Uranium From Russia, Ukraine and Uzbekistan

Investigations Nos. 731-TA-539-C, E and F (Review)

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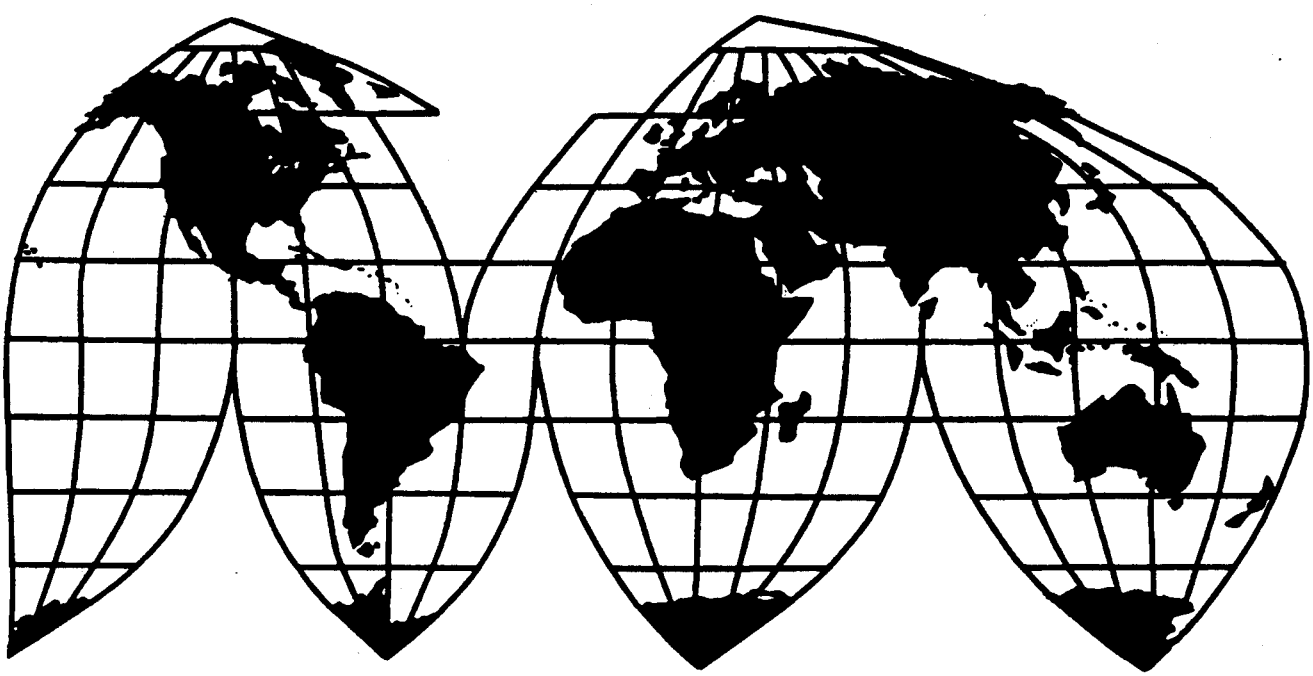
U.S. International Trade Commission



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Note.–Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report.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.

Glossary of Abbreviations

ABB	ABB CE Nuclear Power Inc.
AVLIS	Advanced vapor laser isotope separation
BNFL	British National Fuel Ltd.
Cameco	Cameco Corp.
CIS	Commonwealth of Independent States
COGEMA	COGEMA, S.A.
COGS	Cost of goods sold
Commerce	U.S. Department of Commerce
Commission	U.S. International Trade Commission
COMPAS	Commercial Policy Analysis System
Cotter	Cotter Corp.
DOE	U.S. Department of Energy
EIA	Energy Information Administration
ERA	Energy Resources of Australia
EUP	Enriched uranium product
Everest	Everest Exploration Inc.
FR	Federal Register
GDP	Gross domestic product
GE	Global Nuclear Fuel (Parent: General Electric Co.)
GNSS	Globe Nuclear Service and Supply, Limited
HEU	Highly enriched uranium
HTS	Harmonized Tariff Schedule of the United States
International Uranium	International Uranium (USA) Corp.
ISL	*In situ* leaching
kg	Kilogram
LEU-DO	Low-enriched uranium dioxide (low enriched UO_2)
LEU-HF	Low-enriched uranium hexafluoride (low enriched UF_6)
LTFV	Less than fair value
Minatom	Ministry of Atomic Energy of the Russian Federation
MOX	Mixed uranium oxide
Navoi	Navoi Mining and Metallurgical Combinat
Nukem	Nukem, Inc.
PACE	Paper, Allied-Chemical-Industrial Union
R&D	Research and development
Rio Algom	Rio Algom Mining Corp.
Power Resources	Power Resources, Inc.
SG&A expenses	Selling, general, and administrative expenses
Siemens	Siemens Power Corp.
SWU	Separative work units
TENEX	AO Techsnabexport
TR	Transcript of the Commission's hearing
UF_6	Natural uranium hexafluoride
UO_2	Uranium oxide
U_3O_8	Natural uranium concentrate
Uranium Resources	Uranium Resources Inc.
USEC	United States Enrichment Corporation
USSR	Union of Soviet Socialist Republics

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigations Nos. 731-TA-539-C, E and F (Review)

URANIUM FROM RUSSIA, UKRAINE AND UZBEKISTAN

DETERMINATIONS

On the basis of the record[2] developed in the subject five-year reviews, the United States International Trade Commission determines, pursuant to section 751(c) of the Tariff Act of 1930 (19 U.S.C. § 1675(c)) (the Act), that (1) termination of the suspended investigation on uranium from Russia would be likely to lead to continuation or recurrence of material injury in the United States within a reasonably foreseeable time; (2) revocation of the antidumping duty order on uranium from Ukraine would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time; and (3) termination of the suspended investigation on uranium from Uzbekistan would not be likely to lead to continuation or recurrence of material injury in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission instituted these reviews on August 2, 1999 (64 F.R. 41965) and determined on November 4, 1999, that it would conduct full reviews (64 F.R. 62691, November 17, 1999). Notice of the scheduling of the Commission's reviews and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on January 24, 2000 (65 F.R. 3737). The hearing was held in Washington, DC, on June 13, 2000, and all persons who requested the opportunity were permitted to appear in person or by counsel.

The Commission transmitted its determinations in these reviews to the Secretary of Commerce on August 7, 2000. The views of the Commission are contained in USITC Publication 3334 (August 2000), entitled *Uranium from Russia, Ukraine and Uzbekistan: Investigations Nos. 731-TA-539-C, E and F (Review).*

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

VIEWS OF THE COMMISSION

Based on the record in these five-year reviews,[1] we determine under section 751(c) of the Tariff Act of 1930, as amended ("the Act"), that termination of the suspended investigation covering uranium from Russia would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time; and that termination of the suspended investigation covering uranium from Uzbekistan and revocation of the antidumping duty order covering uranium from Ukraine would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[2]

I. BACKGROUND

On December 23, 1991, the Commission determined that there was a reasonable indication that an industry in the United States was being materially injured by reason of imports of uranium from the U.S.S.R. that allegedly were being sold at less than fair value.[3] Two days later, the Soviet Union dissolved into separate republics. The Department of Commerce ("Commerce") and the Commission continued its respective investigations, with the 12 independent countries that occupied the territory of the former Soviet Union becoming the respondents in 12 separate investigations.[4] Commerce issued preliminary determinations against the newly independent countries in June 1992.[5] On October 16, 1992, Commerce entered into suspension agreements with the six Soviet successor countries (Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan) that produced uranium.[6]

In early 1993, Tajikistan and Ukraine requested the termination of their suspension agreements. Accordingly, in April 1993, Commerce resumed the investigations of those countries and issued final

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[1] For purposes of these determinations, we are disregarding the following new factual information, not included in the factual record which closed on July 14, 2000, which was submitted in final comments of the Russian Respondents of July 18, 2000: Attachment A (Affidavit of ***) and references to that affidavit in the text of the final comments, including the paragraph on pages 3 and 4. See 19 U.S.C. § 1677m(g); 19 C.F.R. § 207.68(b).

[2] Vice Chairman Deanna Tanner Okun not participating.

[3] Uranium from U.S.S.R., Inv. No. 731-TA-539 (Preliminary) USITC Pub. 2471 (Dec. 1991) ("Soviet Uranium").

[4] 57 Fed. Reg. 11064 (Apr. 1, 1992).

[5] 57 Fed. Reg. 23380 (June 3, 1992).

[6] See, e.g., Agreement Suspending the Antidumping Investigation on Uranium from Russia (Oct. 16, 1992) ("Russian Suspension Agreement"), in 57 Fed. Reg. 49220, 49235 (Oct. 30, 1992) and Agreement Suspending the Antidumping Investigation on Uranium from Uzbekistan (Oct. 16, 1992) ("Uzbek Suspension Agreement"), in 57 Fed. Reg. 49220, 49255 (Oct. 30, 1992). Commerce also terminated the investigations against the remaining six countries that did not produce uranium on the grounds that there were no LTFV sales from those countries. 57 Fed. Reg. 48505 (Oct. 26, 1992).

affirmative determinations as to both of them.[7] The Commission resumed its final investigations under the name Uranium from Tajikistan and Ukraine, and issued a negative determination with respect to Tajikistan and an affirmative determination with respect to Ukraine in August 1993.[8] Commerce subsequently issued an antidumping duty order on imports of uranium from Ukraine.[9]

The suspension agreements against Kazakhstan, Kyrgyzstan, Russia, and Uzbekistan remained in effect, but were subject to a series of amendments that broadened the range of products subject to the agreements, gave the subject countries a larger quota for U.S. imports, and, in the case of Russia, made changes to correspond with the Russian HEU Agreement and the USEC Privatization Act.[10] One amendment made to both the Russian and Uzbek Suspension Agreements was to change the original termination date for the suspension agreement from October 15, 2000 to March 31, 2004 for the Russian Agreement, and October 12, 2004 for the Uzbekistan Agreement, as long as the Russian Federation or the Government of Uzbekistan have not been found to have violated the Agreements in any substantive manner.[11]

In early 1999, the suspension agreement with Kazakhstan was terminated at the request of the Government of Kazakhstan. As a result of the termination, Commerce and the Commission resumed their investigations, and the Commission reached a negative final determination on July 13, 1999.[12]

On August 2, 1999, the Commission instituted these reviews pursuant to section 751(c) of the Act to determine whether termination of the suspended investigations on uranium from Russia and Uzbekistan and revocation of the antidumping duty order on uranium from Ukraine would likely lead to continuation or recurrence of material injury.[13]

In five-year reviews, the Commission initially determines whether to conduct a full review

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[7] Uranium From Ukraine and Tajikistan, 58 Fed. Reg. 36640 (July 8, 1993) (final) ("Final LTFV Determination – Ukraine").

[8] Uranium From Tajikistan and Ukraine, Inv. Nos. 731-TA-539D-539E (Final), USITC Pub. 2669 (Aug. 1993) ("Uranium From Ukraine").

[9] 58 Fed. Reg. 45483 (Aug. 30, 1993).

[10] See, e.g., 59 Fed. Reg. 15373 (April 1, 1994) (Russia); 60 Fed. Reg. 55004 (Oct. 27, 1995)(Uzbekistan); 61 Fed. Reg. 56665 (Nov. 4, 1996) (Russia).

[11] 59 Fed. Reg. 15373 (April 1, 1994) (Russia); 60 Fed. Reg. 55004 (Oct. 27, 1995) (Uzbekistan). The Suspension Agreements indicate that Commerce's review and termination shall be conducted consistent with §353.25 (1994) (i.e., procedures for revocation of an order/termination of a suspension agreement), or as amended in §351.222 (1999), of the Department's regulations. 57 Fed. Reg. at 49240 and 49260 (Oct. 30, 1992).

