 F. Supp. 936, 942 (CIT 1990) and reaffirmed in *Midland Export Ltd. v. U.S.A.*, Slip Op. 92-53 (CIT 1992), the Department's choice of BIA must be supported by "substantial evidence on the record."

Tenex asserts that, although the Department did not obtain complete and verifiable questionnaire responses from any of the NIS governments, the Department should not rely solely upon petitioners' data. Such exclusivity, argues Tenex, defies the inherent principle of substantial evidence on the record. Tenex, citing from the record, *Tenex*, citing from the Department's Final Determination of Sales at Less Than Fair Value: Silicon Metal from the PRC, 56 FR 18570 (April 23, 1991) (*Silicon Metal*), asserts that the public information it submitted should be included within the realm of what is considered substantial evidence because there is no basis to ignore publicly available data in the record. Tenex also argues that, just as in the CIT decision, *Holmes Products Corp., and Estem Industries, Ltd. v. U.S.*, Slip Op. 92-118 (CIT 1992), it, like Estem, should be considered a complying party.

Therefore, the information it submitted on May 8, 1992, should be considered in the calculation of FMV based on BIA. Petitioners state that the Department should continue to refuse to consider Tenex's submissions on the appropriate

basis for BIA, as well as that portion of Tenex's case brief which again presents the information Tenex deems "best." They contend that the Department's selection of BIA in past determinations reflects an unwillingness to entertain substantive comments and information on BIA from non-complying respondents.

In response to Tenex's citing of *Silicon Metal*, petitioners state that the Department entertained a very limited comment from importers concerning the accuracy of one surrogate cost used as BIA. The importers did not submit wholesale factual information to be used as BIA. Here, Tenex seeks improperly to provide comprehensive factual information for use as BIA.

Petitioners argue that neither the statute, *Silicon Metal*, nor any administrative or judicial precedent permits use of Tenex's information. Specifically, they assert, citing *Plastichio Group of the Asm. of Food Industries, Inc. v. United States*, 671 F. Supp. 31, 40 (1987), that the courts have emphasized that the BIA rule should be applied in such a way that respondents not be allowed to "control the results of the investigation by providing partial information or by delaying or otherwise hindering the investigation." They also cite the following from *The Tinklen Company v. United States*, 788 F. Supp. 1216 (CIT 1982), quoting *Rhone Poulenc, Inc. v. United States*, 710 F. Supp. 343, 346 (1988), *off'd* 898 F.2d 1185 (1990): "Once Commerce has exercised its discretion to use the BIA rule against a respondent, it is for Commerce, not the respondent to determine what is the best information." "Therefore, Tenex should not be allowed to select what will constitute BIA.

The Yankee Group contends that the Department imposed an unreasonably high barrier to the acceptance of outside information concerning BIA. By only considering proposals which demonstrated an inaccuracy or aberration on the part of the Department's initiation calculations, the Department excluded relevant information. The Department has an obligation to exercise its BIA discretion reasonably (see *Tinklen Co. v. United States*, 673 F. Supp. 495, 501 (1987)). The Yankee Group contends that the information it submitted should be given greater weight than afforded to it by the Department at the preliminary determinations.

DOC Position

The central purpose of the BIA rule is to induce respondents, in the absence of any subpoena power vested in the

agency, to provide Commerce with timely, complete, and accurate factual information, so that the Agency can determine current margins as accurately as possible within the time limits established by the Act. (See *Rhone Poulenc v. United States*, 899 F.2d 1185, 1191 (Fed. Cir. 1990).) Accordingly, in selecting a BIA rule, the Department must draw an inference that is adverse to the noncomplying respondent. Otherwise, respondents "would be able to control the amount of antidumping duties by selectively providing the Department with information." See *Olympic Adhesives v. United States*, 899 F.2d 1565, 1572 (Fed. Cir. 1990).

Accepting comments from non-complying respondents that lower the BIA rate conflicts with the purpose of the BIA rule by reducing their incentive to respond to the questionnaire. Thus, the Department accepts only very limited comments to correct gross errors in the petition which it would plainly be inequitable to allow to escape scrutiny. A reasonable degree of inaccuracy in the resulting number is acceptable (in fact, virtually unavoidable) because the Department only employs BIA where the respondents have frustrated the Department's efforts to calculate accurate margins by failing to furnish the necessary information. In this circumstance, the BIA rule gives the requirement of an adverse inference priority over the preference for accuracy.

BIA margins are supported by substantial evidence because the statutory requirement that they be based on substantial evidence must be balanced with the requirements of the BIA rule itself, as explained above. Requiring BIA margins to withstand the same level of scrutiny for accuracy as margins based on information in complying questionnaire responses effectively would need the BIA provision out of the statute. Thus, the Department's approach correctly reconciles the competing objectives of the BIA rule and the substantial evidence standard of review.

Consistent with these principles, for purposes of this final determination, we have examined all of the comments submitted by interested parties and others with respect to the selection of BIA. We have accepted from Tenex only comments on clerical errors and other gross errors clearly derivable from public information. Conversely, we have rejected all comments from Tenex based on information within its control, which should have been included in a questionnaire response, and all

comments constituting attempts to modify the BIA rule in Tenex's favor.

In examining the adjustments suggested by the non-respondent parties, we applied a similar standard as that used in the preliminary determinations. That is, we did not attempt to "fine-tune" the BIA. We only considered adopting a proposed change to the methodology in instances where our initiation methodology was shown to be plainly inaccurate or where a particular figure used in our calculations was demonstrated to be an aberration.

Comment 10

Petitioners argue that the Department should use certain respondent-provided data as BIA for United States prices so as to achieve an LTFV analysis which is as accurate as possible. There is no basis in the statute, the Department's regulations, or past practice to conclude that the Department is precluded from using any respondent-provided data as BIA. Citing *Tinklen Co. v. United States*, 11 CIT 786, 673 F. Supp. 495 (Ct. Int'l Trade 1987), petitioners claim that the CIT has recognized the propriety of using certain respondent data as BIA. In addition, petitioners contend the Department should use the actual product and sells assay values that respondents provided as BIA to calculate more accurate factors of production for the imported merchandise.

Tenex asserts that the Department should deny petitioners' request that it use Tenex's U.S. prices data and enriched uranium product (EURP) product and sells assay information as BIA in the final determination. Petitioners have consistently argued that the Department should reject Tenex's questionnaire response and their proposed adjustments to petitioners' FAV estimates (which would improve the Department's LTFV margin calculations).

DOC Position

We disagree with petitioners that the accuracy of the LTFV analysis would be enhanced through selective use of Tenex's response data. The Department did not verify any of the information therein because the Department considers Tenex's response as inadequate and deficient. Accordingly, the Department has not selectively employed data submitted by Tenex.

Comment 11

Tenex states that the Department's factors of production analysis is fundamentally flawed since the Department failed to properly determine

appropriate surrogate countries for each of the NIS under investigation. Tenex states that the surrogate countries chosen during the initiation were chosen specifically for the USSR and not for the separate NIS under investigation. Moreover, since all of the NIS are not at the same level of economic development, a single catch-all surrogate is not appropriate. Tenex also comments that a separate FMV and U.S. price for each uranium-producing NIS should be calculated rather than a single margin for all countries.

Tenex also states that Namibia was incorrectly used to value labor for mining and milling. Tenex accuses the Department of "shopping around" for the highest-cost surrogate because the value was not taken from the petition or the supplement and defied the Department's standard practice of using as few surrogates as possible. Tenex also argues that Namibia is an inappropriate surrogate for the former USSR in that the USSR is far more technically advanced than Namibia. Tenex asserts that while the Gross National Product (GNP) per capita is similar, the purchasing power parity (PPP) is not. Agricultural labor is extensive in Namibia and not in the former USSR. Namibia is sparsely populated while the former USSR is not. Tenex, therefore, concludes that Portugal is more comparable to the former USSR than Namibia for valuing labor mining and milling.

Petitioners assert that because the POI encompasses a period in which the USSR existed, the Department's determination to use surrogates at a "comparable level of economic development" was proper. The group of surrogates selected by the Department satisfies the economic comparability criteria and, therefore, is appropriate. Furthermore, no information has been presented which warrants reconsideration of the surrogate selection because the surrogates proposed by various respondents and other parties do not satisfy the statutory criteria governing surrogate selection.

Petitioners also contend that they attempted to obtain Namibian data for all factors. However, because of the limitation on reliable public data for mining factors costs, it was unavoidable that multiple surrogates would be used. They allege that the Namibian data is preferable to Portuguese labor data because the Portuguese data is outdated, and is not uranium-specific. The Namibian data, which is recent and uranium-specific, is the best information available.

DOC Position

We disagree with respondents. When the Department determined it proper to continue this case against Ukraine and Tajikistan, it deemed it appropriate to continue to apply the surrogates chosen for the USSR to Ukraine and Tajikistan (see Memorandum to Carolé Showers from David Mueller dated March 24, 1992).

With respect to choosing Namibia as the preferred surrogate for mining factors of production, consistent with 19 CFR 353.52(b), the Department followed its traditional analysis by considering the macroeconomic criteria of per capita GNP, the distribution of labor within the economy, and the role of economic growth of significant producers of comparable merchandise (see, e.g., Final Determination of Sales at Less Than Fair Value: Refined Antimony Trifluoride from the People's Republic of China, 57 FR 6801, (February 28, 1992)). The PPP data provided by Tenex does not persuade the Department to deviate from its established practice. Based on the criteria considered by the Department, and on the fact that Namibia is a significant producer of comparable merchandise, we have determined that this country is the proper surrogate.

In those instances where values were unavailable from Namibia, we have employed Portuguese values. Portugal was included in the list of comparable countries and, hence, use of Portuguese data is appropriate where data from the preferred surrogate was not available.

Comment 12

Tenex argues that the mines used by petitioners to calculate Canadian U₃O₈ factors of production were incorrect because they were not the mines in operation during the POI. This, Tenex argues, necessarily affected various calculated factors. In addition, Tenex states that operating cost estimates are incorrect and unsupported.

Tenex further asserts that Canadian mining labor was incorrectly adjusted in order to account for differences in labor productivity. Petitioners' use of East German and Czechoslovak experience to adjust for conditions in the USSR cannot be supported because the geological peculiarities of those countries' mines make them more labor-intensive than Canadian or Soviet mines.

Petitioners state that Tenex fails to acknowledge that the Department's responsibility is to identify the best information available for establishing what respondents' factors for producing U₃O₈ were during the POI given the

producers' refusal to provide timely responses. Petitioners suggest that respondents would have provided actual factors data were the actual data more favorable.

Petitioners reject the contention of Tenex that the Department should use 1991 Canadian mine data. Petitioners selected 1990 Canadian data because, in addition to being the more complete and accurate data available, it included eastern Canadian mines which are more representative of uranium mines in the NIS republics.