[12] Uranium From Kazakhstan, 64 Fed. Reg. 10317 (Mar. 3, 1999) (notice of continuation of review); Uranium From the Republic of Kazakhstan, 64 Fed. Reg. 31179 (June 10, 1999) ("Final LTFV Determination – Kazakhstan"); Uranium from Kazakhstan, Inv. No. 731-TA-539A (Final), USITC Pub. 3213 (July 1999).

[13] 64 Fed. Reg. 41965 (Aug. 2, 1999). The Commission also instituted a review of the suspended investigation on uranium from Kyrgyzstan, but terminated that review pursuant to Commerce's notice that it was terminating its suspended investigation. 64 Fed. Reg. 61939 (Nov. 15, 1999).

(which would include a public hearing, the issuance of questionnaires, and other procedures) or an expedited review, as follows. First, the Commission determines whether individual responses of interested parties to the notice of institution are adequate. Second, based on those responses deemed individually adequate, the Commission determines whether the collective responses submitted by two groups of interested parties - domestic interested parties (producers, unions, trade associations, or worker groups) and respondent interested parties (importers, exporters, foreign producers, trade associations, or subject country governments) - demonstrate a sufficient willingness among each group to participate and provide information requested in a full review.[14] If the Commission finds the responses from both groups of interested parties to be adequate, or if other circumstances warrant, it will determine to conduct a full review.

In these reviews, the Commission received a response to the notice of institution from the Uranium Coalition that contained company-specific information submitted by domestic producers of uranium. The Uranium Coalition was comprised of domestic producers Rio Algom Mining Corporation ("Rio Algom"), Uranium Resources, Inc., ("URI"), and the United States Enrichment Corporation ("USEC"), and the Paper, Allied-Industrial, Chemical & Energy Workers International Union, AFL-CIO ("PACE"), a union representing the workers at production facilities owned by USEC and ConverDyn, a domestic producer that is not a member of the Coalition. In the review concerning Russia, the Commission received a joint response containing company-specific information for the Ministry of the Russian Federation for Atomic Energy ("Minatom") (the sole producer of uranium in Russia), AO Techsnabexport ("Tenex") (the sole exporter of uranium from Russia), and Globe Nuclear Service and Supply GNSS, Ltd. ("GNSS") (a related U.S. importer of Russian uranium), (collectively, "Russian Respondents"). In the review concerning Uzbekistan, the Commission received a joint response containing company-specific information for the Government of Uzbekistan and Navoi Mining and Metallurgical Combinat (the only producer of uranium in Uzbekistan) (collectively, "Uzbek Respondents"). The Commission also received a response from the Ad Hoc Utilities Group, a coalition of U.S. industrial users of uranium, which is a party to the proceeding, but not an interested party, as defined by the statute. The Commission did not receive a response from any respondent interested party in the review concerning Ukraine.

On November 4, 1999, the Commission determined that both the domestic and respondent interested party group responses to its notice of institution for the reviews concerning Russia and Uzbekistan were adequate. Pursuant to 19 U.S.C. § 1675(c)(5), the Commission decided to conduct a full review with regard to Russia and Uzbekistan. Because no respondent interested party responded for the review of uranium from Ukraine, the Commission determined that the respondent interested party group response for that review was inadequate. However, the Commission decided to conduct a full review of the order covering Ukraine to promote administrative efficiency in light of the Commission's decision to conduct full reviews with respect to Russia and Uzbekistan.[15]

The Uranium Coalition, consisting of the Ad Hoc Committee of Domestic Uranium Producers ("Ad Hoc Committee"),[16] PACE, and USEC, filed briefs and appeared at the hearing in opposition to revocation of the order and termination of the suspended investigations. The Russian Respondents filed briefs and appeared at the hearing in support of termination of the suspended Russian investigation. The

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[14] See 19 C.F.R. § 207.62(a); 63 Fed. Reg. 30599, 30602-05 (June 5, 1998).

[15] See Explanation of Commission Determination on Adequacy in Uranium from Russia, Ukraine, and Uzbekistan. See also 64 Fed. Reg. 62694 (Nov. 17, 1999).

[16] The Ad Hoc Committee consists of four uranium mining and milling companies and the sole uranium converter in the United States, ConverDyn.

Uzbek Respondents filed briefs and appeared at the hearing in support of termination of the suspended Uzbek investigation. The Ad Hoc Utilities Group filed briefs supporting revocation of the order and termination of the suspended investigations and appeared at the hearing.

II. DOMESTIC LIKE PRODUCT AND INDUSTRY

A. Domestic Like Product

In making its determination under section 751(c), the Commission defines "the domestic like product" and the "industry."[17] The Act defines "domestic 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 under this subtitle."[18]

In its final full sunset review of the suspended Russian investigation, Commerce defined the scope of the review as the subject merchandise covered by the agreement suspending the antidumping investigation on uranium from the Russian Federation, including:

> 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 U^{235} and its compounds; alloys, dispersions (including cermets), ceramic products, and mixtures containing uranium enriched in U^{235} or compounds of uranium enriched in U^{235}; and any other forms of uranium within the same class or kind.
>
> In addition, Section III of the suspension agreement provides that uranium ore from Russia that is milled into U_3O_8 and/or converted into UF_6 in another country prior to direct and/or indirect importation into the United States is considered uranium from Russia and is subject to the terms of the Russian agreement, regardless of any subsequent modification or blending. . . .
>
> Under the terms of suspension agreement HEU is within the scope of this investigation, and HEU is covered by this Russian suspension agreement. (HEU means uranium enriched to 20 percent or greater in the isotope uranium-235.)[19]

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[17] 19 U.S.C. § 1677(4)(A).

[18] 19 U.S.C. § 1677(10). See NEC Corp. v. Department of Commerce, 36 F. Supp.2d 380, 383 (CIT 1998); Nippon Steel Corp. v. United States, 19 CIT 450, 455 (1995); Torrington Co. v. United States, 747 F. Supp. 744, 749 n.3 (CIT 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991). See also S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

[19] Commerce also stated regarding the scope of the Russian review:

> the second amendment to the Russian suspension agreement, on November 4, 1996, permitted, among other things, the sale in the United States of Russian low-enriched uranium ("LEU") derived from HEU and included within the scope of the suspension agreement Russian uranium which has been enriched in a third country prior to importation into the United States. According to the amendment, these modifications would remain in effect until October 3, 1998.
>
> On August 6, 1999, USEC, Inc. and its subsidiary, United States Enrichment Corporation (collectively, "USEC") requested that the Department issue a scope ruling to clarify that enriched uranium located in Kazakhstan at the time of the dissolution of the Soviet Union is within the scope of the Russian suspension agreement. Respondent interested parties filed an opposition to the scope request on August 27, 1999. That scope request is pending before the

Commerce's definition of the subject merchandise for each of the three reviews is similar with the primary exception that the definition for the Russian and Uzbek[20] reviews explicitly includes imports of HEU in the scope of review and the definition for the Ukrainian review[21] explicitly does not include

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Department at this time.

65 Fed. Reg. 41439, 41440-41441 (July 5, 2000).

[20] In its final full sunset review of the suspended Uzbek investigation, Commerce defined the scope of the review as the subject merchandise covered by the agreement suspending the antidumping investigation on uranium from the Uzbekistan, including:

> 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 U^{235} and its compounds; alloys, dispersions (including cermets), ceramic products, and mixtures containing uranium enriched in U^{235} or compounds of uranium enriched in U^{235}; and any other forms of uranium within the same class or kind. . . . . The notice [suspending the original investigation] amended the scope of the investigation to include HEU. The suspension agreement provided that uranium ore from Uzbekistan that is milled into U_3O_8 and/or converted into UF_6 in another country prior to direct and/or indirect importation into the United States is considered uranium from Uzbekistan and is subject to the terms of the Agreement. . . .
>
> On October 13, 1995, the Department issued an amendment to the suspension agreement on uranium from Uzbekistan. Among other things, this amendment modifies the agreement to include Uzbek uranium enriched in a third country prior to importation into the United States.

65 Fed. Reg. 41441, 41442 (July 5, 2000).

[21] In its final expedited sunset review of the antidumping duty order on uranium from Ukraine, Commerce defined the subject merchandise as:

> Ukrainian 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 U^{235} and its compounds; alloys, dispersions (including cermets), ceramic products and mixtures containing uranium enriched in U^{235} or compounds or uranium enriched in U^{235}. Low enriched uranium ("LEU") is included within the scope of the order; highly enriched uranium ("HEU") is not. LEU is uranium enriched in U^{235} to a level of up to 20 percent, while HEU is uranium enriched in U^{235} to a level of 20 percent or more. . . . The Department clarified, in the scope of the order that: "milling" or "conversion" performed in a third country does not change the country of origin for purposes of this order. Milling consists of processing uranium ore into uranium concentrate. Conversion consists of transforming uranium concentrate into natural uranium hexafluoride (UF_6). Since milling or conversion does not change the country of origin, uranium ore or concentrate of Ukrainian origin that is subsequently milled and/or converted in a third country will be considered of Ukrainian origin and subject to the antidumping duties.

HEU.[22] The scope of review for all three reviews clarifies that milling or conversion in third countries does not change the country of origin from that of the original country. The Uzbek and Russian suspension agreements also were amended to modify the scope to include the natural component of uranium enriched in a third country. This scope amendment has expired regarding the Russian review but still applies to the Uzbek review.

The subject merchandise is a radioactive metal used principally as fuel to generate electricity in nuclear power plants and secondarily as a fuel to propel naval vessels and as an active ingredient in atomic weaponry.[23] In processing uranium ore to a usable form as fuel in a nuclear reactor, uranium takes on four different forms and involves four successive stages of preparation. The entire traditional production process of transforming U_3O_8 into enriched UO_2 is known as the "uranium fuel cycle."[24] In the first stage, "concentrators" mine uranium ore and extract the uranium in a concentrated form of U_3O_8, resulting in a product known as "uranium concentrate."[25] In the second stage, "converters" transform the U_3O_8 into natural uranium hexafluoride (UF_6), which is a powder at room temperature but becomes a gas with relatively little addition of energy.[26] In the third stage, the "enricher" vaporizes the natural UF_6 and processes it using units of effort called "separative work units" ("SWU") to increase the percentage of U^{235} (the only naturally occurring uranium isotope that is easily fissionable), thereby producing enriched UF_6.[27] Enriched UF_6 (enriched uranium hexafluoride) is processed for use in nuclear power plants to a proportion of U^{235} in the uranium from 0.71 percent to 3-5 percent by weight (low-enriched uranium or LEU) and for use in nuclear weapons and nuclear propulsion to a proportion of U^{235} in uranium of 20 percent or more (highly-enriched uranium or HEU). The enriching process also produces a waste stream, or "tails," which is depleted in its natural concentration of U^{235}, but can be re-enriched with U^{235} and

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65 Fed. Reg. 11552, 11553 (March 3, 2000).

[22] While HEU is included in the scope for both the Russian and Uzbek reviews, it is only an issue as discussed below for the Russian review because there is no HEU in Uzbekistan.

[23] Confidential Staff Report ("CR") at I-7-I-13; Public Staff Report ("PR") at I-5 - I-9.

[24] CR/PR at II-1. Electric utilities have typically purchased the uranium concentrates, contracted with converters and enrichers to toll-produce the natural uranium hexafluoride (natural UF_6) and low-enriched uranium hexafluoride (LEU-HF) or enriched UF_6, and then contracted with fabricators both to toll-produce the LEU-HF into low-enriched uranium dioxide (LEU-DO) and pelletize this latter product, and to construct the fuel assemblies. Id.

[25] For the purposes of these reviews, we use the terms "uranium concentrate" and "U_3O_8" interchangeably. The concentrate accounts for about 31 percent of the total subject nuclear fuel costs. CR at I-9; PR at I-6-7.