Finally, petitioners state that, lacking usable data on the relative use of each mining method and "geological peculiarities" in the former USSR, the Department's adjustment of Canadian labor usage is well-supported by substantial information on the record of these investigations. Because Tenex has failed to provide this data to the Department, the Department must seek the best information available which is the East European mine data, in conjunction with the Canadian data. Ignoring this data because Tenex contends it differs in some way from what would have been demonstrated if actual data had been provided would be improper and would reward noncompliance.

DOC Position

Respondents failed to provide the data concerning labor productivity requested in the Department's questionnaire and have also failed to prove that the information provided in the petition regarding labor productivity is a clerical error or a gross error clearly derivable from public information.

Therefore, consistent with the Department's BIA policy stated in DOC Position to Comment 9, above, the Department rejects Tenex's proposed adjustment. Furthermore, as stated above in the *Foreign Market Value* section, the Department determined it appropriate to express all figures in 1990 terms, where possible, and the petitioners provided information regarding the mines in operation during 1990. Therefore, Tenex's argument to use data from the mines in operation during the POI is without merit.

Comment 13

Petitioners argue that certain modifications need to be made to the quantification and valuation of the factors or production for uranium mining. The Department should triple the adjustment for the Canadian energy factor because mining facilities in the NIS consume significantly more energy than their Western counterparts. Although such information was

requested of and not provided by respondents, it can be derived indirectly from respondents' data and public information.

Petitioners also claim that the Department's rejection of the adjustment to the Canadian energy factor in the preliminary determinations was erroneous because all activities at the Priyargunsky mine are related to, and for the support of, uranium production. Petitioners also provide additional public information from a May 20, 1992, article in *The Energy Daily*, not available at the time of the Department's preliminary determinations, which substantiates that the unadjusted Canadian factor understates energy consumption in uranium mining facilities in the former USSR.

Tenex states that the Department was correct in rejecting the energy adjustment. Petitioners' attempt to justify the energy adjustment based on electricity use at the Priyargunsky facility is uncertified, uncorroborated, and not specific to the mining industry, let alone the uranium mining industry.

DOC Position

We disagree with petitioners' proposed adjustment to the former Soviet mining energy factor. The Department rejects this adjustment on the grounds that the supporting evidence provided was selectively taken from Tenex's response. See *DOC Position to Comment 10*, above. In addition, petitioners' publicly-available evidence pertaining to energy consumption in the former USSR is general and fails to demonstrate that the Department's methodology is inaccurate or aberrant.

Comment 14

Petitioners argue that in its preliminary determinations, the Department failed to include the annual bonus paid to the Rosing mine employees in the cost per man year for uranium mining in Namibia. The 1990 Rosing report clearly states that the bonus is "in addition to" the stated monthly wage rate. Petitioners also argue that the Department should index the 1990 Namibian wage rate to 1990 using information specific to the Namibian uranium sector. Petitioners request that the Department calculate an index specific to the Namibian uranium sector by comparing Rosing's 1990 wage rates to 1988 wage rates for certain wage categories.

DOC Position

The Department agrees with petitioners regarding the holiday bonus pay in Namibia. After review of the

information provided, it is clear that the holiday bonus check is provided over and above monthly pay. Therefore, we have adjusted the calculations accordingly. However, the Department disagrees with petitioners' argument concerning indexing of the Namibian labor wages. The methodology proposed by petitioners is based only on increases with respect to four out of thirteen wage categories and, in fact, yields a result very similar to the Department's. As stated above, the Department has made adjustments to the BIA methodology only in those instances where that methodology is shown to be plainly inaccurate or aberrant. We determine that the Department's reliance on the "Home Prices Index" is neither plainly inaccurate nor aberrant.

Comment 15

Tenex states that for mining and milling, and for enrichment, Portugal was inappropriately used as the energy valuation surrogate. Portugal is not an appropriate choice because 1) Portugal seeks self-sufficiency in electricity and, therefore, does not seek the cheapest possible sources, and 2) Portugal has the second highest dependence in imported oil in the Organization for Economic Cooperation and Development. With respect to roasting and milling, Canada should have been the surrogate for energy since Canada is more comparable to the former USSR than Portugal in terms of energy supply conditions. For enrichment, Tenex argues that the United Kingdom is the appropriate surrogate because it was the surrogate in the petitioner's factors of production estimates.

Petitioners rebut Tenex's contention that Portugal is an inappropriate surrogate because it is not a "significant energy producer" by stating that there is no requirement in the statute or regulations that the selected surrogate country be a significant producer of the inputs required to produce comparable merchandise. Furthermore, despite the Department's willingness to disregard a surrogate's costs if those costs are aberrant for that surrogate country, there is no indication that Portugal's energy costs are distorted for the period or that these costs are not an appropriate indicator of energy costs in a country which is at a comparable level of economic development to the former USSR.

DOC Position

We disagree with Tenex. As stated above in *DOC Position to Comment 11*, the Department selects surrogate countries based on macroeconomics

criteria. Different surrogate countries are not chosen to value each separate factor.

Comment 16

Tenex states that BNFL's financial statements cover other operations in addition to commercial enrichment. In addition, only one of the three commercial plants identified actually operated during the POI: E22. However, the petitioners included costs from 1990 and plants E21 and E23 in calculating the EUP constructed value. Therefore, the public data provided by Tenex, pertaining to the E22 plant, is the only appropriate basis for the Department's FMV calculation for enrichment.

Petitioners reject Tenex's arguments regarding the information used as BIA for enriched uranium. First, although the data includes the E21 plant which is now closed, the E21 plant was operational during the entire period covered by the fiscal year 1990 and fiscal year 1991 reports. With respect to E23, Tenex has provided no information to show that the financial statements reflect construction costs. Therefore, the data is not distorted. Moreover, there is no requirement that the BIA factors be specifically from the POI, nor that the BIA factors be for facilities that were operational during the POI.

Additionally, petitioners state that Tenex offers no information to substantiate its allegation that the Ureenco annual report includes military production. According to petitioners, the Treaty of Almedo precludes Ureenco from performing uranium enrichment services for military purposes. They also state that the annual report itself demonstrates that only Ureenco (UK) commercial production, and not BNFL, military production, is encompassed by the report.

DOC Position

Again, as discussed in the *Foreign Market Value* section, above, we have used, as BIA, 1990 information to the extent possible. Plant E21 operated in 1990 and, therefore, is properly included in the Department's calculations. The Department agrees with petitioners in rejecting Tenex's argument regarding the E23 plant. It is unclear whether and to what extent the financial reports reflect the costs of construction of E23. Therefore, we conclude no basis exists to adjust for Tenex's allegations. Finally, the Department thoroughly examined BNFL's financial statements and it is unclear whether they contain data relating to the submarine fuels facilities. Even Tenex recognizes this when stating that data pertaining to this facility is "apparently" consolidated in the BNFL

annual reports. Therefore, Tenex has not shown that the methodology used in the preliminary determinations is inaccurate or aberrant.

Comment 17

Tenex argues that if the Department does not use FOI data, it should use the BNFL 1991 annual report data rather than the BNFL 1990 annual report. The 1991 annual report better corresponds to the 1990 data used for other factors than does data from the fiscal year 1990 BNFL annual report. Petitioners agree that the 1991 annual report should be used.

DOC Position

We agree that the fiscal year 1991 BNFL report better suits the Department's objective of using consistent 1990 data for BIA and have adjusted our calculations accordingly.

Comment 18

Depreciation

The Yankee Group argues that the Department should correct BNFL's depreciation and related financing costs to reflect the actual periods listed in BNFL's financial statement. They assert that the Department failed to account for disparities between the depreciation terms of 13-30 years for the buildings and ancillary plant, and 10-15 years for the centrifuge equipment listed in BNFL's 1991 financial statement. The Yankee Group asserts that the Department should correct these adjustments for its final determinations.

Financing

Tenex states that the actual interest expense for former Soviet enrichment plants is minimal or zero since these plant's sunk costs were incurred for military enrichment. However, should the Department decide to use the BNFL annual report to calculate Soviet finance charges, it should not base finance charges on BNFL's gross interest payable, but should use BNFL's net interest payable, which nets out interest revenue.

Petitioners assert that actual finance charges of Urenco (UK) are based on the gross interest payable and, using the net interest payable, would understate the actual financing costs associated with these plants.

DOC Position

The Department disagrees with Tenex concerning its argument about the zero financing charges in the USSR. This is an issue more properly resolved through responding to the Department's questionnaire and subjecting that response to verification rather than

through a submission concerning the most appropriate BIA to apply. We do, however, agree with Tenex regarding the use of net interest payable rather than gross interest payable. BNFL's balance sheet contains only short-term interest-revenue-generating assets. Therefore, net interest payable reflects BNFL's financing costs related to production. Tenex has demonstrated that petitioners' use of gross interest payable is a gross error clearly derivable from public data. Hence, we have adjusted the calculations accordingly.

Comment 19

Tenex states that petitioners' cost of capital for enrichment inappropriately reflects high interest costs in Portugal. Although Tenex argues that finance charges should equal zero in the FAVV calculation, it would agree to use the DOE's cost of capital, since the former USSR operated more similarly to the United States than to Portugal in this respect, given the government funding in the United States and the USSR.

Moreover, Tenex argues that petitioners' Portuguese interest rate adjustment in no way resembles the cost of capital in the former USSR. Costs of capital are related to a country's state of technological development and inflation, both of which suggest that Portugal has a higher cost of capital than the former USSR. Therefore, the Department should alternatively value interest costs in a country with enrichment capability such as the UK. Finally, if the Department uses the UK data (adjusted to reflect Portuguese costs or not), it should use more current data applicable to the FOI.

Petitioners state that Tenex has not argued that Portugal is an unsuitable surrogate but rather, that Portugal's interest rates are too high. Tenex's attempt to pick and choose among surrogates and values to find the most favorable valuations is without support and is impermissible. Moreover, as demonstrated in a May 7, 1992, letter, no support can be found on the record to support the contention that all former Soviet facilities have been fully amortized and, hence, that interest costs should be zero.

DOC Position

We disagree with Tenex. Similar to our position on energy costs, we do not select surrogate countries based on their similarity to the NME respect to individual inputs. They are selected on the basis of macroeconomic criteria. Moreover, we have not updated the information to 1991. In initiating these investigations, we determined that 1990

data were sufficiently current. (See DOC Position to Comment 9, above.)

Comment 20

Tenex states that petitioners' enrichment labor usage is overstated due to labor used in non-commercial enrichment activities. For example, petitioners' estimated usage of 450 employees to produce 900,000 separative work units (SWU) inflates the reality of the situation since the number of workers typically required to produce 1.25 million SWU in the Netherlands is 206 while only between 180 and 200 are required in the United States to produce 1.5 million SWU.