[26] At this point, the uranium consists of several isotopes, which are forms of the uranium molecule that contain different numbers of neutrons. Conversion accounts for about 3 percent of total subject nuclear fuel costs. CR at I-10; PR at I-7.

[27] Enrichment represents about 59 percent of subject total nuclear fuel costs. CR at I-11; PR at I-8.

recycled into nuclear fuel.[28] In the fourth and final stage, "fabricators" convert the "enriched UF_6" into uranium dioxide (UO_2),[29] which they then pelletize and encase the pellets into protective metal sheaths, called fuel assembly rods, to meet the needs of specific nuclear power plants.[30] The UO_2 in powder or pellet form, in addition to the previous uranium forms, is part of the subject merchandise, but the fuel assembly rods are not.[31] LEU can also be produced by de-enriching or blending down surplus HEU, i.e., by diluting its concentration of U^{235} to LEU levels.

In the 1991 preliminary determination for the original investigation of Uranium from the U.S.S.R. and the 1993 final determination in Uranium from Ukraine, the Commission found that the five-factor semifinished product analysis dictated a single like product encompassing all four forms of uranium.[32] In Uranium from Ukraine, the Commission evaluated whether there were two like products composed of enriched and unenriched uranium. It found that three of the factors favored a single like product: (1) that all forms of uranium were dedicated for use in the production of nuclear fuel; (2) that all forms shared the same essential characteristic, the presence of fissionable U^{235}; and (3) that there were no independent markets for the various forms of uranium. The Commission found that these three factors outweighed the two that militated for separate like products, namely: (1) that the enrichment

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[28] Depleted uranium or uranium tails remain a large potential source of natural uranium. It has not been economically feasible for widespread commercial exploitation of the substantial supply of uranium tails, i.e., re-enrichment of the depleted uranium waste. Only Russia's enricher, Minatom, has re-enriched significant quantities of depleted uranium in recent years. CR at I-15; PR at I-10.

[29] Fabricators also may convert enriched UF_6 into a uranium nitrate, metal, or ceramic product. CR at I-12; PR at I-8. For the sake of simplicity, we refer to all of the fabricated forms of enriched uranium as UO_2.

[30] The converting and pelletizing process represents about 7 percent of the total cost of producing the subject product. CR at I-12; PR at I-9.

[31] See 65 Fed. Reg. at 41440-41441 (Russia); 65 Fed. Reg. at 41442 (Uzbekistan); and 65 Fed. Reg. at 11553 (Ukraine).

[32] Soviet Uranium, USITC Pub. 2471 at 8-9 (The Commission concluded "that the lack of significant independent uses for unenriched forms of uranium other than for nuclear fuel and the presence of the 'essential' U^{235} isotope in all pertinent forms of uranium outweigh the countervailing criteria and support designation of a single like product coextensive with the articles under investigation." Id. at 8.) Uranium from Ukraine, USITC Pub. 2669 at 12. Vice Chairman Watson and Commissioner Nuzum dissented from the majority's like product determination in Uranium from Ukraine, deciding instead that there were two like products, consisting of HEU and uranium other than HEU. They voted in the negative with regard to HEU and in the affirmative with regard to LEU. Of the Commissioners who found a single like product covering all uranium, two voted in the affirmative, and two in the negative. Therefore, the final affirmative determination applied only to uranium other than HEU. Id. at 35-39 (separate views of Vice Chairman Watson and Commissioner Nuzum).

Likewise, in Uranium from Kazakhstan, the Commission found a single like product encompassing all four forms of uranium. The Commission considered and decided that fuel assemblies should be explicitly excluded from the like product. Uranium from Kazakhstan, Inv. No. 731-TA-539-A (Final), USITC Pub. 3213 at 6-8 (July 1999)(The Commission found that the factors favoring a single like product, especially the similarity of functions and the lack of independent markets among the forms of uranium, outweigh the factors suggesting multiple like products.).

step involved a more than nominal cost and added substantial value to natural UF_6, and (2) that the various forms of uranium were not interchangeable.[33]

The record indicates that the product itself has remained essentially unchanged since the original 1991 preliminary investigation of Uranium from the U.S.S.R. and the original 1993 final investigation of Uranium from Ukraine.[34] [35] The parties have presented no arguments and the record does not suggest a reason for revisiting the Commission's original determination of the domestic like product in the preliminary investigation or the final investigation involving Ukraine. We therefore define a single domestic like product consisting of all forms of uranium coextensive with the scope of review for each of the three reviews.[36]

The parties have raised two additional issues, which involve challenges to the definition of the scope of the review, particularly the scope of the Russian review. The two issues are: 1) the Russian Respondents contend that Commerce's inclusion of HEU in the scope is invalid and thus the Commission should disregard it;[37] [38] and 2) the Uranium Coalition maintains that uranium tails are included in the scope of review for all three reviews.[39]

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[33] See Ukrainian Uranium, Pub. 2669 at 10-12.

[34] CR/PR at II-1. For example, the traditional production stages and successive forms of uranium in the LEU fuel cycle remain the same. Id. at II-1-2.

[35] While there has been a significant new alternative source of supply of LEU-HF produced directly by blending down HEU, and thus eliminating for this new source the first three stages of the fuel cycle, the dominant process by which electric utilities obtain LEU remains the four stage uranium fuel cycle. Blended down LEU-HF in the U.S. market is supplied largely under the terms of the Russian HEU Agreement with the United States, although ***. CR/PR at II-1 and II-2.

[36] We note that this domestic like product definition is broader than the scope of the Ukrainian review because it includes HEU, and the Ukrainian scope does not. However, while the domestic like product definition includes HEU, as well as other forms of uranium, HEU has not been produced during the period of review and thus there is no HEU data to include in the domestic industry. Thus, the difference in the domestic like product and Ukrainian scope of review definitions has no effect on our analysis of the actual data regarding the domestic industry since no HEU production data are included.

[37] While Commerce's definition of the scope of the Uzbek review includes HEU, as well as other forms of uranium, the Uzbek Respondents have not challenged this definition since there is no HEU inventory, nor capabilities to produce HEU in Uzbekistan; thus, whether HEU is or is not included in the scope is not an issue for the Uzbekistan review.

[38] The Russian Respondents contend that HEU is not within the scope of the suspended Russian investigation. These respondents acknowledge that "the Department of Commerce included HEU material within the scope of the suspended investigation," but charge that "this determination should be disregarded by the Commission." According to the Russian Respondents, "[t]he issue is not whether the Commission should look behind a valid scope determination of the Department, but whether there was any validity to that decision in the first instance." Russian Respondents' Posthearing Brief, Attachment H at 1-4.

[39] The Uranium Coalition contends that depleted uranium, or uranium "tails," are included within the scope of these reviews because the "scope definition does not define the scope of the subject

While the parties' questions regarding the scope of review should be directed to Commerce, Commerce has yet to resolve these issues, and the Commission has no choice other than to use the plain language of Commerce's definition of the scope of review in considering any of the issues before it.[40] We briefly discuss each of these arguments below, although we note that they have little practical effect on the definition of the domestic like product and principally involve defining the potential likely volume of imports.

On the first issue regarding HEU, Commerce's scope definition for both the Russian and Uzbek reviews explicitly states that HEU is included.[41] It is contrary to law for the Commission to look behind Commerce's determination as to what merchandise is subject to review.[42] That, however, is exactly what the Russian Respondents would have the Commission do in urging the Commission to disregard Commerce's scope because they allege it is invalid. The Commission properly cannot look behind Commerce's definition. Moreover, this issue of whether HEU is in the scope and thus is equivalent domestic material within the domestic like product has little effect on the Commission's definition of the domestic product and industry because there is no U.S. production of HEU at the present time, only a large stockpiled surplus, ***.[43]

The implication of HEU's inclusion in or exclusion from the scope of the Russian review could have a significant effect on the likely volume of imports under consideration. The Russian Respondents' argument focuses on the fact that the importation of LEU blended down from HEU is governed by the

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merchandise based on the concentration level of U^{235}." Uranium Coalition's Prehearing Brief, Appendix A at n.2; Ad Hoc Committee's Posthearing Brief, Appendix A (Coalition's Response to Questions) at 8 and 9.

[40] Commerce indicated in its "Issues and Decision Memorandum," adopted in its notice of final results in both the Russian and Uzbek reviews, that it was not appropriate to evaluate scope issues or revise the scope language in the course of sunset proceedings. Issues and Decision Memorandum for the Sunset Review of Uranium from Russia; Final Results, from Jeffrey A. May, Director, Office of Policy, Import Administration to Troy H. Cribb, Acting Assistant Secretary for Import Administration, dated June 27, 2000 at 6; Issues and Decision Memorandum for the Sunset Review of Uranium from Uzbekistan; Final Results, from Jeffrey A. May, Director, Office of Policy, Import Administration to Troy H. Cribb, Acting Assistant Secretary for Import Administration, dated June 27, 2000 at 5.

[41] 65 Fed. Reg. at 41441 and 41442 (July 5, 2000).

[42] See Statement of Administration Action ("SAA"), H.R. Rep. No. 103-316, vol. I (1994) at 887. See e.g., NEC Corp., 36 F. Supp.2d at 383 (CIT 1998)("the Commission must accept the determination of Commerce as to the scope of the imported merchandise sold at less than fair value. . . ."); Goss Graphics, 33 F. Supp.2d at 1093 (ITA included certain presses in the class of merchandise sold at LTFV and Commission properly included it in its injury analysis); Algoma, 688 F. Supp. at 645 (CIT 1988)(ITC bases "its decision on affects of relevant imports from companies determined [by Commerce] to have sold the subject merchandise at LTFV."), aff'd 865 F. 2d 240 (Fed. Cir. 1988), cert. denied, 492 U.S. 919 (1989); Makita Corp., 974 F. Supp. at 783 (CIT 1997); Nippon Steel, 19 CIT at 467 (CIT 1995); United Engineering & Forging, 779 F. Supp. at 1391 (CIT 1991).

[43] CR at II-12 and n. 46; PR at II-8 and n.46.

Russian HEU Agreement and the USEC Privatization Act.[44] The language in the Russian Suspension Agreement, however, appears to indicate that where there is an overlap regarding product coverage between the Russian Suspension Agreement and the Russian HEU Agreement that raises a conflict in terms, the Russian HEU Agreement controls.[45] The Russian Suspension Agreement indicates that it covers HEU, and this language does not imply otherwise.[46] Finally, while the Russian HEU Agreement governs the blending down of 500 metric tons of Russian HEU for importation into the United States as LEU, any additional Russian HEU would not be covered by the Russian HEU Agreement at this time but would be covered by the Russian Suspension Agreement.

The second issue raised, whether the scope of review includes depleted uranium or uranium tails, makes little difference in practice as to whether it is included or not in our definition of the domestic like product. While stockpiles of this waste product of the enrichment process have accumulated in the United States and worldwide, it remains economically prohibitive to commercially exploit this waste product in the United States.[47] Thus, there is no production data on U.S. re-enrichment of uranium tails

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[44] The Russian Respondents also argue that termination of the suspended investigation would be irrelevant to imports of LEU derived from Russian HEU because such imports are not controlled by the suspension agreement, but rather by the Russian HEU Agreement and the USEC Privatization Act. See also Ad Hoc Utilities Group's Posthearing Brief at 6-9. USEC, however, maintains that the "Russian Suspension Agreement is . . . a critical legal component in the success of the Russian HEU Agreement." USEC's Posthearing Brief at 12-13. USEC contends that "the HEU Agreement and the USEC Privatization Act have moderated the adverse price and volume effects that would have occurred if the Russian HEU Agreement material flooded the U.S. market unchecked, and the Russian Suspension Agreement has proven to be a flexible tool in accommodating these mechanisms." Id. at 12. According to USEC, "[i]f the Russian Suspension Agreement is terminated, aside from the material injury that would result, the HEU Agreement would also be vulnerable to the uncertainty of future trade action against unfairly priced uranium imports from the Russian Federation." Id. at 12, n.38.