Petitioners contend that Tenex's comparisons of the UK labor factor with that of a different plant in the Netherlands and with projections for an unbuild plant in the U.S. are irrelevant. Such comparisons neither suggest that the UK factors are unrepresentative of former Soviet factors, nor that the UK factors are inaccurate.

DOC Position

We agree with petitioners. Tenex's arguments rely on projections and speculation concerning a not-yet-complete enrichment facility in the United States and an enrichment facility outside of the Department's preferred surrogate for factors. Therefore, Tenex has failed to show that the enrichment labor factor used in the petition is a clerical or gross error.

Comment 21

Tenex argues that there is no indication that overhead costs reported in Urenco's financial statements were all related to commercial production. Tenex contends that it has proven that overhead is uneconomical given the conditions assumed by the Department. In addition, Urenco's 1991 annual report indicates that the overhead costs were negative.

Petitioners note that their factors of production analysis, based on fiscal year 1991 data, incorporates the negative feed cost reported by Urenco. Just as the cost of the producer-supplied feed must be incorporated in a cost of production calculation when overfeeding occurs, so must "negative" feed cost be included.

DOC Position

We agree with petitioners. As we have used the 1991 annual report, feed costs are negative. Hence, Tenex's concerns regarding the uneconomical nature of overfeeding are irrelevant.

Comment 22

Tenex states that the Department's EUP factors of production fall to

account for the advanced centrifuge technology employed at enrichment plants in the former USSR. Although petitioners argue that the supposedly advanced Urenco centrifuge technology makes the Urenco plants more productive than Soviet plants, which in turn leads to higher depreciation and finance charges for Soviet enrichment, their claims are unsupported, absurd, and have been rejected by the Department in its preliminary FNV calculation. Actually, the Soviet technology enjoys technological and productivity advantages over Urenco centrifuges, suggesting that depreciation and finance charges should be reduced, not increased, from those estimated for the Urenco plant.

The Yankee Group argues that the Department should reject petitioners' claim that capital and depreciation costs are 3.5 times higher than Urenco's because the smaller former Soviet centrifuges produce less SWU per machine. Petitioners failed to consider that the former USSR's smaller, lower-tech centrifuges cost considerably less per unit than Urenco's larger centrifuges.

Petitioners continue to argue that the Department should adjust UK production factors to reflect known technology differences with facilities producing EUP in the former USSR.

Moreover, petitioners reject Tenex's adjustment as speculative. Further, Tenex should not be given the benefit of certain critical assumptions given the failure of respondents to provide the actual data.

DOC Position

The Department continues to reject petitioners' upward adjustment to enrichment costs as speculation. We also reject Tenex's proposed adjustment. Potential economies of scale experienced by or technology differences at former Soviet enrichment facilities are not an appropriate adjustment for the Department to consider in a BIA situation; rather, it is more properly addressed by responding to the Department's questionnaire and allowing verification to occur.

Comment 23

The Yankee Group asserts that the Department should give greater weight to the visit of its knowledgeable representatives to the former Soviet enrichment plant. The information concerning the former Soviet enrichment plant is directly relevant given that this plant is the only one that produced LEU which was exported to the United States.

Petitioners argue that the information provided by the Yankee Group is inadequate and cannot be construed as BIA because it relies on an impermissible level of speculation and concerns only one former Soviet facility.

DOC Position

We disagree with the Yankee Group and reject the data contained in its affidavit. The information gleaned by Yankee Group representatives during their visit to the Eisenhainburg enrichment facility is more appropriately submitted by the respondents to the Department in the form of a questionnaire response, not through an affidavit of a third party.

Comment 24

The Yankee Group argues, based on public information on the record, that petitioners have overstated the SWU cost at Urenco's UK facilities with their estimate of \$166.37 per SWU. ENFL's financial statements indicate that the company had a nine percent profit on sales in 1990. Based on this figure and the fact that ENFL's primary activity is uranium enrichment, the Yankee Group argues that ENFL sold enriched uranium at prices which yielded a profit.

The Yankee Group cites a 1984 statement by an official at Urenco's UK facility that Urenco could offer long-term SWU contracts at prices "around \$100 SWU." Prices have not changed significantly since that time. Petitioners estimated Urenco's cost to be \$167 per SWU, thus implying that if Urenco were selling enrichment at \$100 per SWU, it must have incurred huge losses. The Yankee Group states that ENFL's financial statements demonstrate that the company's costs are less than \$100 per SWU, since it is making a profit at that price. Thus, the Yankee Group asserts that the Department should reject petitioners' constructed cost as it is inconsistent with other information on the record of these investigations.

DOC Position

We disagree with the Yankee Group. Their conclusion rests on information dating back to 1984, while petitioners' CV is derived from the 1991 fiscal year. Therefore, we are not convinced that the petition calculations are aberrant.

Comment 25

Tenex states that its failure to provide complete and verifiable responses was due, in large part, to legitimate national security concerns. Tenex insists that there is no basis in law or logic for the Department to require producers or exporters in one country to supply

highly sensitive data, critical to the national security of the NIS, relating to production in another country. To do so would violate all notions of sovereignty. Likewise, Tenex states that it cannot be held responsible for the failure to provide data on the production facilities in Ukraine and Tajikistan. It did not, nor does it now, have access to complete and verifiable data concerning factors of production in the former USSR uranium industry. Tenex cites GATT Article XXI as the national prerogative to refuse disclosure of such information which they consider contrary to their essential security interests. In Final Determination of Sales at Less Than Fair Value: Industrial Nitrocellulose from France (Industrial Nitrocellulose from France), 48 FR 11971 (March 22, 1993), and Final Determination of Sales at Less Than Fair Value: Industrial Nitrocellulose from Yugoslavia (Industrial Nitrocellulose from Yugoslavia), 55 FR 34946 (August 27, 1990), the Department identified GATT Article XXI as grounds for declining disclosure. Tenex also states that in *Chevron Standard Ltd. v. U.S.*, 563 F. Supp. 1361 (1983), the CIT ruled that the Department cannot penalize one respondent for failing to compel another respondent, over which it has no control, to provide information requested by the Department.

Further, Tenex, states that given the dramatic changes in recent months, its failure to file timely responses to the Department's requests is understandable and excusable. In fact, only one NIS has responded to the Department's questionnaire, illustrating the difficulty the NIS have had, and continue to have, in complying with the Department's numerous requests for information. Based on the above, it would be inconsistent with the antidumping law and precedent to use BIA to calculate punitive margins in this case. Petitioners state that the Department should continue to reject all respondents' comments and information concerning use of BIA in the final determination. Specifically, petitioners request that the Department reject as BIA publicly available information submitted by Tenex because no legitimate national security concerns have been raised in these proceedings and because the NIS refused to submit information within their possession or control. They argue that some of the NIS explained in a timely manner that national security concerns led to their failure to submit questionnaire responses and that these republics, not Tenex, were the appropriate party to raise such concerns. Petitioners claim that the cases cited by Tenex (*i.e.*,

Industrial Nitrocellulose from France and Industrial Nitrocellulose From Yugoslavia make clear that a secondary respondent such as Tenax may not interfere, in the broadest possible manner, national security concerns.

Petitioners also object to Tenax's statements that it should not be penalized for the failure of the republics to respond to the Department's questionnaire because such information is beyond its control. Tenax's arguments would reward recalcitrant republics by permitting it to supply BIA in lieu of information that properly should have been submitted by the republics.

DOC Position

We disagree with Tenax. In *Industrial Nitrocellulose from Yugoslavia*, the respondent submitted timely and complete responses to the Department's requests for information. The issue of national security involved the verification of data, not the submission of data. In these proceedings, however, we did not receive timely and complete data from Ukraine and Tajikistan. Therefore, *Industrial Nitrocellulose from Yugoslavia* is not relevant to these investigations.

This case can also be distinguished from *Industrial Nitrocellulose from France* in that the French Ministry of Economics and Finance responded to the Department's requests for information with claims of national security. Tenax is not the appropriate entity to be making claims of national security. Any claims involving national security in these investigations must be properly submitted by the COU and the COT. In this instance, Tenax's representations of national security concerns are not sufficient, especially since the production information it failed to submit is not within its domain. Rather, the production enterprises, through their overseeing ministries in Ukraine and Tajikistan, are the only parties that can appropriately claim concerns of national security.

Finally, Ukraine and Tajikistan are not signatories to the GATT. Therefore, the United States has no obligations under GATT with respect to Ukraine and Tajikistan.

Critical Circumstances

Petitioners allege that "critical circumstances" exist with respect to imports of uranium from the former USSR. Section 735(a)(3) of the Act provides that critical circumstances exist when we determine that there is a reasonable basis to believe or suspect the following:

(1) There is a history of dumping in the United States or elsewhere of the

class or kind of merchandise which is subject to investigation, or that the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the merchandise at less than its fair value; and

(2) There have been massive imports of the subject merchandise over a relatively short period.

To determine whether imports have been massive over a relatively short period, we based our analysis on official statistics of the Department, as BIA, for equal periods immediately preceding and following the filing of the petition. The time period we used for comparison purposes begins in December 1991, the first complete month after the petition was filed (November 8, 1991). Based on available statistics, and in accordance with our regulations (19 CFR 353.16(g)), we determine it appropriate to use for comparison the period December 1991 through March 1992. (See, *DOC Position to Comment 5* above.)

We compared the quantity of imports during the comparison period to the imports during the immediately preceding period (the "base period") of comparable duration (i.e., August through November 1991).

Under 19 CFR 353.16(f)(2), unless the imports in the comparison period have increased by at least 15 percent over the imports during the base period, we will not consider the imports "massive." Our analysis indicates that shipments from the former USSR have increased by considerably more than 15 percent.

Since this shows evidence of massive imports over a relatively short period of time, we need to consider whether there is a history of dumping or whether there is reason to believe or suspect that importers of this product knew or should have known that it was being sold at less than fair value. We examined recent antidumping cases and found that there are currently no findings of dumping in the United States or elsewhere on the subject merchandise by Ukraine or Tajikistan.

We then examined the magnitude of the dumping margins in these investigations. It is our standard practice to impute knowledge of dumping under section 735(a)(3)(A)(ii) of the Act, when the estimated margins are of such a magnitude that the importer should have realized that dumping existed with regard to the subject merchandise. Normally, in purchase price sales, we consider estimated margins of 25 percent or greater to be sufficient, and in exporter's sales price sales, margins of 15 percent or greater to be sufficient to impute knowledge of dumping. See, e.g. Final

Determination of Sales at Less than Fair Value: High-Tenacity Rayon Filament Yarn from Germany (57 FR 21770, May 22, 1992). Using these criteria, we have found that the final margins in these investigations are sufficient to impute knowledge of dumping. Therefore, we find that the requirements of section 735(a)(3) are met and we determine that critical circumstances exist with respect to imports of uranium from Ukraine and Tajikistan.

Suspension of Liquidation

In accordance with section 735(d) of the Act, we are directing the U.S. Customs Service to continue suspending liquidation of all unliquidated entries of uranium from Ukraine and Tajikistan, as defined in the Scope of Investigations section of this notice, that are entered, or withdrawn from warehouse, for consumption on or after March 5, 1992 (90 days prior to the date of publication through October 16, 1992 (the signing of the suspension agreement)) and on or after April 12, 1993 (for Ukraine) and April 26, 1993 (for Tajikistan). The U.S. Customs Service shall require a cash deposit or bond equal to 129.29 percent *ad valorem*, the estimated weighted-average amount by which the foreign market value of the subject merchandise exceeds the United States price, for all manufacturers, producers and exporters in Ukraine and Tajikistan of uranium.

ITC Notification

In accordance with section 735(d) of the Act, we have notified the ITC of our determination. The ITC will now determine within 45 days whether these imports are materially injuring, or threaten material injury to, the U.S. industry. If the ITC determines that material injury, or threat of material injury, does not exist with respect to uranium, these proceedings will be terminated and all securities will be refunded or cancelled. If the ITC determines that such injury does exist, the Department will issue an antidumping duty order directing Customs officials to assess antidumping duties on all imports of uranium from Ukraine and Tajikistan for the periods discussed above in the *Suspension of Liquidation* section of this notice.

This notice also serves as the only reminder to parties subject to administrative protective order (APO) of their responsibility concerning the return or destruction of proprietary information disclosed under APO in accordance with 19 CFR 353.35(d). Failure to comply is a violation of the APO.

This determination is published pursuant to section 735(d) of the Act (19 U.S.C. 1673(d)) and (19 CFR 353.20(a)(4)).

Dated: June 28, 1993.

Joseph A. Spetrini,
Acting Assistant Secretary for Import
Administration.

[FR Doc. 93-16017 Filed 7-7-93; 8:45 am]

SELLING CODE 9710-02-P

[A-943-809]

Termination of Suspension Agreement and Resumption of Investigation on Uranium From Tajikistan

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

Action: Notice of termination of suspension agreement and resumption of antidumping duty investigation.

Summary: The Government of Tajikistan has terminated the suspension agreement on uranium from Tajikistan. Therefore, the Department of Commerce ("the Department") is resuming the investigation.

EFFECTIVE DATE: April 26, 1993.

FOR FURTHER INFORMATION CONTACT: Melissa Schuster or Robert Hamilton, Office of Agreements Compliance (for matters pertaining to the termination of the suspension agreement), and Lawrence P. Sullivan or Carole Showers, Office of Investigations (for matters pertaining to the resumption of the investigation), Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street & Constitution Ave., NW., Washington, DC 20230; telephone: (202) 482-2622, 482-0182, 482-0114, or 482-3217, respectively.

SUPPLEMENTARY INFORMATION:

Background

On October 16, 1992, the Department suspended the antidumping duty investigation involving uranium from Tajikistan. The basis for the suspension was an agreement by the Government of Tajikistan (GOT) to restrict exports of uranium to the United States. The agreement was signed on the behalf of the GOT by Mr. Y. Nesterov, Director General of the Tajik production association "Vostokredmet", in accordance with an October 15, 1992, authorization signed by Mr. Djamshed Hilolovich Karimov, First Deputy Prime Minister of the Republic of Tajikistan.

Section XII of the agreement provided that the GOT could terminate the agreement effective 60 days after providing the Department with notice of such termination. On October 30, 1992, counsel for Tajikistan transmitted an October 29 letter from Mr. Nesterov notifying the Department that the GOT was terminating the agreement effective 60 days from the date of the letter.

In November, 1992, the U.S. Department of State notified the Department that the Prime Minister of Tajikistan, Mr. A. Abdullodjanov, did not wish to terminate the agreement. As

a result of this communication, the Department, through the U.S. Department of State, attempted to obtain written instructions from Prime Minister Abdullodjanov regarding the GOT's intentions vis-a-vis the suspension agreement.

On December 16, 1992, the Department received a letter dated December 11, 1992, from Mr. Nesterov relaying that the GOT was withdrawing from the suspension agreement. Because of the earlier communication from Prime Minister Abdullodjanov, the Department continued to pursue efforts to obtain written instructions from the Prime Minister of Tajikistan on whether the GOT wished to terminate the agreement.

On April 26, 1993, counsel for the GOT transmitted two letters to the Department from the Chairman of the Council of Ministers of the Republic of Tajikistan, Mr. A. Abdullodjanov. Letter No. 1-10/576 of April 13, 1993, confirmed that the Republic of Tajikistan terminated the agreement and reaffirmed prior notification of termination. The prior notification referenced in the letter, however, was a January 19, 1993, letter which, according to counsel for the GOT, was never delivered to the Department and which the Department never received. Letter No. 345 of April 19, 1993, authorized the Plenipotentiary Representative of the Republic of Tajikistan in Moscow, Djamshed Hilolovich Karimov, to conduct negotiations and sign documents regarding all issues relating to sales of uranium in the United States, including the antidumping investigation.

On April 26, 1993, the Department of State confirmed that it recognizes Mr. Abdullodjanov as the Prime Minister of the Republic of Tajikistan. Based on the confirmation and the letter confirming Mr. Karimov's authority to act in uranium matters and hence, Mr. Karimov's authority to designate Mr. Nesterov in October 1992 as an official representative of the GOT, the Department is terminating the agreement effective April 26, 1993.

Scope of the Agreement

Imports covered by this investigation include natural uranium in the form of uranium ores and concentrates; natural uranium metal and natural uranium compounds; alloys, dispersions (including ceramic), ceramic products and mixtures containing natural uranium or natural uranium compounds; uranium enriched in U235 and its compounds; alloys, dispersions (including ceramic), ceramic products and mixtures containing uranium

enriched in U²³⁵ or compounds of uranium enriched in U²³⁵. Both low-enriched uranium (LEU) and highly-enriched uranium (HEU) are included within the scope of this investigation. LEU is uranium enriched in U²³⁵ to a level of up to 20 percent, while HEU is uranium enriched in U²³⁵ to a level of 20 percent or more. The uranium subject to this investigation is provided for under subheadings 2612.10.00.00, 2644.10.10.00, 2644.10.20.10, 2644.10.20.25, 2644.10.20.50, 2644.10.30.55, 2644.10.50.00, 2644.20.00.10, 2644.20.00.20, 2644.20.00.30, and 2644.20.00.50 of the Harmonized Tariff Schedule (HTS). HTS numbers are provided for convenience and customs purposes only. The written description remains dispositive.

Resumption of Investigation

Because Tajikistan is terminating the agreement, there no longer exists an agreement under section 734(f) of the Tariff Act of 1930, as amended ("the Act"), which "prevent[s] the suppression or undercutting of prices levels of domestic products by imports of the merchandise under investigation." Therefore, in accordance with section 734(f)(2) of the Act, the Department must resort to section 734(f)(3)(B), which directs us to resume the investigation as if our preliminary determination were published on the date of termination. In accordance with section 735(a), we will issue a final determination within 75 days of April 26, 1993, unless respondents request an extension pursuant to 19 CFR 353.20(b).

In making our final determination in this investigation, the Department will use only information already submitted in the investigation, which was suspended on October 16, 1992. (see *Uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan: Suspension of Antidumping Investigations and Amendment of Preliminary Determinations*; (57 FR 49220; October 30, 1992)).

Suspension of Liquidation

In our preliminary determination in this investigation (see *Preliminary Determinations of Sales at Less Than Fair Value: Uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan; and Preliminary Determinations of Sales at Not Less Than Fair Value: Uranium from Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Turkmenistan* (57 FR 23380; June 3, 1992)), the Department preliminarily determined that critical circumstances exist with respect to imports of uranium from Tajikistan. Therefore, in accordance with section

733(e) of the Act, the Department is instructing the U.S. Customs Service (1) to suspend liquidation of all unliquidated entries of uranium, as defined in the *Scope of Investigation* section of this notice, that are entered, or withdrawn from warehouse, for consumption on or after March 5, 1992 (90 days prior to the publication of our preliminary determination) through October 16, 1992 (the signing of the suspension agreement), and (2) to suspend liquidation of all entries of uranium from Tajikistan that are entered, or withdrawn from warehouse, for consumption on or after April 26, 1993. The Customs Service shall require a cash deposit or bond equal to 115.82 percent of value-weighted estimated weighted-average amount by which the foreign market value of the subject merchandise exceeds the United States price, for all manufacturers, producers, and exporters of uranium from Tajikistan.

ITC Notifications

In accordance with section 733(f) of the Act, we have notified the International Trade Commission ("ITC") of this determination. If our final determination is affirmative, the ITC will determine whether these imports are materially injuring, or threaten material injury to, the U.S. industry before the latter of 120 days after the effective date of this notice or 45 days after publication of our final determination.

Dated: May 19, 1993.

Joseph A. Spertak,
Acting Assistant Secretary for Import
Administration.

[FR Doc. 93-11894 Filed 5-19-93; 8:45 am]
SUMMARY: see svs-93-9

[A-823-802]

Termination of Suspension Agreement and Resumption of Investigation on Uranium From Ukraine

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

ACTION: Notice of termination of suspension agreement and resumption of antidumping duty investigation.

SUMMARY: The Government of Ukraine has terminated the suspension agreement on uranium from Ukraine. Therefore, the Department of Commerce ("the Department") is resuming the investigation.

EFFECTIVE DATE: April 12, 1993.

FOR FURTHER INFORMATION CONTACT: Melissa Skinner or Beti Chalecki, Office of Agreements Compliance (for matters pertaining to the termination of the suspension agreement), and Lawrence P. Sullivan or Carole Showers, Office of Investigations (for matters pertaining to the resumption of the investigation), Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street & Constitution Ave., NW., Washington, DC 20230; telephone: (202) 482-2522, 482-2312, 482-0114, or 482-3217, respectively.

SUPPLEMENTARY INFORMATION:**Background**

On October 16, 1992, the Department suspended the antidumping duty investigation involving uranium from Ukraine. The basis for the suspension was an agreement by Ukraine to restrict exports of uranium to the United States.