[45] The Russian Suspension Agreement in fact explicitly states that:

> M.1. This Agreement in no way prevents the Russian Federation from selling directly or indirectly any or all of the HEU in existence at the time of the signing of this Agreement and/or low enriched uranium ("LEU") produced in Russia from this HEU to the DOE, its governmental successor, its contractors, assigns, or U.S. private parties acting in association with DOE or the U.S. Enrichment Corporation and in a manner not inconsistent with the Agreement between the United States of America and the Russian Federation concerning the disposition of HEU resulting from the dismantlement of nuclear weapons in Russia.

57 Fed. Reg. 49220, 49237 (Oct. 30, 1992). See also 65 Fed. Reg. at 41441 (July 5, 2000).

[46] Moreover, the Russian Suspension Agreement has been amended to be consistent with changes in the USEC Privatization Act, which governs sales of the natural uranium component (HEU feed) of the HEU-derived material under the Russian HEU Agreement; this amendment arguably would not have occurred if the Russian Suspension Agreement had no effect on the HEU derived product. See 61 Fed. Reg. 56665 (Nov. 4, 1996).

[47] CR at I-14 and I-15; PR at I-10.

that could be included in the domestic industry data.[48] This scope issue, however, does have a bearing on the likely production and supply of uranium in Russia. The Russian industry reportedly has been re-enriching uranium tails to use as a feed component (i.e., natural uranium) in its enrichment operations, including the HEU-to-LEU blend down operations.[49] While Commerce's scope of review in each of these reviews does not explicitly include depleted uranium, neither does it explicitly exclude it. The scope includes language regarding uranium compounds without reference to concentration levels that arguably could include depleted uranium.

Thus, we define the domestic like product coextensive with the scope of reviews for the each of the three reviews.

B. Domestic Industry

Section 771(4)(A) of the Act defines the relevant industry as the domestic "producers as a [w]hole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[50] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market, provided that adequate production-related activity is conducted in the United States.[51] The Commission bases its analysis on a firm's production-related activities in the United States.[52]

U.S. producers of uranium are divided into four types of generally independent producers corresponding to the four successive processes in the uranium fuel cycle -- concentrators, converters, enrichers, and fabricators. There are five uranium concentrate producers, one converter (ConverDyn),

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[48] CR at II-4; PR at II-3.

[49] CR at II-23; PR at II-14. See also Uranium Coalition's Prehearing Brief, Exhibit 14 at 1 and 2 (report in Nuclear Fuel of possible Urenco deal to sell uranium tails re-enriched by Russia under contract).

[50] 19 U.S.C. § 1677(4)(A).

[51] See, e.g., Uranium from Kazakhstan, Inv. No. 731-TA-539-A (Final), USITC Pub. 3213 at 8-9 (July 1999); Manganese Sulfate from the People's Republic of China, Inv. No. 731-TA-725 (Final), USITC Pub. 2932, at 5 & n.10 (Nov. 1995) ("the Commission has generally included toll producers that engage in sufficient production-related activity to be part of the domestic industry"). See, e.g., United States Steel Group v. United States, 873 F. Supp. 673, 682-83 (CIT 1994), aff'd, 96 F.3d 1352 (Fed. Cir. 1996).

[52] The Commission typically considers six factors: (1) the extent and source of a firm's capital investment; (2) the technical expertise involved in U.S. production activity; (3) the value added to the product in the United States; (4) employment levels; (5) the quantities and types of parts sourced in the United States; and (6) any other costs and activities in the United States leading to production of the like product. See Certain Cut-to-Length Steel Plate from France, India, Indonesia, Italy, Japan, and Korea, Inv. Nos. 701-TA-387-391 and 731-TA-816-821 (Final), USITC Pub. 3273 at 8-9 (Jan. 2000).

one enricher (USEC), and four subject fabricators.[53] Except for the producers of uranium concentrates, the uranium producers at the other stages in the uranium cycle primarily provide only toll-services to further process uranium.[54] For the reasons discussed below and consistent with our domestic like product determination, we find one domestic industry, consisting of all domestic producers of uranium, including concentrators, the converter, the enricher, and fabricators.

Two domestic industry issues have been raised in these reviews regarding (1) whether the U.S. fuel assembly fabricators should be included in the domestic industry, and (2) whether appropriate circumstances exist to exclude any related parties.

1. Domestic Producers to be Included in Definition of Domestic Industry

We have considered the Uranium Coalition's argument that "the Commission should exclude U.S. fabricators from the U.S. industry,"[55] also raised in Uranium from Kazakhstan, and again reject it.[56] The parties presented no new information and the record does not suggest a reason to revisit our decision

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[53] CR at I-10-I-12 and III-1-III-5; PR at I-7 - I-9 and III-1 - III-3. Consolidations and closings have substantially reduced the number of operating concentrate producers in the United States from 15 in 1992 to 7 during the 1997-1999 period of review; two of the seven ceased production in 1999. The five remaining concentrate producers are: Cogema, Inc. ("Cogema"); Power Resources, Inc. ("Power Resources"); Rio Algom (one of the original petitioners); International Uranium; and Cotter. Id. at I-10, n.8. The four subject fabricators are: ABB; GE; Siemens; and Westinghouse. CR at I-12; PR at I-7. The U.S. production data in the record represents 100 percent of the U.S. industry. CR at I-21; PR at I-14.

[54] CR at II-7; PR at II-5. Electric utilities typically have purchased the uranium concentrates and then contracted with the converter, enricher, and fabricators to toll produce their stage of the process. Id. at II-1. The converter, ConverDyn, prices its toll-services based on the number of kilograms of uranium in the converted uranium, while the enricher, USEC, prices its toll-service based on the SWU required to enrich the natural uranium. On the other hand, the fabricators toll-process uranium into LEU-DO and pelletize this product as part of the total contract agreement to produce fuel-rod assemblies. Id. at II-7 and II-8.

[55] In the alternative, the Coalition urged that the Commission should "at a minimum ***." Uranium Coalition's Prehearing Brief, Appendix A at 10-13; Ad Hoc Committee's Posthearing Brief, Appendix A (Coalition's Response to Questions) at 10-12. According to the Uzbek Respondents, the Uranium Coalition has "offered nothing new from the *Kazakh* case, therefore the Commission should follow this same analysis and find that fabricators are part of the domestic industry." Uzbek Respondents' Posthearing Brief, Response to Questions at 20-21; see also Ad Hoc Utilities Group's Posthearing Brief at 14.

[56] In the Kazakhstan determination, the Commission viewed fabricators as essentially toll producers that make subject merchandise (UO_2) for captive consumption in their production of nonsubject merchandise (fuel assemblies). In comparing the fabricator with the converter, which clearly is a member of the domestic industry, the Commission found that, based on the available information, the fabricators' costs of converting enriched UF_6 into UO_2 are at least as significant as the converter's cost of making natural UF_6. The Commission explicitly excluded fabricators' manufacturing operations for fuel assemblies, which are not part of the subject merchandise nor the domestic like product, from the domestic industry. Uranium from Kazakhstan, USITC Pub. 3213 at 8-9 (July 1999).

to include fabricators in the domestic industry in the Kazak determination. The record in these reviews indicates that subject uranium processing by the fabricators represents about 7 percent of the total subject nuclear fuel costs, while conversion represents only 3 percent.[57] Moreover, the subject manufacturing operations, processing uranium into LEU-DO and pelletizing it, account for over half of the fabrication process for production of fuel assembly rods.[58] All enriched UF_6 or LEU-HF is sent to a fabricator to process it into LEU-DO and pelletize it for encapsulation in fuel assembly rods. Therefore, based on the available information, we include fabricators in the domestic industry.

2. Related Parties

In defining the domestic industry in these reviews, we have considered whether any U.S. producers of uranium should be excluded from the domestic industry pursuant to 19 U.S.C. § 1677(4)(B). That provision of the statute allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry for the purposes of an injury determination producers that are related to an exporter or importer of the subject merchandise, or which are themselves importers.[59] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each case.[60]

In the original preliminary investigation regarding the U.S.S.R. and the final investigation regarding Ukraine, the Commission considered whether domestic producers which imported subject product should be excluded from the domestic industry, and found that appropriate circumstances to do

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[57] CR at I-10 and I-12; PR at I-7 and I-9. Further, the fabricators employ about *** as many production workers as employed by the converter. Compare Table I-4 with Table I-6.

[58] CR at I-12; PR at I-9.

[59] 19 U.S.C. § 1677(4)(B).

[60] See Sandvik AB v. United States, 721 F. Supp. 1322, 1331-32 (CIT 1989), aff'd without opinion, 904 F.2d 46 (Fed. Cir. 1990); Empire Plow Co. v. United States, 675 F. Supp. 1348, 1352 (CIT 1987). 19 U.S.C. § 1677(4)(B). The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include:

> (1) the percentage of domestic production attributable to the importing producer;
> (2) the reason the U.S. producer has decided to import the product subject to investigation, i.e., whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market; and
> (3) the position of the related producer vis-a-vis the rest of the industry, i.e., whether inclusion or exclusion of the related party will skew the data for the rest of the industry.

See, e.g., Torrington Co. v. United States, 790 F. Supp. 1161, 1168 (CIT 1992), aff'd without opinion, 991 F.2d 809 (Fed. Cir. 1993). The Commission has also considered the ratio of import shipments to U.S. production for related producers and whether the primary interest of the related producer lies in domestic production or importation. See, e.g., Carbon Steel Butt-Weld Pipe Fittings from Brazil, China, Japan, Taiwan, and Thailand, Inv. Nos. 731-TA-308-310 and 520-521 (Review), USITC Pub. 3263 at 5-7 (Dec. 1999); Stainless Steel Plate from Sweden, Inv. No. AA1921-114 (Review), USITC Pub. 3204 at 10 (July 1999); Sugar from the European Union; Sugar from Belgium, France, and Germany; and Sugar and Syrups from Canada, Inv. Nos. 104-TAA-7, AA1921-198-200, and 731-TA-3 (Review), USITC Pub. 3238 at 14 (Sept. 1999). See also S. Rep. No. 249, 96th Cong., 1st Sess. 83 (1979).

so did not exist.[61] [62]

The Commission's questionnaires show that ***[63] Under the terms of the relevant suspension agreement, the natural component of these imports of *** involving Russian and Uzbek natural uranium are subject imports,[64] while the natural component of imports enriched in a third country involving Ukrainian natural uranium are not subject imports under the terms of the antidumping duty order.[65] Under the terms of the Russian HEU Agreement, USEC imports LEU blended down in Russia from HEU and sells it directly to utilities.[66] Cogema and USEC are importers of subject merchandise and thus can be excluded from the industry if appropriate circumstances exist.

Cogema is a subsidiary of French enricher, Cogema, S.A. Although Cogema, S.A. is allegedly involved in an uranium mining joint-venture in Uzbekistan, the evidence shows that this project has not progressed beyond a feasibility study, which has found that project economically infeasible under current

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[61] Soviet Uranium, USITC Pub. 2471 at 14-16; Uranium from Ukraine, USITC Pub. 2669 at 13-14.

[62] In these reviews, the Uranium Coalition alleges that Cogema and Power Resources, which are domestic concentrators, are related parties because their parent corporations, Cogema, S.A. and Cameco Corp. ("Cameco"), are involved in a joint venture to exploit and export natural uranium in Uzbekistan, and the importation and sale of subject merchandise from Russia, respectively. Uranium Coalition's Prehearing Brief, Appendix A at 9; Ad Hoc Committee's Posthearing Brief, Appendix A (Coalition's Response to Questions) at 13-15 and 18-19. In noting that the Uranium Coalition does not argue that Cogema should be excluded by virtue of its imports of uranium, the Uzbek Respondents allege that any such arguments regarding appropriate circumstances to exclude importers as related parties would be equally applicable to USEC. Uzbek Respondents' Posthearing Brief, Response to Questions at 21, n.13.