On December 30, 1992, the Department received a letter from the Government of Ukraine (GOU) notifying the Department of its intent to terminate the agreement. Subsequently, on February 1, 1993, the GOU submitted an additional letter to the Department confirming that the GOU was

terminating the suspension agreement on uranium. Section XII of the agreement provided that the GOU could terminate the agreement effective 60 days after providing the Department with notice of such termination. Ukraine's termination was to be effective April 2, 1993. However, we received notification via a diplomatic note through the United States Department of State and the United States Embassy in Ukraine which apparently indicated that the Ukrainian Ministry of Foreign Economic Affairs did not want to terminate the agreement. Subsequently, on April 12, 1993, the Department received a revised unofficial translation of the diplomatic note from the United States Embassy in Ukraine. Based on the revised translation the Department is terminating effective April 12, 1993.

Scope of the Agreement

Imports covered by this investigation include natural uranium in the form of uranium ores and concentrates; natural uranium metal and natural uranium compounds; alloys, dispersions (including cermets), ceramic products and mixtures containing natural uranium or natural uranium compounds; uranium enriched in U²³⁵ and its compounds; alloys, dispersions (including cermets), ceramic products and mixtures containing uranium enriched in U²³⁵ or compounds of uranium enriched in U²³⁵. Both low-enriched uranium (LEU) and highly-enriched uranium (HEU) are included within the scope of this investigation. LEU is uranium enriched in U²³⁵ to a level of up to 20 percent, while HEU is uranium enriched in U²³⁵ to a level of 20 percent or more. The uranium subject to this investigation is provided for under subheadings 2162.10.00.00, 2844.10.10.00, 2844.10.20.10, 2844.10.20.25, 2844.10.20.50, 2844.10.20.55, 2844.10.50.00, 2844.20.00.10, 2844.20.00.20, 2844.20.00.30, and 2844.20.00.50 of the Harmonized Tariff Schedule (HTS). HTS numbers are provided for convenience and customs purposes only. The written description remains dispositive.

Resumption of Investigation

Because Ukraine has terminated the agreement, there no longer exists an agreement under section 734(1) of the Tariff Act of 1930, as amended ("the Act"), which "prevent[s] the suppression or undercutting of price levels of domestic products by imports of the merchandise under investigation." Therefore, in accordance with section 734(1)(2) of the Act, the Department must resort to section

734(i)(1)(B), which directs us to resume the investigation as if our preliminary determination were published on April 12, 1993. In accordance with section 735(a), we will issue a final determination within 75 days of April 12, 1993, unless respondents request an extension pursuant to 19 CFR 353.20(b).

In making its final determination in this investigation, the Department will use only information already submitted in the investigation, which was suspended on October 16, 1992. (see Uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan; Suspension of Antidumping Investigations and Amendment of Preliminary Determinations; (57 FR 49220; October 30, 1992).

Suspension of Liquidation

In its preliminary determination in this investigation (see Preliminary Determinations of Sales at Less Than Fair Value: Uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan; and Preliminary Determinations of Sales at Not Less Than Fair Value: Uranium from Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Turkmenistan (57 FR 23380; June 3, 1992), the Department preliminarily determined that critical circumstances exist with respect to imports of uranium from Ukraine. Therefore, in accordance with section 733(e) of the Act, the Department is instructing the U.S. Customs Service (1) to suspend liquidation of all unliquidated entries of uranium, as defined in the Scope of Investigation section of this notice, that are entered, or withdrawn from warehouse, for consumption on or after March 5, 1992 (90 days prior to the publication of our preliminary determination) through October 16, 1992 (the signing of the suspension agreement), and (2) to suspend liquidation of all entries of uranium from Ukraine that are entered, or withdrawn from warehouse, for consumption on or after the effective date of this notice. The Customs Service shall require a cash deposit or bond equal to 115.82 percent *ad valorem*, the estimated weighted-average amount by which the foreign market value of the subject merchandise exceeds the United States price, for all manufacturers, producers, and exporters of uranium from Ukraine.

ITC Notification

In accordance with section 733(f) of the Act, we have notified the ITC of this determination. If our final determination is affirmative, the ITC will determine whether these imports are materially injuring, or threaten

material injury to the U.S. industry before the latter of 120 days after the effective date of this notice or 45 days after publication of our final determination.

Dated: April 12, 1993.

Joseph A. Spetrial,

Acting Assistant Secretary for Import Administration.

[FR Doc. 93-9102 Filed 4-16-93; 8:45 am]

BILLING CODE 3510-06-01

APPENDIX B
CALENDAR OF PUBLIC HEARING

CALENDAR OF PUBLIC HEARING

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

Subject : URANIUM FROM
TAJKISTAN AND UKRAINE

Invs. Nos. : 731-TA-539-D and
731-TA-539-E (Final)

Date and Time : July 1, 1993 - 9:30 a.m.

Sessions were held in connection with the investigations in the Main Hearing Room 101 of the United States International Trade Commission, 500 E St., S.W., Washington, D.C.

Opening Remarks

Petitioner

Respondent

In support of Imposition of
Antidumping Duties:

Akin, Gump, Strauss, Hauer & Feld
Washington, D.C.

On behalf of

The Ad Hoc Committee of Domestic Uranium
Producers

The Oil, Chemical and Atomic Workers
International Union

R. Hugh Courtenay, Vice President, Marketing
Power Resources, Inc.

Dennis E. Stover, Director
ISL Technology, Rio Algom Mining Corp.

William M. McKnight, Jr., Executive Vice President and
Chief Operating Officer
Uranium Resources, Inc.

In support of Imposition of
Antidumping Duties:

Akin, Gump, Strauss, Hauer & Feld
Washington, D.C.
(Cont 'd)

Nolan Hancock, The Oil, Chemical and Atomic Workers
International Union

Danny M. Collier, Nuclear Assurance Corp.

Daniel Klett, Capital Trade

R. Mark Stout, Manager, Land and Marketing,
Rio Algom Mining Corp.

Valerie A. Slater)
Nicholas D. Giordano)--OF COUNSEL
James Southwick)

In Opposition to the Imposition of
Antidumping Duties:

Powell, Goldstein, Frazer & Murphy
Washington, D.C.
On behalf of

Government of Ukraine (Vostgok)

Government of Tajikistan (Vostkomredmet)

Peter O. Suchman)
Neil R. Ellis)
Elizabeth C. Hafner)--OF COUNSEL
Alex Kogan)
Susan M. Mathews)

**In Opposition to the Imposition of
Antidumping Duties:**

**Hogan & Hartson
Washington, D.C.
On behalf of**

Energy Fuels, Ltd.

**Brad L. Doores, General Counsel
Energy Fuels Nuclear, Inc.**

**Treva Klingbiel, President
NUEXCO Information Services, Inc.**

**Fletcher Newton, Commercial Representative for
NUEXCO**

**Lewis E. Leibowitz, Jr.)
Timothy C. Stanceu)--OF COUNSEL
Lynn Kamarck)**

APPENDIX C
SUMMARY DATA

Table C-1

Uranium concentrates: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993

(Quantity=1,000 pounds, value=1,000 dollars, unit values, unit labor costs, and unit COGS are per pound, period changes=percent, except where noted)

Item	Reported data			Jan.-Mar.--		Period changes			
	1990	1991	1992	1992	1993	1990-92	1990-91	1991-92	1992-93
U.S. consumption quantity:									
Amount.....	32,792	38,123	27,375	7,435	4,440	-16.5	+16.3	-28.2	-40.3
Producers' share 1/.....	24.3	18.1	12.1	17.8	18.2	-12.2	-6.2	-6.0	+0.3
Importers' share: 1/									
Tajikistan.....	0	0	0	0	0	0	0	0	0
Ukraine.....	***	***	***	***	***	***	***	***	***
Subtotal.....	***	***	***	***	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***	***	***	***	***
Subtotal.....	12.5	32.2	10.7	39.3	13.3	-1.8	+19.7	-21.5	-25.9
Other (nonformer									
U.S.S.R.).....	63.2	49.7	77.3	42.9	68.5	+14.0	-13.5	+27.5	+25.6
Total.....	75.7	81.9	87.9	82.2	81.8	+12.2	+6.2	+6.0	-0.3
U.S. consumption value:									
Amount.....	465,324	538,570	366,195	92,386	44,799	-21.3	+15.7	-32.0	-51.5
Producers' share 1/.....	35.7	28.0	17.0	27.8	18.4	-18.7	-7.8	-11.0	-9.5
Importers' share: 1/									
Tajikistan.....	0	0	0	0	0	0	0	0	0
Ukraine.....	***	***	***	***	***	***	***	***	***
Subtotal.....	***	***	***	***	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***	***	***	***	***
Subtotal.....	7.8	20.8	6.9	27.3	13.3	-0.9	+13.0	-13.9	-14.0
Other (nonformer									
U.S.S.R.).....	56.5	51.3	76.1	44.9	68.3	+19.6	-5.3	+24.9	+23.5
Total.....	64.3	72.0	83.0	72.2	81.6	+18.7	+7.8	+11.0	+9.5
U.S. importers' imports from-									
Tajikistan:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	2/	2/	2/	2/	2/	2/	2/	2/	2/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Ukraine:									
Imports quantity.....	***	***	***	***	***	***	***	***	***
Imports value.....	***	***	***	***	***	***	***	***	***
Unit value.....	\$***	\$***	\$***	\$***	\$***	\$***	\$***	\$***	\$***
Ending inventory qty.....	***	***	***	***	***	***	***	***	***
Subject sources:									
Imports quantity.....	***	***	***	***	***	***	***	***	***
Imports value.....	***	***	***	***	***	***	***	***	***
Unit value.....	\$***	\$***	\$***	\$***	\$***	\$***	\$***	\$***	\$***
Ending inventory qty.....	***	***	***	***	***	***	***	***	***
Other former U.S.S.R.:									
Imports quantity.....	***	***	***	***	***	***	***	***	***
Imports value.....	***	***	***	***	***	***	***	***	***
Unit value.....	\$***	\$***	\$***	\$***	\$***	\$***	\$***	\$***	\$***
Ending inventory qty.....	***	***	***	***	***	***	***	***	***
Former U.S.S.R.:									
Imports quantity.....	4,099	12,265	2,919	2,919	591	-28.8	+199.2	-76.2	-79.8
Imports value.....	36,071	111,815	25,205	25,205	5,964	-30.1	+210.0	-77.5	-76.3
Unit value.....	\$8.80	\$9.12	\$8.64	\$8.64	\$10.10	-1.9	+3.6	-5.3	+16.9
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Other (nonformer									
U.S.S.R.):									
Imports quantity.....	20,737	18,966	21,151	3,189	3,042	+2.0	-8.5	+11.5	-4.6
Imports value.....	263,056	276,146	278,770	41,454	30,615	+6.0	+5.0	+1.0	-26.1
Unit value.....	\$12.69	\$14.56	\$13.18	\$13.00	\$10.06	+3.9	+14.8	-9.5	-22.6
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
All sources:									
Imports quantity.....	24,836	31,232	24,070	6,108	3,633	-3.1	+25.8	-22.9	-40.5
Imports value.....	299,128	387,961	303,975	66,659	36,578	+1.6	+29.7	-21.6	-45.1
Unit value.....	\$12.04	\$12.42	\$12.63	\$10.91	\$10.07	+4.9	+3.1	+1.7	-7.7
U.S. producers'--									
Average capacity quantity..	26,095	27,145	25,551	6,667	5,712	-2.1	+4.0	-5.9	-14.3
Production quantity.....	8,379	7,995	5,917	2,023	803	-29.4	-4.6	-26.0	-60.3
Capacity utilization 1/.....	32.1	29.5	28.9	37.5	15.4	-3.2	-2.7	-0.5	-22.1

See footnotes at end of table.

Table C-1--Continued

Uranium concentrates: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993

(Quantity=1,000 pounds, value=1,000 dollars, unit values, unit labor costs, and unit COGS are per pound, period changes=percent, except where noted)

Item	Reported data					Period changes			
	1990	1991	1992	Jan.-Mar.--		1990-92	1990-91	1991-92	Jan.-Mar. 1992-93
				1992	1993				
U.S. shipments:									
Quantity.....	7,956	6,891	3,305	1,327	807	-58.5	-13.4	-52.0	-39.2
Value.....	166,196	150,609	62,220	25,727	8,221	-62.6	-9.4	-58.7	-68.0
Unit value.....	\$24.60	\$21.86	\$18.83	\$19.39	\$10.17	-23.5	-11.2	-13.9	-47.6
Export shipments:									
Quantity.....	2,249	4,018	3,494	675	875	+55.4	+78.7	-13.0	+29.6
Exports/shipments $\frac{1}{2}$	22.0	36.8	51.4	33.7	52.0	+29.4	+14.8	+14.6	+18.3
Value.....	55,683	84,463	74,223	13,445	16,232	+33.3	+51.7	-12.1	+20.7
Unit value.....	\$24.76	\$21.02	\$21.24	\$19.92	\$18.55	-14.2	-15.1	+1.1	-6.9
Ending inventory quantity..	11,057	8,143	7,128	8,031	6,247	-35.5	-26.4	-12.5	-22.2
Inventory/production $\frac{1}{2}$	132.0	101.9	84.6	73.0	189.7	-47.4	-30.1	-17.3	+116.7
Production workers.....	696	603	387	462	205	-44.4	-13.4	-35.8	-55.6
Hours worked (1,000s).....	1,302	1,125	786	245	118	-39.6	-13.6	-30.1	-51.8
Total comp. (\$1,000).....	21,927	19,698	15,185	4,619	2,604	-30.7	-10.2	-22.9	-43.6
Hourly total compensation..	\$16.84	\$17.51	\$19.32	\$18.85	\$22.07	+14.7	+4.0	+10.3	+17.1
Productivity (QTY/hour)....	6.5	7.2	7.5	8.3	7.6	+15.7	+10.5	+4.8	-8.3
Unit labor costs.....	\$2.59	\$2.43	\$2.55	\$2.27	\$2.89	-1.3	-6.0	+5.0	+27.0
Net sales--									
Quantity.....	9,008	10,277	5,909	1,620	1,248	-34.4	+14.1	-42.5	-23.0
Value.....	218,413	224,985	139,362	30,402	16,854	-36.2	+3.0	-38.1	-44.6
Cost of goods sold (COGS)..	155,310	165,471	102,036	27,178	14,464	-34.3	+6.5	-38.3	-46.8
Gross profit (loss).....	63,103	59,514	37,326	3,224	2,390	-40.8	-5.7	-37.3	-25.9
SG&A expenses.....	19,573	17,906	12,579	5,765	2,101	-35.7	-8.5	-29.7	-63.6
Operating income (loss)....	43,530	41,608	24,747	(2,541)	289	-43.1	-4.4	-40.5	+111.4
Capital expenditures.....	***	***	***	***	***	***	***	***	***
Unit COGS.....	\$17.24	\$16.10	\$17.25	\$16.73	\$11.60	+0.1	-6.6	+7.2	-30.7
COGS/sales $\frac{1}{2}$	71.1	73.5	73.2	89.4	85.8	+2.1	+2.4	-0.3	-3.6
Op.income (loss)/sales $\frac{1}{2}$..	19.9	18.5	17.8	(8.4)	1.7	-2.2	-1.4	-0.7	+10.1

$\frac{1}{2}$ / 'Reported data' are in percent and 'period changes' are in percentage-point.

$\frac{2}{2}$ / Not applicable.

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

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

Table C-2
 Natural uranium hexafluoride: Summary data concerning the U.S. market, 1990-92, January-March 1992, and
 January-March 1993

(Quantity=1,000 pounds, value=1,000 dollars, unit values, unit labor costs,
 and unit COGS are per pound, period changes=percent, except where noted)

Item	Reported data			Jan.-Mar.--		Period changes			
	1990	1991	1992	1992	1993	1990-92	1990-91	1991-92	1992-93
U.S. consumption quantity:	*	*	*	*	*	*	*		
U.S. consumption value:	*	*	*	*	*	*	*		
U.S. importers' imports from--									
Tajikistan:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Ukraine:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Subject sources:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Other former U.S.S.R.:									
Imports quantity.....	60	0	0	0	0	-100.0	-100.0	0	0
Imports value.....	15,721	2	0	0	0	-100.0	-100.0	-100.0	0
Unit value.....	\$263.79	\$52.43	1/	1/	1/	1/	-80.1	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Former U.S.S.R.:									
Imports quantity.....	60	0	0	0	0	-100.0	-100.0	0	0
Imports value.....	15,721	2	0	0	0	-100.0	-100.0	-100.0	0
Unit value.....	\$263.79	\$52.43	1/	1/	1/	1/	-80.1	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Other (nonformer U.S.S.R.):									
Imports quantity.....	16,522	14,256	10,305	2,743	5,138	-37.6	-13.7	-27.7	+87.3
Imports value.....	214,623	229,255	148,886	69,292	51,891	-30.6	+6.8	-35.1	-25.1
Unit value.....	\$12.99	\$16.08	\$14.45	\$25.26	\$10.10	+11.2	+23.8	-10.2	-60.0
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
All sources:									
Imports quantity.....	16,582	14,256	10,305	2,743	5,138	-37.9	-14.0	-27.7	+87.3
Imports value.....	230,344	229,258	148,886	69,292	51,891	-35.4	-0.5	-35.1	-25.1
Unit value.....	\$13.89	\$16.08	\$14.45	\$25.26	\$10.10	+4.0	+15.8	-10.2	-60.0
U.S. producers'--									
	*	*	*	*	*	*	*		

1/ Not applicable.

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

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

Table C-3

Enriched uranium hexafluoride: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993

(Quantity=1,000 SWU, value=1,000 dollars, unit values, unit labor costs, and unit COGS are per SWU, period changes=percent, except where noted)

Item	Reported data			Jan.-Mar.--		Period changes			
	1990	1991	1992	1992	1993	1990-92	1990-91	1991-92	1992-93
U.S. consumption quantity:	*	*	*	*	*	*	*	*	*
U.S. consumption value:	*	*	*	*	*	*	*	*	*
U.S. importers' imports from--									
Tajikistan:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Ukraine:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Subject sources:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Other former U.S.S.R.:									
Imports quantity.....	400	0	194	194	0	-51.5	-100.0	1/	-100.0
Imports value.....	71,430	0	12,325	12,325	0	-82.7	-100.0	1/	-100.0
Unit value.....	\$178.55	1/	\$63.44	\$63.44	1/	-64.5	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Former U.S.S.R.:									
Imports quantity.....	400	0	194	194	0	-51.5	-100.0	1/	-100.0
Imports value.....	71,430	0	12,325	12,325	0	-82.7	-100.0	1/	-100.0
Unit value.....	\$178.55	1/	\$63.44	\$63.44	1/	-64.5	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Other (nonformer U.S.S.R.):									
Imports quantity.....	1,432	2,638	2,446	532	395	+70.8	+84.2	-7.3	-25.8
Imports value.....	181,589	346,317	414,899	109,349	81,398	+128.5	+90.7	+19.8	-25.6
Unit value.....	\$126.81	\$131.27	\$169.66	\$205.51	\$205.94	+33.8	+3.5	+29.2	+0.2
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
All sources:									
Imports quantity.....	1,832	2,638	2,640	726	395	+44.1	+44.0	+0.1	-45.6
Imports value.....	253,019	346,317	427,224	121,674	81,398	+68.9	+36.9	+23.4	-33.1
Unit value.....	\$138.11	\$131.27	\$161.84	\$167.52	\$205.94	+17.2	-5.0	+23.3	+22.9
U.S. producers'--	*	*	*	*	*	*	*	*	*

1/ Not applicable.

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

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

Table C-4

Low-enriched uranium hexafluoride: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993

(Quantity=1,000 SWU, value=1,000 dollars, unit values, unit labor costs, and unit COGS are per SWU, period changes=percent, except where noted)

Item	Reported data					Period changes			
	1990	1991	1992	Jan.-Mar.-- 1992	1993	1990-92	1990-91	1991-92	Jan.-Mar. 1992-93
U.S. consumption quantity:	*	*	*	*	*	*	*	*	*
U.S. consumption value:	*	*	*	*	*	*	*	*	*
U.S. importers' imports from--									
Tajikistan:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Ukraine:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Subject sources:									
Imports quantity.....	0	0	0	0	0	0	0	0	0
Imports value.....	0	0	0	0	0	0	0	0	0
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Other former U.S.S.R.:									
Imports quantity.....	400	0	194	194	0	-51.5	-100.0	1/	-100.0
Imports value.....	71,430	0	12,325	12,325	0	-82.7	-100.0	1/	-100.0
Unit value.....	\$178.55	1/	\$63.44	\$63.44	1/	-64.5	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Former U.S.S.R.:									
Imports quantity.....	400	0	194	194	0	-51.5	-100.0	1/	-100.0
Imports value.....	71,430	0	12,325	12,325	0	-82.7	-100.0	1/	-100.0
Unit value.....	\$178.55	1/	\$63.44	\$63.44	1/	-64.5	1/	1/	1/
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
Other (nonformer U.S.S.R.):									
Imports quantity.....	1,432	2,638	2,446	532	395	+70.8	+84.2	-7.3	-25.8
Imports value.....	181,589	346,317	414,899	109,349	81,398	+128.5	+90.7	+19.8	-25.6
Unit value.....	\$126.81	\$131.27	\$169.66	\$205.51	\$205.94	+33.8	+3.5	+29.2	+0.2
Ending inventory qty.....	-	-	-	-	-	-	-	-	-
All sources:									
Imports quantity.....	1,832	2,638	2,640	726	395	+44.1	+44.0	+0.1	-45.6
Imports value.....	253,019	346,317	427,224	121,674	81,398	+68.9	+36.9	+23.4	-33.1
Unit value.....	\$138.11	\$131.27	\$161.84	\$167.52	\$205.94	+17.2	-5.0	+23.3	+22.9
U.S. producers'--	*	*	*	*	*	*	*	*	*

1/ Not applicable.