[63] CR at IV-2/PR at IV-1 and ***. *** of Russian natural uranium, valued at about ***. *** of Ukrainian natural uranium valued at about ***. *** of Uzbek natural uranium, valued at ***. Id.

[64] Under the terms of amendments to the Russian and Uzbek suspension agreements, enrichment in a third country did not confer origin from 1996 to 1998 for Russian natural uranium and from 1995 to the present for Uzbek natural uranium. 61 Fed. Reg. at 56666 (Nov. 1996) (Russia) and 60 Fed. Reg. at 55004 (Oct. 27, 1995) (Uzbekistan).

[65] Under the terms of the antidumping duty order covering imports of uranium from Ukraine, enrichment confers origin. While Commerce's scope of review for the Ukraine five-year review is silent on the issue of enrichment, the original antidumping duty order states: "The Department continues to regard enrichment of uranium as conferring country of origin." 58 Fed. Reg. 45483, 45484 (Aug. 30, 1993).

[66] The volume of enrichment services is measured in SWU, which measure the effort expended in the enrichment process. CR at I-11; PR at I-8. The SWU component of the enriched UF_6 (LEU) is the effective import since the natural UF_6 feed component of the imported LEU is credited/returned to the Russians and retains Russian ownership; the Russian feed may be sold separately under the provisions and quotas of the USEC Privatization Act and the Russian Suspension Agreement. USEC's imports of the SWU component of Russia's LEU blended down under the Russian HEU Agreement were: ***. Id. at IV-1 and ***. USEC is committed to purchasing 5.5 million SWU annually during 2000-2014 pursuant to the Russian HEU Agreement. CR at II-2 and III-4; PR at II-1 and III-2.

market conditions.[67] Thus, there is no evidence suggesting that ore production will commence in the imminent future.[68] ***, which is considered subject imported product under the terms of the suspension agreements as noted above. U.S. concentrate producer, Cogema, accounted for *** of U.S. concentrate producers' net sales by quantity from 1997 to 1999 and *** of net sales by value from 1997 to 1999.[69] ***.[70] [71] ***, it has made significant investments in the U.S. market and its interests appear to be as a domestic producer rather than importer.[72] Moreover, since its imports are for enriched uranium, a later stage product, which results in a reduced need for its earlier stage product, uranium concentrate, it would appear that rather than benefit from the imports, Cogema would be harmed by them. In fact, Cogema's net sales have *** to the other concentrate producers.[73]

USEC is the sole U.S. enricher of uranium.[74] Since the enrichment process accounts for about 59 percent of the subject total nuclear fuel costs, USEC accounts for a substantial share of total domestic production of the domestic like product.[75] USEC imports Russian enriched uranium in its role as Executive Agent under the Russian HEU Agreement. As USEC indicates, "[i]ts imports of subject merchandise are made to support a nuclear non-proliferation agreement, not as a result of a commercial

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[67] Uzbek Respondents' Posthearing Brief, Response to Questions at 21-23. The Uzbek Respondents contend that "Cogema Inc.'s parent, Cogema S.A., has merely expressed an interest in establishing a joint venture in Uzbekistan, and has indicated that the uncompleted feasibility study for the Uzbek uranium reserves would be economically infeasible to proceed under current market conditions." They contend that "there has been absolutely no activity beyond the feasibility study." Id. at 22.

[68] Uzbek Respondents' Posthearing Brief, Response to Questions at 21-23.

[69] Cogema accounted for ***. Cogema accounted for ***. Calculated from CR/PR at Table III-2.

[70] CR at IV-2; PR at IV-1.

[71] Chairman Koplan and Commissioners Miller and Hillman do not find that Cogema is benefitting significantly from its current level of subject imports such that its inclusion in the domestic industry would affect their assessment of the industry's vulnerability. They also do not find that Cogema is likely to benefit substantially from subject imports if the order is revoked or the suspended investigations terminated such that Cogema's inclusion in the domestic industry would affect their assessment of the likelihood of material injury.

[72] Imports of enriched uranium were made from about *** of Uzbek and Russian natural uranium from 1997 to 1999 compared to Cogema's net sales by quantity of the concentrate it produced of *** from 1997 to 1999. CR at Table III-2 and IV-2; ***.

[73] CR/PR at Table III-2.

[74] CR at II-17; PR at II-11.

[75] CR/PR at II-1.

decision to buy the subject merchandise rather than make the domestic like product."[76] In fact the SWU that USEC is required to purchase under the Russian HEU Agreement have forced it to use correspondingly less of its enrichment capacity, resulting in higher unit production costs at the plants it operates.[77] While USEC's imports are substantial, USEC claims that it "is now and intends to remain a producer of enriched uranium."[78]

Finally, U.S. concentrate producer, Power Resources, is a subsidiary of Cameco, a converter in Canada.[79] Cameco is a member of the consortium of Cogema, Cameco, and Nukem which contracted with the Russians in 1999 to sell the Russian feed component, natural UF_6, resulting from the HEU to LEU shipments under the Russian HEU Agreement.[80] However, there is no evidence regarding Cameco's sales under this contract, i.e, whether the Russian feed has been imported into the United States.[81] Power Resources cannot be excluded from the domestic industry since there is no evidence that Cameco has imported Russian or other subject uranium into the United States.[82] Any future imports of further processed uranium are unlikely to have conveyed any benefit to Cameco's U.S. concentration operations, Power Resources, that would shield Power Resources from the effects of dumping or otherwise distort their financial performance.

Therefore, we find that Power Resources is not a related party and that appropriate circumstances do not exist to exclude Cogema or USEC from the domestic industry.

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[76] Ad Hoc Committee's Posthearing Brief, Appendix A (Coalition's Response to Questions) at 17. USEC stated that its does not import uranium from any other source, nor any Russian uranium except pursuant to the Russian HEU Agreement. Id. and Tr. at 82. The Uranium Coalition urged the Commission to consider "the reason that USEC is an importer of subject merchandise" and maintained that exclusion of USEC from the domestic industry would be inappropriate. Ad Hoc Committee's Posthearing Brief, Appendix A (Coalition's Response to Questions) at 16-18.

[77] CR at III-3; PR at III-2.

[78] Ad Hoc Committee's Posthearing Brief, Appendix A (Coalition's Response to Questions) at 17. USEC claims that it "is vigorously participating in this review in order to maintain its ability to do so [remain a producer]. Thus, while USEC's ratio of imports-to-production is high . . . , this is principally a function of the size of the Russian HEU Agreement rather than a commercial decision by USEC to supplant its own production." Id. at 18.

[79] CR at I-10; PR at I-7.

[80] CR at I-17, n.18; PR at I-11, n.18.

[81] The Uranium Coalition's allegation provided no additional evidence on this issue. Power Resources did not respond to the Commission's questionnaire in these reviews; its response in the Kazak investigation was used for these reviews. CR/PR at III-1, n.1.

[82] The Commission previously has decided that "control does not exist, absent evidence to the contrary, if the ownership interest is less than that necessary, in and of itself, to establish control." Certain Structural Steel Beams from Germany, Japan, Korea, and Spain, Inv. Nos. 701-TA-401 and 731-TA-852-855 (Preliminary), USITC Pub. 3225 at 8, n.40 (Sept. 1999); see also Engineered Process Gas Turbo-Compressor Systems from Japan, Inv. No. 731-TA-748 (Preliminary), USITC Pub. 2976 at 8 (July 1996).

III. CUMULATION [83]

A. Framework

Section 752(a) of the Act provides that:
the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry.[84]

Thus, cumulation is discretionary in five-year reviews. However, the Commission may exercise its discretion to cumulate only if the reviews are initiated on the same day and the Commission determines that the subject imports are likely to compete with each other and the domestic like product in the U.S. market. The statute precludes cumulation if the Commission finds that subject imports from a country are likely to have no discernible adverse impact on the domestic industry.[85] We note that neither the statute nor the Uruguay Round Agreements Act ("URAA") Statement of Administrative Action ("SAA") provides specific guidance on what factors the Commission is to consider in determining that imports "are likely to have no discernible adverse impact" on the domestic industry.[86] With respect to this provision, the Commission generally considers the likely volume of the subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked.[87] [88]

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[83] Commissioner Bragg does not join in Section III. Commissioner Bragg provides a separate analysis of cumulation in these reviews. See Separate Views of Commissioner Lynn M. Bragg Regarding Cumulation. For a complete statement of Commissioner Bragg's analytical framework regarding cumulation in sunset reviews, see Separate Views of Chairman Lynn M. Bragg Regarding Cumulation in Sunset Reviews, found in Potassium Permanganate From China and Spain, Inv. Nos. 731-TA-125-126 (Review), USITC Pub. 3245 (Oct. 1999); see also Separate Views of Chairman Lynn M. Bragg Regarding Cumulation, found in Brass Sheet and Strip From Brazil, Canada, France, Germany, Italy, Japan, Korea, the Netherlands, and Sweden, Inv. Nos. 701-TA-269 & 270 (Review) and 731-TA-311-317 and 379-380 (Review), USITC Pub. 3290 (April 2000).

[84] 19 U.S.C. § 1675a(a)(7).

[85] 19 U.S.C. § 1675a(a)(7).

[86] SAA, H.R. Rep. No. 103-316, vol. I (1994).

[87] For a discussion of the analytical framework of Chairman Koplan and Commissioners Miller and Hillman regarding the application of the "no discernible adverse impact" provision, see Malleable Cast Iron Pipe Fittings From Brazil, Japan, Korea, Taiwan, and Thailand, Inv. Nos. 731-TA-278-280 (Review) and 731-TA-347-348 (Review). For a further discussion of Chairman Koplan's analytical framework, see Iron Metal Construction Castings from India; Heavy Iron Construction Castings from Brazil; and Iron Construction Castings from Brazil, Canada, and China, Inv. Nos. 803-TA-13 (Review); 701-TA-249 (Review) and 731-TA-262, 263, and 265 (Review) (Views of Commissioner Stephen

The Commission has generally considered four factors intended to provide a framework for determining whether the imports compete with each other and with the domestic like product.[89] Only a "reasonable overlap" of competition is required.[90] In five-year reviews, the relevant inquiry is whether there likely would be competition even if none currently exists. Moreover, because of the prospective nature of five-year reviews, we have examined not only the Commission's traditional competition factors, but also other significant conditions of competition that are likely to prevail if the orders under review are revoked. The Commission has considered factors in addition to its traditional competition factors in other contexts where cumulation is discretionary.[91]

In these reviews, the statutory requirement for cumulation that all reviews be initiated on the

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Koplan Regarding Cumulation).

[88] Commissioner Askey notes that the Act clearly states that the Commission is precluded from exercising its discretion to cumulate if the imports from a country subject to review are likely to have "no discernible adverse impact on the domestic industry" upon revocation of the order. 19 U.S.C. § 1675a(a)(7). Thus, the Commission must focus on whether the imports will impact the condition of the industry discernibly as a result of revocation, and not solely on whether there will be a small volume of imports after revocation, i.e., by assessing their negligibility after revocation of the order. For a full discussion of her views on this issue, see Additional Views of Commissioner Thelma J. Askey in Potassium Permanganate from China and Spain, Inv. Nos. 731-TA-125-126 (Review), USITC Pub. 3245 (Oct. 1999).

[89] The four factors generally considered by the Commission in assessing whether imports compete with each other and with the domestic like product are: (1) the degree of fungibility between the imports from different countries and between imports 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 geographical 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 (4) whether the imports are simultaneously present in the market. See, e.g., Wieland Werke, AG v. United States, 718 F. Supp. 50 (CIT 1989).

[90] See Mukand Ltd. v. United States, 937 F. Supp. 910, 916 (CIT 1996); Wieland Werke, AG, 718 F. Supp. at 52 ("Completely overlapping markets are not required."); United States Steel Group v. United States, 873 F. Supp. 673, 685 (CIT 1994), aff'd, 96 F.3d 1352 (Fed. Cir. 1996)). We note, however, that there have been investigations where the Commission has found an insufficient overlap in competition and has declined to cumulate subject imports. See, e.g., Live Cattle from Canada and Mexico, Inv. Nos. 701-TA-386 and 731-TA-812-813 (Preliminary), USITC Pub. 3155 at 15 (Feb. 1999), aff'd sub nom, Ranchers-Cattleman Action Legal Foundation v. United States, 74 F. Supp.2d 1353 (CIT 1999); SRAMs from the Republic of Korea and Taiwan, Inv. Nos. 731-TA-761-762 (Final), USITC Pub. 3098 at 13-15 (Apr. 1998).

[91] See, e.g., Torrington Co. v. United States, 790 F. Supp. at 1172 (affirming Commission's determination not to cumulate for purposes of threat analysis when pricing and volume trends among subject countries were not uniform and import penetration was extremely low for most of the subject countries); Metallverken Nederland B.V. v. United States, 728 F. Supp. 730, 741-42 (CIT 1989); Asociacion Colombiana de Exportadores de Flores v. United States, 704 F. Supp. 1068, 1072 (CIT 1988).

same day is satisfied.[92] [93]

B. Likelihood of No Discernible Adverse Impact

The Commission finds that subject imports of uranium from Ukraine would be likely to have no discernible adverse impact on the domestic industry if the order is revoked and, therefore, does not cumulate subject imports from Ukraine with subject imports from either Russia or Uzbekistan.[94] [95]

Although the Russian Respondents and the Uzbek Respondents urged the Commission to find that imports from Russia and Uzbekistan also would be likely to have no discernible adverse impact on

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[92] The Uranium Coalition urged the Commission to exercise its discretion and cumulate imports from Russia, Ukraine, and Uzbekistan in these reviews. Uranium Coalition's Prehearing Brief at 61-73.

[93] Commissioners Miller and Hillman do not join Section III.B. and III.C. See Separate Views on Cumulation of Commissioners Marcia E. Miller and Jennifer A. Hillman.

[94] Chairman Koplan finds that subject imports from Ukraine are likely to have no discernible adverse impact on the domestic industry and therefore does not cumulate subject imports from Ukraine with subject imports from Russia or Uzbekistan. Initially Chairman Koplan observes that as Ukraine did not participate in these reviews, the data are limited and while there is no Ukrainian import data for the 1990-1992 period, there were no direct imports from Ukraine during the 1997-1999 period of investigation. CR-II-23-24; PR at II-14-15. More importantly, Ukraine can only produce concentrate, and while its reserves may be extensive, they are characterized as too deep and of sufficiently low grade as to be not economically reasonable to recover. CR at II-24; PR at II-14. Additionally, current production of Ukraine concentrate is estimated to be 3.1 million pounds, but it is believed that domestic demand is between 5 to 6 million pounds annually, as Ukraine relies on nuclear energy to provide over 35 percent of its home electricity requirements. CR at II-24 and IV-6; PR at II-14 and IV-3. Thus, while the volume of Ukrainian production may be increasing, Ukraine is a net importer of uranium. In addition, Ukraine must rely on Russia for all of its conversion, enrichment and fabrication supply and services as well the remainder of its need for concentrate. CR-IV-6; PR at IV-3. Finally, it appears that any likely direct competition in the U.S. market for concentrate would be limited by the fact that Ukraine's principal competition would be from non-subject importers whose product can be recovered at lower cost. Consequently, any subject imports from Ukraine likely would have no discernable adverse impact on the domestic uranium industry.

[95] Commissioner Askey determines that imports from Ukraine would have no discernable adverse impact on the domestic industry if the order were revoked. There were no reported direct U.S. imports of uranium from Ukraine during 1997-1999, although there may have been some nonsubject imports containing Ukrainian uranium. *See supra*, section II.B.2. While Ukraine produces concentrates, it has no ability to convert, enrich or fabricate. More than one third of Ukraine's electricity is generated by nuclear power plants. CR at II-23-24 and PR at II-14-15. However, Ukraine's domestic production of concentrates can only satisfy just over half of their home market demand for concentrates, making the country a net importer of uranium products. CR at IV-6 and PR at IV-3. Even in the unlikely event that Ukraine would divert all of its production to exports to the United States, the country's total reported production of uranium concentrate would represent only approximately *** of U.S. utilities' projected reactor requirements in 2000, 2001 and 2002. *See* CR at II-29 and IV-6, and PR at II-18 and IV-3. Accordingly, it is unlikely that imports from Ukraine would have a discernible adverse impact on the domestic industry.

the domestic industry if the suspended investigations were terminated,[96] we find that the no discernible adverse impact provision is not satisfied with respect to subject imports from either Russia or Uzbekistan.

Subject imports from Uzbekistan have remained in the U.S. market in the years since the imposition of the suspension agreement. The value of uranium imports from Uzbekistan increased from 1997 to 1999.[97] Uzbek exports of uranium to the United States are projected to increase in 2000 from actual 1999 levels.[98] Moreover, since imports of Uzbek uranium have been restricted by quotas, which generally have been fully subscribed, it is likely that uranium shipments from Uzbekistan would increase without the suspension agreement quotas. Uzbekistan, which has no home market demand, is thus completely export-oriented. Data believed to account for all uranium concentrate production in Uzbekistan show that between *** of total Uzbek uranium shipments were exported to the United States from 1997 to 1999 and are projected to account for *** of all Uzbek shipments in 2001.[99] Accordingly, we do not find that the subject imports from Uzbekistan would be likely to have no discernible adverse impact on the domestic industry if the suspended investigation is terminated.

Subject imports from Russia have remained in the U.S. market in the years since the imposition of the suspension agreement. Moreover, imports of Russian uranium have accounted for a significant and increasing share of both total imports and domestic consumption from 1997 to 1999.[100] Based on the current level of imports from Russia and the likely volume of subject imports in the reasonably foreseeable future, we do not find that the subject imports from Russia would be likely to have no discernible adverse impact on the domestic industry if the suspended investigation is terminated.

C. Reasonable Overlap of Competition and Other Considerations

In determining whether to exercise our discretion to cumulate subject imports from Russia with those from Uzbekistan, we examined whether, upon termination of the suspended investigation, subject imports from Russia would likely compete in the U.S. market under similar conditions of competition with subject imports from Uzbekistan and with the domestic like product. As an initial matter, we considered the likelihood of a reasonable overlap of competition among the products from Russia, Uzbekistan, and the United States. In this regard, the parties generally agreed that uranium from one

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[96] Russian Respondents' Prehearing Brief at 61-62; Uzbek Respondents' Prehearing Brief at 9-13.

[97] CR/PR at Table I-2. The value of direct U.S. imports of uranium from Uzbekistan *** in 1999. Id. The value of direct U.S. imports of uranium concentrates from Uzbekistan, based on questionnaire responses, accounted for 5.1 percent of the total value of all U.S. imports of uranium concentrates during the period of review and *** of the total value of U.S. sales and imports of uranium concentrate in 1998 and 1999, respectively. CR at II-24/PR at II-15 and calculated from Table I-3.

[98] CR at IV-7; PR at IV-4. Direct Uzbek exports to the United States of uranium concentrate were *** in 2000. Id. and ***. In addition, nonsubject imports of enriched UF_6 were imported into the United States containing ***.

[99] CR at IV-7/PR at IV-4 and ***.

[100] CR/PR at Table I-2.

country is generally physically interchangeable with uranium from another.[101] Moreover, these subject imports and the U.S. product have similar channels of distribution,[102] appear to have had a geographic overlap of sales,[103] and have been simultaneously present in the market during the period of review.[104]

The record, however, indicates that if the suspended investigations were terminated, subject imports from Russia and Uzbekistan would likely not compete under similar conditions of competition. Uzbekistan only produces, and thus exports, uranium in one form, i.e., uranium concentrate. Russia, on the other hand, produces and exports uranium at all of the four stages of production, with most of its exports to the United States likely to be at a further stage than uranium concentrate, primarily at the enriched uranium level (including LEU blended down from HEU).[105] In addition, substantial imports from Russia will continue to enter the U.S. market under the terms of the HEU Agreement.

We have limited data regarding Russian production, capacity, and inventories. The evidence, however, indicates that Russia has the capacity to produce large volumes of uranium at the concentrate, conversion, and enriched levels, as well as the re-enrichment of uranium tails and reprocessing of spent nuclear fuel.[106] Russia reported it has the capacity to produce *** of uranium concentrate per year.[107] Its annual conversion capacity to produce natural UF_6 is *** and its enrichment capacity to produce enriched UF_6, or LEU-HF, is ***.[108] The extent of inventories of uranium concentrate, natural UF_6, LEU-HF, as well as HEU, located in Russia are not precisely known, but arguably make Russia the largest source of uranium in the world.[109] Moreover, Russia's home market demand for enrichment reportedly is only about *** of its enrichment capacity.[110] Thus, a substantial share of its enrichment capacity is, or can be, used for export shipments. Russian exports to the United States account for a significant share of that SWU capacity. Under the terms of the HEU Agreement, the United States has guaranteed that it will

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[101] CR at II-34 and II-37; PR at II-21 and II-24.

[102] All uranium, whether U.S., Russian, Uzbek, or from other countries is sold principally to U.S. electric utilities, but may also be sold to U.S. producers, processors and traders. CR at II-2, II-3, and II-8; PR at II-2 and II-4.

[103] Questionnaire responses indicate that utilities in the same states have purchased or held both Russian and Uzbek material. Uranium Coalition's Prehearing Brief at 66, n. 196 and Exhibit 11.

[104] Uranium concentrate from Russia and Uzbekistan, and enriched uranium from Russia were present in the U.S. market simultaneously with U.S. uranium in all four forms in all three years of the review. CR/PR at Tables I-4 and I-6.

[105] From 1997-1999, U.S. imports of Russian enriched uranium accounted for over 95 percent of the value of total imports of all uranium from Russia. Calculated from CR/PR at Tables I-3 and I-5.

[106] CR at II-22-23, and IV-4; PR at II-13-14 and IV-2-3.

[107] CR at IV-4; PR at IV-2. In contrast, about 4.9 million pounds of concentrate is produced in the United States per year. Id.

[108] CR at IV-4; PR at IV-2.

[109] CR at II-23 and IV-3; PR at II-14 and IV-2.

[110] CR at II-22-23; PR at II-13-14.

purchase 5.5 million SWU per year from Russia through 2014. These guaranteed imports of LEU-HF containing 5.5 million Russian SWU account for about half of U.S. nuclear reactor annual requirements for SWU and a significant share of total U.S. uranium demand.[111]

Uzbekistan has the capacity to produce uranium concentrate, but does not have the capacity to produce other products in the uranium fuel cycle. It has production capacity of about *** of uranium concentrate annually.[112] While Uzbekistan has no home market demand, it reportedly is ***. In stark contrast to U.S. imports of Russian uranium that even under the restraints of the Suspension Agreement have accounted for a significant share of the value of total U.S. sales and imports of uranium, direct U.S. imports of Uzbek uranium concentrate accounted for only about *** of the value of total U.S. uranium sales and imports in 1999.[113]

Thus, we find that if the suspended investigations were terminated, subject imports from Russia and Uzbekistan would likely not compete under similar conditions of competition and do not exercise our discretion to cumulate subject imports from Russia and Uzbekistan in these reviews.