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

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

Table C-5
 Highly-enriched uranium hexafluoride: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993

(Quantity=1,000 SWU, value=1,000 dollars, unit values, unit labor costs, and unit COGS are per SWU, period changes=percent, except where noted)

Item	Reported data			Jan.-Mar.--		Period changes			
	1990	1991	1992	1992	1993	1990-92	1990-91	1991-92	Jan.-Mar. 1992-93
	*	*	*	*	*	*	*	*	*

Note.--Period changes are derived from the unrounded data. Period changes involving negative period data are positive if the amount of the negativity decreases and negative if the amount of the negativity increases. Unit values and other ratios are calculated using data of firms supplying both numerator and denominator information. Part-year inventory ratios are annualized. There are reconciliation errors for fiscal year 1992.

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

Table C-6

Enriched uranium oxide: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993

(Quantity=kilograms, value=1,000 dollars, unit values, unit labor costs, and unit COGS are per kilogram, period changes=percent, except where noted)

Item	Reported data			Jan.-Mar.--		Period changes			Jan.-Mar.	
	1990	1991	1992	1992	1993	1990-92	1990-91	1991-92	1992-93	
U.S. consumption quantity:	*	*	*	*	*	*	*	*	*	
U.S. importers' imports from--										
Tajikistan:										
Imports quantity.....	0	0	0	0	0	0	0	0	0	
Imports value.....	0	0	0	0	0	0	0	0	0	
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/	
Ending inventory qty.....	-	-	-	-	-	-	-	-	-	
Ukraine:										
Imports quantity.....	0	0	0	0	0	0	0	0	0	
Imports value.....	0	0	0	0	0	0	0	0	0	
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/	
Ending inventory qty.....	-	-	-	-	-	-	-	-	-	
Subject sources:										
Imports quantity.....	0	0	0	0	0	0	0	0	0	
Imports value.....	0	0	0	0	0	0	0	0	0	
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/	
Ending inventory qty.....	-	-	-	-	-	-	-	-	-	
Other former U.S.S.R.:										
Imports quantity.....	0	0	0	0	0	0	0	0	0	
Imports value.....	0	0	0	0	0	0	0	0	0	
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/	
Ending inventory qty.....	-	-	-	-	-	-	-	-	-	
Former U.S.S.R.:										
Imports quantity.....	0	0	0	0	0	0	0	0	0	
Imports value.....	0	0	0	0	0	0	0	0	0	
Unit value.....	1/	1/	1/	1/	1/	1/	1/	1/	1/	
Ending inventory qty.....	-	-	-	-	-	-	-	-	-	
Other (nonformer U.S.S.R.):										
Imports quantity.....	180,346	6,062,500	56,305	9,868	4,340	-68.8	3/	-99.1	-56.0	
Imports value.....	40,496	27,831	24,747	5,124	840	-38.9	-31.3	-11.1	-83.6	
Unit value.....	\$224.55	\$4.59	\$439.52	\$519.27	\$193.52	+95.7	-98.0	3/	-62.7	
Ending inventory qty.....	-	-	-	-	-	-	-	-	-	
All sources:										
Imports quantity.....	180,346	6,062,500	56,305	9,868	4,340	-68.8	3/	-99.1	-56.0	
Imports value.....	40,496	27,831	24,747	5,124	840	-38.9	-31.3	-11.1	-83.6	
Unit value.....	\$224.55	\$4.59	\$439.52	\$519.27	\$193.52	+95.7	-98.0	3/	-62.7	
U.S. producers'--										
Average capacity quantity..	3,800,000	3,800,000	3,800,000	950,000	950,000	0	0	0	0	
Production quantity.....	2,502,885	2,622,213	2,593,273	807,161	727,562	+3.6	+4.8	-1.1	-9.9	
Capacity utilization 2/.....	65.9	69.0	68.2	85.0	76.6	+2.4	+3.1	-0.8	-8.4	

1/ Not applicable.

2/ 'Reported data' are in percent and 'period changes' are in percentage-point.

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

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

Table C-7
 U.S. reactor requirements: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993 ^{1/}

Item	Reported data					Period changes			
	1990	1991	1992	Jan.-Mar.		1990-92	1990-91	1991-92	Jan.-Mar. 1992-93
				1992	1993				
U.S. reactor requirements:									
Quantity.....	39,176	42,278	37,116	9,643	11,145	-5.3	7.9	-12.2	15.6
Producers' share.....	20.3	16.3	8.9	13.8	7.2	-11.4	-4.0	-7.4	-6.5
Importers' share:									
Tajikistan.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ukraine.....	***	***	***	***	***	***	***	***	***
Subject sources.....	***	***	***	***	***	***	***	***	***
U.S. importers' imports from--									
Tajikistan:									
Quantity.....	0	0	0	0	0	-	-	-	-
Ukraine:									
Quantity.....	***	***	***	***	***	***	***	***	***
Subject sources:									
Quantity.....	***	***	***	***	***	***	***	***	***
U.S. producers'--									
Shipments:									
U.S. shipments:									
Quantity.....	7,956	6,891	3,305	1,327	807	-58.5	-13.4	-52.0	-39.2

^{1/} Quantity data are in thousands of pounds U₃O₈ equivalent, shares are in percent, and period changes are in percentage point.

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

APPENDIX D

PORTIONS OF * IMPORTERS'
QUESTIONNAIRE RESPONSE**

* * * * *

APPENDIX E

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

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

1. Since January 1, 1990, has your firm experienced any actual negative effects on its growth, investment, ability to raise capital, or existing development and production efforts, including efforts to develop a derivative or more advanced version of the product, as a result of imports of uranium ores and/or uranium concentrates from Ukraine or Tajikistan?

* * * * *

2. Does your firm anticipate any negative impact of imports of uranium ores and/or uranium concentrates from Ukraine or Tajikistan?

* * * * *

3. Has the scale of capital investments undertaken been influenced by the presence of imports of uranium ores and/or uranium concentrates from Ukraine or Tajikistan?

* * * * *

APPENDIX F
FINANCIAL EXPERIENCE OF CONSOLIDATED
U.S. URANIUM INDUSTRY

Due to the disparate nature of the respective processes, the available financial data has been reported separately for each industry sector. The consolidation examples in table F-1 are presented to demonstrate the financial significance of each step in the process, utilizing 1992 average per-unit revenue and costs. A transaction product assay of 3.6 percent U²³⁵ with a tails assay of 0.2 percent U²³⁵ is used in example 1 and a transaction product assay of 3.6 percent U²³⁵ with a tails assay of 0.3 percent U²³⁵ is used in example 2 to illustrate the effect of different tails assays on utility costs. The average revenue is also the average cost generally for the utility or other purchaser of the U.S. product. Therefore, these data can be reconciled with the pricing data in tables 42-44 for U.S. uranium concentrates (financial data are a mix of spot and contract sales), table 46 for U.S. conversion fees, and table 47 for USEC enrichment fees (financial data include export sales).

Table F-1
Selected average income-and-loss data by uranium processing segments representing final average costs for 1,000 kilograms of U²³⁵ to the purchasers in 1992

Item	Feed	Net sales per unit 1/	Revenue 1/	Percent of total	Operating income
	*	*	*	*	*

1/ Represents generally the average 1992 costs for the purchasing utilities.

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

APPENDIX G

IMPORT DATA FOR NATURAL AND ENRICHED URANIUM

Table G-1

Natural and enriched uranium: U.S. imports, by products and by sources, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	Quantity (1,000 pounds)				
Uranium concentrates:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	4,099	12,265	2,919	2,919	591
Other (nonformer U.S.S.R.).....	20,737	18,966	21,151	3,189	3,042
Total.....	24,836	31,232	24,070	6,108	3,633
Natural uranium hexa- fluoride:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	60	1/	0	0	0
Subtotal.....	60	1/	0	0	0
Other (nonformer U.S.S.R.).....	16,522	14,256	10,305	2,743	5,138
Total.....	16,582	14,256	10,305	2,743	5,138
Other natural uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other (nonformer U.S.S.R.).....	1/	6	1/	0	1/
Total.....	1/	6	1/	0	1/
All natural uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	4,159	12,265	2,919	2,919	591
Other (nonformer U.S.S.R.).....	37,259	33,228	31,456	5,932	8,180
Total.....	41,417	45,493	34,375	8,851	8,771
Low-enriched uranium hexa- fluoride:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	195	0	95	95	0
Subtotal.....	195	0	95	95	0

See footnotes at end of table.

Table G-1--Continued
 Natural and enriched uranium: U.S. imports, by products and by sources, 1990-92,
 January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	Quantity (1,000 pounds)				
Low-enriched uranium hexa- fluoride--Continued:					
Other (nonformer U.S.S.R.).....	698	1,285	1,191	259	193
Total.....	893	1,285	1,286	354	193
Low-enriched uranium oxide:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other (nonformer U.S.S.R.).....	398	13,365	124	22	10
Total.....	398	13,365	124	22	10
Other enriched uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other (nonformer U.S.S.R.).....	351	90	1/	0	0
Total.....	351	90	1/	0	0
All enriched uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	195	0	95	95	0
Subtotal.....	195	0	95	95	0
Other (nonformer U.S.S.R.).....	1,446	14,741	1,316	281	202
Total.....	1,641	14,741	1,410	376	202
All natural and enriched uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	4,353	12,265	3,013	3,013	591
Other (nonformer U.S.S.R.).....	38,705	47,969	32,772	6,213	8,383
Total.....	43,059	60,234	35,785	9,227	8,973

See footnotes at end of table.

Table G-1--Continued

Natural and enriched uranium: U.S. imports, by products and by sources, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	Value (1,000 dollars)				
Uranium concentrates:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	36,071	111,815	25,205	25,205	5,964
Other (nonformer U.S.S.R.).....	263,056	276,146	278,770	41,454	30,615
Total.....	299,128	387,961	303,975	66,659	36,578
Natural uranium hexa- fluoride:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	15,721	2	0	0	0
Subtotal.....	15,721	2	0	0	0
Other (nonformer U.S.S.R.).....	214,623	229,255	148,886	69,292	51,891
Total.....	230,344	229,258	148,886	69,292	51,891
Other natural uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other (nonformer U.S.S.R.).....	40	40	21	0	4
Total.....	40	40	21	0	4
All natural uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	51,792	111,817	25,205	25,205	5,964
Other (nonformer U.S.S.R.).....	477,720	505,442	427,678	110,746	82,510
Total.....	529,512	617,259	452,882	135,951	88,473
Low-enriched uranium hexa- fluoride:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	71,430	0	12,325	12,325	0
Subtotal.....	71,430	0	12,325	12,325	0

See footnotes at end of table.