IV. LIKELIHOOD OF CONTINUATION OR RECURRENCE OF MATERIAL INJURY IF THE SUSPENDED INVESTIGATIONS ON RUSSIA AND UZBEKISTAN ARE TERMINATED OR THE ANTIDUMPING DUTY ORDER ON UKRAINE IS REVOKED[114]

A. Legal Standard In A Five-Year Review

In a five-year review conducted under section 751(c) of the Act, Commerce will revoke a countervailing or antidumping duty order or terminate a suspended investigation unless: (1) it makes a determination that dumping is likely to continue or recur, and (2) the Commission makes a determination that revocation of an order or termination of a suspended investigation "would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time."[115] The SAA states that "under the likelihood standard, the Commission will engage in a counter-factual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports."[116] Thus, the likelihood standard is prospective in nature.[117] The statute states that

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[111] CR at II-29; PR at II-18. For example, U.S. imports from Russia of *** of the total value of U.S. sales and imports of all uranium products. Calculated from CR/PR at Tables I-2 and I-5, and ***.

[112] CR at IV-7; PR at IV-4.

[113] Calculated from CR/PR at Table I-2. Uzbek direct imports of uranium concentrate accounted for only *** of the total value of U.S. sales and imports of uranium concentrate in 1999. Calculated from CR/PR at Table I-3. The disparity between Russian imports and Uzbek imports is not lessened to a significant degree when the *** to direct Uzbek's imports.

[114] Commissioner Bragg joins the remaining sections of these views.

[115] 19 U.S.C. § 1675a(a).

[116] SAA, H.R. Rep. No. 103-316, vol. I, at 883-84 (1994). The SAA states that "[t]he likelihood of injury standard applies regardless of the nature of the Commission's original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to

"the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time."[118] According to the SAA, a "'reasonably foreseeable time' will vary from case-to-case, but normally will exceed the 'imminent' time frame applicable in a threat of injury analysis [in antidumping and countervailing duty investigations]."[119] [120]

Although the standard in five-year reviews is not the same as the standard applied in original antidumping or countervailing duty investigations, it contains some of the same fundamental elements. The statute provides that the Commission is to "consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated."[121] It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, and whether the industry is vulnerable to material injury if the order is revoked or the suspension

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suspended investigations that were never completed." SAA at 883.

[117] While the SAA states that "a separate determination regarding current material injury is not necessary," it indicates that "the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued [sic] prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked." SAA at 884.

[118] 19 U.S.C. § 1675a(a)(5).

[119] SAA at 887. Among the factors that the Commission should consider in this regard are "the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities." Id.

[120] In analyzing what constitutes a reasonably foreseeable time, Commissioner Koplan examines all the current and likely conditions of competition in the relevant industry. He defines "reasonably foreseeable time" as the length of time it is likely to take for the market to adjust to a revocation or termination. In making this assessment, he considers all factors that may accelerate or delay the market adjustment process including any lags in response by foreign producers, importers, consumers, domestic producers, or others due to: lead times; methods of contracting; the need to establish channels of distribution; product differentiation; and any other factors that may only manifest themselves in the longer term. In other words, this analysis seeks to define "reasonably foreseeable time" by reference to current and likely conditions of competition, but also seeks to avoid unwarranted speculation that may occur in predicting events into the more distant future.

[121] 19 U.S.C. § 1675a(a)(1).

agreement is terminated.[122] [123]

We note that the statute authorizes the Commission to take adverse inferences in five-year reviews, but such authorization does not relieve the Commission of its obligation to consider the record evidence as a whole in making its determination.[124] We generally give credence to the facts supplied by the participating parties and certified by them as true, but base our decision on the evidence as a whole, and do not automatically accept the participating parties' suggested interpretation of the record evidence. Regardless of the level of participation and the interpretations urged by participating parties, the Commission is obligated to consider all evidence relating to each of the statutory factors and may not draw adverse inferences that render such analysis superfluous. "In general, the Commission makes determinations by weighing all of the available evidence regarding a multiplicity of factors relating to the domestic industry as a whole and by drawing reasonable inferences from the evidence it finds most persuasive."[125] In this case, a number of respondent interested parties did not provide questionnaire responses and/or participate in these reviews. Accordingly, we have relied on the facts available in these reviews, which consist primarily of the information collected by the Commission since the institution of these reviews, and information submitted by the domestic producers, respondent parties and other parties in these reviews.

In evaluating the likely volume of imports of subject merchandise if the order under review is revoked, the Commission is directed to consider whether the likely volume of subject imports would be significant either in absolute terms or relative to the production or consumption in the United States.[126] In doing so, the Commission must consider "all relevant economic factors," including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.[127]

In evaluating the likely price effects of subject imports if the order is revoked, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared with the domestic like product and whether the subject imports are likely to enter the United

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[122] 19 U.S.C. § 1675a(a)(1). The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission's determination. 19 U.S.C. § 1675a(a)(5). While the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

[123] Section 752(a)(1)(D) of the Act directs the Commission to take into account in five-year reviews involving antidumping proceedings "the findings of the administrative authority regarding duty absorption." 19 U.S.C. § 1675a(a)(1)(D). Commerce has not issued any duty absorption findings with respect to these reviews. See 65 Fed. Reg. 11552 (Mar. 3, 2000) (Ukraine), 65 Fed. Reg. 41439 and 41441 (July 5, 2000) (Russia and Uzbekistan); CR/PR at Appendix A.

[124] 19 U.S.C. § 1675(e).

[125] SAA at 869.

[126] 19 U.S.C. § 1675a(a)(2).

[127] 19 U.S.C. § 1675(a)(2)(A)-(D).

States at prices that would have a significant depressing or suppressing effect on the price of domestic like products.[128]

In evaluating the likely impact of imports of subject merchandise if the order is revoked, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.[129] All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry.[130] As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the antidumping duty order or suspension agreements at issue and whether the industry is vulnerable to material injury if the order is revoked.[131]

For the reasons stated below, we determine that termination of the suspended investigation on uranium from Russia would be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time; and that termination of the suspended investigation on uranium from Uzbekistan and revocation of the antidumping duty order on uranium from Ukraine would not be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time.

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[128] 19 U.S.C. § 1675a(a)(3). The SAA states that "[c]onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices." SAA at 886.

[129] 19 U.S.C. § 1675a(a)(4).

[130] 19 U.S.C. § 1675a(a)(4). Section 752(a)(6) of the Act states that "the Commission may consider the magnitude of the margin of dumping" in making its determination in a five-year review. 19 U.S.C. § 1675a(a)(6). The statute defines the "magnitude of the margin of dumping" to be used by the Commission in five-year reviews as "the dumping margin or margins determined by the administering authority under section 1675a(c)(3) of this title." 19 U.S.C. § 1677(35)(C)(iv). See also SAA at 887. In its expedited review of the antidumping duty order regarding subject imports from Ukraine, Commerce found that revocation of the antidumping duty order on uranium from Ukraine would likely lead to continuation or recurrence of dumping at the margin of 129.29 percent for all Ukrainian manufacturers/exporters. 65 Fed. Reg. at 11553 (Mar. 3, 2000). In the final results of its full reviews regarding subject imports from Russia and Uzbekistan, Commerce found termination of the suspended investigations on uranium from Russia and Uzbekistan would be likely to lead to continuation or recurrence of dumping at the margins of 115.82 percent for all Russian manufactures/exporters and 115.82 percent for all Uzbek producer/exporters. 65 Fed. Reg. at 41441 and 41442 (July 5, 2000).

[131] The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission "considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports." SAA at 885.

B. Conditions of Competition

In evaluating the likely impact of the subject imports on the domestic industry, the statute directs the Commission to consider all relevant economic factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[132]

The following conditions of competition in the uranium industry are relevant to our determinations. First, the various forms of uranium – uranium concentrate (U_3O_8), natural UF_6, enriched UF_6 (LEU-HF), and uranium oxides (UO_2 or LEU-DO) – are fungible, commodity products.[133] Uranium of any form is, for the most part, substitutable with uranium of the same form produced elsewhere in the world.[134] The four basic forms are not physically interchangeable with each other since they are all intermediate products each successively contained in each other. All forms of uranium except uranium oxides (UO_2) are traded on a worldwide basis.[135] In the past, there was limited substitution between uranium concentrates (U_3O_8) and toll-enrichment services,[136] and virtually no substitution for the natural conversion and toll-processing for fabrication.[137] However, in the current market, significant volumes of natural UF_6 and LEU-HF act as substitutes for uranium concentrates, natural conversion, and enrichment services, and thus for these sources limit the need for the earlier stages of the fuel cycle.[138]

Second, there have been substantial structural changes to the domestic industry since the original investigations. Consolidations and closings have substantially reduced the number of operating concentrate producers in the United States, from 15 in 1992, to 7 during the 1997-1999 period of review, and 5 in 2000.[139] Similarly, U.S. conversion operations have been reduced from two in 1993 to one during the period of review.[140] The most significant change to the domestic industry has been the privatization of USEC. Created by the U.S. Government in 1992 as the first step toward the privatization

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[132] 19 U.S.C. § 1675a(a)(4).

[133] CR at I-13 and II-37; PR at I-9 and II-24.

[134] CR at II-34; PR at II-21. Purchasers rated imported Russian, Uzbekistan, and Ukrainian uranium as generally comparable with U.S. uranium, and stated that they generally purchased their uranium products and toll-processing on an open country basis. Id. at II-37 - II-38. Open country essentially means the purchasers will accept uranium from any country. Purchasers also indicated that uranium from Russia and Uzbekistan is perceived to be less desirable because of the administrative burdens and swap/loan prohibitions of the suspension agreements. Id. at II-34. It is not clear how the U.S. market perceives uranium from Ukraine. Id.

[135] CR at I-13 and II-1; PR at I-9 and II-1.

[136] An enricher may decrease the number of SWU necessary to achieve a given concentration of U^{235} by increasing the quantity of UF_6 input into the production process. CR at I-11, n.11; PR at I-8, n.11.

[137] CR at II-11; PR at II-8.

[138] CR at II-11; PR at II-8.

[139] CR at I-10; PR at I-7. Two of the seven concentrate producers ceased production in 1999.

[140] CR/PR at III-2 and Uranium from Ukraine, USITC Pub. 2669 at I-17.

of the Department of Energy's uranium enrichment activities, USEC was fully divested of Government ownership and became a publicly-held corporation in July 1998.[141] USEC is the only U.S. enricher of uranium and traditionally has enriched natural UF_6 to produce LEU-HF for electric utilities almost exclusively on a toll basis.[142] However, as the U.S. Government's Executive Agent for the Russian HEU Agreement, USEC is required to import large quantities of Russian enriched UF_6 (LEU-HF blended down from Russian HEU) and sell it directly to utilities.[143] These imports and sales of Russian LEU-HF have led to correspondingly diminished use of USEC's enrichment capacities and have been cited as a factor in its decision to close one of its two plants in June 2001.[144]

Third, U.S. utilities' demand for uranium, as measured by reactor requirements, has been constant during the period of review and is projected to remain relatively flat for the next decade.[145] Uranium consumption is highly dependent on the number of operating nuclear reactors producing electricity and on the level at which each utility is operating.[146] Since 1978, at least 11 nuclear power plants in the United States have been closed and no new plants have been constructed.[147] Demand for uranium also has been affected by deregulation of electrical utilities, which effectively puts nuclear power plants in competition with other sources of electricity.[148] Since the cost of fuel assembly rods represents a significant portion of a nuclear power plant's operating expenses, utilities that own nuclear facilities face increasing pressure to cut costs by obtaining uranium at the lowest costs whether through the traditional fuel cycle or from non-traditional uranium suppliers.[149]

The nature of U.S. demand may be changing as U.S. electric utilities are now able to bypass the fuel cycle by purchasing the processed products directly, especially natural UF_6 and enriched uranium.[150] A majority of U.S. electric utilities' purchases of uranium and uranium processing are based on long-term contracts.[151] The increased availability of processed products has led to shorter lead times and allowed electric utilities to reduce their long-term purchases of uranium in favor of shorter-term contracts, including spot contracts.[152]

Fourth, another significant condition of competition affecting the domestic industry is the overall

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[141] CR at I-12; PR at I-8.

[142] CR at II-17; PR at II-11.

[143] CR at I-12; PR at I-8.