Table G-1--Continued

Natural and enriched uranium: U.S. imports, by products and by sources, 1990-92, January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	Value (1,000 dollars)				
Low-enriched uranium hexafluoride--Continued:					
Other (nonformer U.S.S.R.).....	181,589	346,317	414,899	109,349	81,398
Total.....	253,019	346,317	427,224	121,674	81,398
Low-enriched uranium oxide:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other (nonformer U.S.S.R.).....	40,496	27,831	24,747	5,124	840
Total.....	40,496	27,831	24,747	5,124	840
Other enriched uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other (nonformer U.S.S.R.).....	125,278	26,848	2	0	0
Total.....	125,278	26,848	2	0	0
All enriched uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	0	0	0	0	0
Subtotal.....	0	0	0	0	0
Other former U.S.S.R.....	71,430	0	12,325	12,325	0
Subtotal.....	71,430	0	12,325	12,325	0
Other (nonformer U.S.S.R.).....	347,363	400,997	439,648	114,473	82,238
Total.....	418,794	400,997	451,973	126,798	82,238
All natural and enriched uranium:					
Tajikistan.....	0	0	0	0	0
Ukraine.....	***	***	***	***	***
Subtotal.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Subtotal.....	123,223	111,817	37,530	37,530	5,964
Other (nonformer U.S.S.R.).....	825,083	906,439	867,326	225,219	164,748
Total.....	948,306	1,018,256	904,856	262,749	170,712

See footnotes at end of table.

Table G-1--Continued
 Natural and enriched uranium: U.S. imports, by products and by sources, 1990-92,
 January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
Unit value (per pound)					
Uranium concentrates:					
Tajikistan.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Ukraine.....	\$***	\$***	\$***	\$***	\$***
Average.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Average.....	8.80	9.12	8.64	8.64	10.10
Other (nonformer U.S.S.R.).....	12.69	14.56	13.18	13.00	10.06
Average.....	12.04	12.42	12.63	10.91	10.07
Natural uranium hexa- fluoride:					
Tajikistan.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Ukraine.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Average.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Other former U.S.S.R.....	263.79	52.43	<u>2/</u>	<u>2/</u>	<u>2/</u>
Average.....	263.79	52.43	<u>2/</u>	<u>2/</u>	<u>2/</u>
Other (nonformer U.S.S.R.).....	12.99	16.08	14.45	25.26	10.10
Average.....	13.89	16.08	14.45	25.26	10.10
Other natural uranium:					
Tajikistan.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Ukraine.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Average.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Other former U.S.S.R.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Average.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Other (nonformer U.S.S.R.).....	508.42	7.11	57.57	<u>2/</u>	67.69
Average.....	508.42	7.11	57.57	<u>2/</u>	67.69
All natural uranium:					
Tajikistan.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Ukraine.....	***	***	***	***	***
Average.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Average.....	12.45	9.12	8.64	8.64	10.10
Other (nonformer U.S.S.R.).....	12.82	15.21	13.60	18.67	10.09
Average.....	12.78	13.57	13.17	15.36	10.09
Low-enriched uranium hexa- fluoride:					
Tajikistan.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Ukraine.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Average.....	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Other former U.S.S.R.....	366.47	<u>2/</u>	130.22	130.22	<u>2/</u>
Average.....	366.47	<u>2/</u>	130.22	130.22	<u>2/</u>
Other (nonformer U.S.S.R.).....	260.28	269.43	348.23	421.82	422.70
Average.....	283.47	269.43	332.18	343.83	422.70

See footnotes at end of table.

Table G-1--Continued
 Natural and enriched uranium: U.S. imports, by products and by sources, 1990-92,
 January-March 1992, and January-March 1993

Item	1990	1991	1992	Jan.-Mar.--	
				1992	1993
	Unit value (per pound)				
Low-enriched uranium oxide:					
Tajikistan.....	2/	2/	2/	2/	2/
Ukraine.....	2/	2/	2/	2/	2/
Average.....	2/	2/	2/	2/	2/
Other former U.S.S.R.....	2/	2/	2/	2/	2/
Average.....	2/	2/	2/	2/	2/
Other (nonformer U.S.S.R.).....	\$101.85	\$2.08	\$199.36	\$235.54	\$87.78
Average.....	101.85	2.08	199.36	235.54	87.78
Other enriched uranium:					
Tajikistan.....	2/	2/	2/	2/	2/
Ukraine.....	2/	2/	2/	2/	2/
Average.....	2/	2/	2/	2/	2/
Other former U.S.S.R.....	2/	2/	2/	2/	2/
Average.....	2/	2/	2/	2/	2/
Other (nonformer U.S.S.R.).....	356.90	297.50	123.68	2/	2/
Average.....	356.90	297.50	123.68	2/	2/
All enriched uranium:					
Tajikistan.....	2/	2/	2/	2/	2/
Ukraine.....	2/	2/	2/	2/	2/
Average.....	2/	2/	2/	2/	2/
Other former U.S.S.R.....	366.47	2/	130.22	130.22	2/
Average.....	366.47	2/	130.22	130.22	2/
Other (nonformer U.S.S.R.).....	240.18	27.20	334.18	407.40	406.85
Average.....	255.18	27.20	320.49	337.56	406.85
All natural and enriched uranium:					
Tajikistan.....	2/	2/	2/	2/	2/
Ukraine.....	***	***	***	***	***
Average.....	***	***	***	***	***
Other former U.S.S.R.....	***	***	***	***	***
Average.....	28.30	9.12	12.45	12.45	10.10
Other (nonformer U.S.S.R.).....	21.32	18.90	26.47	36.25	19.65
Average.....	22.02	16.90	25.29	28.48	19.02

1/ Less than 500 pounds.

2/ Not applicable.

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

Source: Compiled from questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

APPENDIX H

DISCUSSION OF THE DIFFERENT TYPES OF SWAPS

The different types of swaps identified by the responding U.S. producers and importers of uranium are location swaps, origin swaps, deconversion swaps, and displacement swaps. These types of swaps are discussed below.

Location swaps involve a single type of uranium product and occur where a seller's uranium product is at location 'A' but his customer requires the product at location 'B'.¹ The seller can make the sale, but instead of physically delivering his product to location 'B', he swaps ownership of the required quantity of his product at location 'A' for ownership of the same type and quantity of uranium product of another firm already at location 'B'. The seller now owns the required quantity of uranium product at location 'B' and sells it to his customer.

Origin swaps involve a single type of uranium product and occur where a seller's uranium product was produced in country 'X', but his customer requires the product to be of country 'Y' origin.² The seller makes the sale by swapping ownership of the required quantity of his product from country 'X' for ownership of the same type and quantity of uranium product from country 'Y' of another firm. The seller now owns the required quantity of uranium product from country 'Y' and sells it to his customer.³ Origin swaps can also be effected by first borrowing the amount of country 'Y' origin material needed and "paying" back the loaned material at a later date with the same type and quantity of uranium product but not necessarily of the same country origin. Some U.S. producers assert that *** is borrowing large amounts of mostly U.S.- and Canadian- origin uranium products in the U.S. market and selling it in the United States, but plans to pay back these loans in like kind and quantity of the subject imported products when prices are expected to be lower.⁴

Deconversion swaps involve at least two types of uranium products and occur where firm 'A' sells, for example, natural uranium hexafluoride to firm 'B' and receives in return the amount of uranium concentrates required to produce that same amount of converted product plus an amount of cash equal to the value of conversion services. Such a value is generally based on the

¹ If the customer has a preference for the country of origin, the seller would be restricted to swapping for the uranium product not only at a specific location but also of a particular country of origin.

² Assume for simplicity that both the country 'X' and country 'Y' uranium products were at the same location, which was where the customer required the product. In actual practice, the seller typically swaps for the country 'Y' product that is at the location required by the customer, but the country 'X' product may or may not be at this location.

³ Origin swaps sometimes involve a type of exchange called flag swaps, where two firms swap the country identities of a like quantity and kind of uranium product that they own. They still own the same physical material at the same locations as before the swap, but after the swap each has the other firm's country designation for a particular quantity of the product. (Transcript of conference, p. 107).

⁴ *** reported that such outstanding loans, if paid back in like kind and quantity of uranium, will maintain or increase the supply of uranium in the U.S. market and thereby keep prices suppressed or act to depress prices further.

conversion value shown in one of the uranium price publications. Firm 'A' then sells the uranium concentrates to firm 'C'.⁵ Deconversion swaps make it difficult to determine sales quantities and values as they often entail a combination of some quantity of a physical product and dollar remuneration for a service component.

Displacement swaps are a type of location swap and may include uranium of different country origins. These reportedly involve European utilities' U.S. inventories of uranium products and occur when an European utility swaps ownership of a particular quantity of uranium product in the United States for a like quantity of the same type of uranium in Europe belonging to another firm. The uranium product now owned by the European utility is likely to be of a different country of origin than the product it initially owned in the United States.⁶ Although it is not currently known how much displacement could take place,⁷ some U.S. producers assert that such "freeing-up" of U.S. uranium stocks could continue even with trade sanctions.

⁵ Firm 'A' could have sold enriched uranium hexafluoride instead of the natural product and gotten in return the amount of natural uranium hexafluoride to produce the particular amount of enriched product and cash for the value of enrichment services to produce this product. Alternatively, the seller of the enriched product could have gotten in return the amount of uranium concentrates required for the particular amount of enriched product and cash for both the conversion and enrichment services needed to produce this product.

⁶ *** asserts in its questionnaire response that most of the displacement swaps involve alleged imported uranium from Tajikistan and Ukraine. The firm feels this type of swap frees-up for sale previously committed uranium in the U.S. market and tends to lower prices in the U.S. market.

⁷ *** indicated that the European Atomic Agency reported that about 2 million pounds (U_3O_8 equivalent) of such swaps involving U.S. uranium occurred in 1990. It is not known what share of such activity involved uranium from the subject countries.

APPENDIX I

**REPORTED SELLING PRICES OF U.S.-PRODUCED URANIUM CONCENTRATES
SUBJECT TO *****

Table I-1

Net delivered selling prices and quantities of U.S.-produced uranium concentrates based on ***, by quarters, January 1990-June 1992 1/

* * * * *

1/ Prices of the domestic uranium concentrates are averages of the net U.S. delivered quarterly selling prices of *** total quarterly sales weighted by each firm's total quarterly sales quantity under the *** agreements. ***.

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