[144] CR at II-14 and III-3-4; PR at II-9 and III-2-3.

[145] CR at II-29/PR at II-18 and Uranium Coalition's Prehearing Brief at 45.

[146] CR at II-7; PR at II-5.

[147] CR at I-19; PR at I-13.

[148] CR at I-19; PR at I-13.

[149] CR at I-19, II-12 and II-13; PR at I-12 and II-8.

[150] CR at II-27; PR at II-16.

[151] CR at II-5 and II-6; PR at II-4.

[152] CR at II-6 and II-27; PR at II-4 and II-16.

increase in the supply of uranium, and, in particular, the increased availability of uranium in processed forms. Uranium imports from Russia, under the Russian HEU Agreement, have provided a large and increasing supply of uranium at the LEU stage to the U.S. market. Under this Agreement, the United States has committed to buy low-enriched UF_6 produced in Russia from high enriched uranium (HEU) that was part of the Soviet military stockpile. USEC, as Executive Agent of the U.S. Government, is responsible for implementing this Agreement.[153] During the period of review, USEC imported and shipped to U.S. utilities Russian LEU-HF blended down from HEU containing a total of ***.[154] USEC is committed to purchasing 5.5 million SWU per year from Russia for the 1999-2014 period, which represents *** of the company's U.S. enrichment sales.[155] In addition, under this Agreement, USEC pays Russia in kind for the natural uranium contained in the enriched UF_6 (by crediting Russia an equivalent quantity of natural UF_6) and pays in cash for the value of enrichment (SWU).[156] This natural UF_6 or Russian feedstock, which is owned by Russia and is stored at USEC facilities, may be imported and sold in the U.S. market under an annual limit that began at 2 million pounds in 1998 and increases by 2 million pounds per year, until the annual limit reaches, and continues at, 20 million pounds.[157]

Further adding to the worldwide abundance of uranium have been the developments of the relatively high-grade, low-cost uranium ore reserves in Canada and Australia.[158] During the investigation period, Canada and Australia each have shipped increasing volumes of uranium concentrate to the United States.[159] Canada and Australia together accounted for almost 72 percent of all U.S. imports of uranium

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[153] CR at II-1 and II-2; PR at II-I.

[154] CR at II-2; PR at II-1.

[155] CR at II-2; PR at II-1. We also note that SWU purchased under the Russian HEU Agreement represented *** of U.S. electric utilities' requirements for enrichment during the period of review, and are projected to represent *** of these requirements in each of the next few years. Calculated from CR at II-2 and II-29, and II-2, n.6; PR at II-1 and II-18, and II-1, n.6.

[156] CR at I-17, n. 18; PR at I-11, n.18.

[157] CR at II-3 and II-4, n.12; PR at II-2 and n.12. The Russian feedstock resulting from the HEU Agreement had accumulated in USEC's storage facilities until 1999, due to restrictions on its distribution under the USEC Privatization Act and Russian Suspension Agreement. As discussed below, in March 1999, the U.S. Government purchased the inventory for $325 million dollars and established these annual limits. At the same time, Russia signed a long-term contract, with market-based pricing, to sell the post-1998 natural uranium component of the HEU-to-LEU shipments to a consortium of Cogema, Cameco, and Nukem. Id. at I-17, n. 18.

[158] CR at I-18; PR at I-12. Australia has the world's most extensive uranium reserves, amounting to 1.2 million metric tons or 35 percent of total world uranium reserves. About 28 percent of Australia's uranium reserves are considered both class 1 and low-cost reserves (well-proven reserves with recovery costs estimated to be under $40/kg U of natural uranium). Canadian uranium reserves also are extensive and account for about 13 percent of world reserves and about 20 percent of the world's low-cost reserves. CR at II-25; PR at II-15.

[159] CR at I-18; PR at I-12. Neither Canada nor Australia process uranium further than natural UF_6 or uranium concentrate, respectively. Id. at II-26.

concentrate during the period of review.[160]

An overhang of natural and enriched UF_6 inventories in the United States and throughout the world represent another source of uranium supply. USEC alone holds an inventory of natural UF_6 that ***.[161] Russia also reportedly holds significant and increasing inventories of natural UF_6 in the U.S. market that result largely from sales of the Russian LEU-HF blended down from HEU.[162] The U.S. Department of Energy has a separate large stockpile of natural UF_6, amounting to about 58 million pounds of U_3O_8, which resulted from the U.S. Government's $325 million purchase of the Russian feedstock that had accumulated through 1998 under the HEU Agreement.[163] The U.S. Government committed in March 1999 to withhold this material from the market for 10 years.[164] Increased worldwide availability of uranium, particularly in processed form, as well as cost-cutting measures resulting from deregulation, also have led some utilities to reduce their uranium inventories by selling or trading it on the open market, adding to the number of suppliers and the already existing excess supplies.[165]

Fifth, the inventories, which are typically held by producers and owned by utilities,[166] allow the producers and utilities to engage in a variety of non-cash transactions. Companies holding uranium in different locations may swap equivalent quantities to avoid transportation costs or government restrictions.[167] A company may loan uranium to other companies that need to cover excess demand or optimize inventories.[168] Such alternative transactions can result in the disaggregation of an advanced stage of uranium (such as natural or enriched UF_6) into the raw material (uranium concentrate or natural UF_6) and processing (conversion or enrichment) used to make it.[169] This process creates separate, but interrelated, markets for the uranium and enrichment components of enriched UF_6. Consequently, a given quantity of uranium may change ownership or possession a number of times before its consumption in a nuclear power plant.

Finally, trade restrictions affect exports of uranium from the successor countries to the former Soviet Union. As previously discussed, suspension agreements between Commerce and Russia and Uzbekistan, and, until recently, Kazakhstan and Kyrgyzstan, limited the volume of uranium these countries could sell into the United States. For Russia, the limitation takes the form of a matched sales arrangement, whereby utilities could purchase Russian uranium only if the utilities bought an equivalent

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[160] CR at II-25; PR at II-15.

[161] CR at II-13, II-16 and II-17; PR at II-9 and II-11.

[162] CR at II-17; PR at II-11. ***. Id.

[163] CR at I-17, n.18 and II-17, n.58; PR at I-11, n.18 and II-11, n.58.

[164] CR at II-3 and II-17, n.58; PR at II-2 and II-11, n.58.

[165] CR at I-19 and II-3; PR at I-13 and II-2.

[166] CR at II-3; PR at II-2.

[167] CR/ PR at V-1.

[168] CR/ PR at V-1.

[169] CR at II-8 and V-1.

quantity of domestically produced uranium.[170] The other suspension agreements imposed numerical quotas, with the quota being increased if the price of uranium in the United States increased.[171] Uranium from Ukraine has been subject to a United States antidumping duty order since 1993, and there were almost no imports from that country during the review period.[172] In addition, the European Atomic Energy Community ("EURATOM") countries limit imports of uranium from these former Soviet states.[173] These restrictions were imposed in the early 1990s in order to maintain diversity of supply in Europe.[174] The Euratom Commission currently allows about 25 percent of its utilities' annual uranium requirements to be filled with uranium from the former Soviet states.[175] Collectively, these restrictions have resulted in a two-tiered pricing structure. Uranium eligible for sale in the United States and EURATOM countries (known as "restricted market uranium") bears a higher price than uranium that can only be sold in countries without import restrictions (known as "unrestricted market uranium").[176]

We find that the foregoing conditions of competition are likely to remain unchanged for the reasonably foreseeable future and thus provide an adequate basis by which to assess the likely effects of revocation or termination within the reasonably foreseeable future.

C. Termination of the Suspended Investigation on Imports of Uranium From Russia Is Likely to Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

1. Likely Volume of Subject Imports

All sources agree that Russia has vast reserves of unmined uranium and extensive capacity to produce all forms of uranium, including the processing of depleted uranium and the reprocessing of spent fuel. The exact quantities of reserves and capacity as well as extensive inventories and stockpiles are uncertain. Moreover, the Russian Respondents provided the Commission only limited data regarding their industry. We find that Russia has the capabilities to increase significantly shipments of subject uranium to the United States within the reasonably foreseeable future if the suspended investigation is terminated.

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[170] As with the other countries subject to suspension agreements, Russia's quota was originally based on the prevailing market price. See 57 Fed. Reg. at 49241 (Oct. 30, 1992). A subsequent amendment replaced this system with the matched sales arrangement. See Amendment to the Agreement Suspending the Antidumping Investigation on Uranium From the Russian Federation, 59 Fed. Reg. 15373, 15374 (Apr. 1, 1994).

[171] See, e.g., 57 Fed. Reg. at 49255 (Oct. 30, 1992)(Uzbekistan).

[172] See discussion of non-subject imports of enriched uranium with natural component of Ukraine origin in sections II.B.2 and IV.E.

[173] CR at II-4; PR at II-3.

[174] CR at IV-3; PR at IV-2.

[175] CR at IV-3; PR at IV-2. Since the 25 percent limit is defined in terms of actual usage, purchases and inventories could be higher. Id.

[176] CR at II-4 - II-5, and n. 16; PR at II-3 and n.16.

Attempting to assign complex transactions involving multiple forms of uranium to one market segment would be arbitrary. Furthermore, strict segmentation would ignore the impact that sales of one form of uranium have on the others. Therefore, we have analyzed the impact of total subject imports from Russia on the entirety of the domestic like product and industry. We recognize, however, that some degree of disaggregated analysis is unavoidable, particularly with respect to quantity data for different segments which are inappropriate to aggregate.

There are several ways to measure volume in the uranium industry: in terms of the value of total imports or sales during a given period, the volume or value sold within each sector, and the volume of uranium required by U.S. utilities each year. The value of U.S. imports of all uranium products from Russia, based on questionnaire responses, increased steadily during 1997-1999, from *** in 1999.[177] [178] Imports of uranium into the United States from Russia *** of the total value of U.S. sales and imports of uranium in 1997 to *** of the total value of U.S. sales and imports of uranium in 1999.[179] Uranium imported from Russia accounted for about *** percent of the total value of all U.S. imports of uranium during the period of review.[180]

Imports from Russia during the period of review included uranium concentrates and LEU-HF. The value of uranium concentrate directly imported from Russia *** in 1999.[181] Direct imports of uranium concentrate from Russia *** of the total value of U.S. sales and imports of uranium concentrate in 1997 to *** of the total value of U.S. sales and imports of uranium concentrate in 1999.[182] The value of directly imported Russian uranium concentrate accounted for *** percent of total U.S. imports of this product during the period of review.[183] Similarly, the volume of uranium concentrate imported from Russia *** in 1999.[184] These volumes represented *** in 1999.[185] While imports of Russian uranium concentrate represented a relatively small share of total U.S. uranium concentrate sales during the period of review, such imports of enriched uranium, or LEU-HF, accounted for a substantial share of all U.S.

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[177] We note that the data in the 1991 original preliminary investigation on imports from the USSR were not available separately for the former republics of the USSR and thus we have no import data for Russia, Ukraine, or Uzbekistan during the 1990-1992 period.

[178] CR/PR at Table I-2.

[179] Calculated from CR/PR at Table I-2.

[180] CR at II-21; PR at II-13.

[181] CR/PR at Table I-3.

[182] Calculated from CR/PR at Table I-3.

[183] CR at II-21; PR at II-13.

[184] Calculated from CR/PR at Table I-3 and ***. The import data for imports of Russian uranium concentrate include direct imports and the *** in 1998 contained in nonsubject imports of enriched UF_6. ***. Due to reporting inconsistencies, the values of these subject indirect imports have not been included in any value-based calculations of market share regarding Russian imports.

[185] Calculated from CR/PR at II-29/PR at II-18, Table I-3 and ***. Expressing imports of Russian uranium concentrate as a percentage of U.S. utilities' deliveries of uranium for enrichment yields similar results, with market shares of *** in 1999. Id.

uranium requirements.

The value of enriched UF_6 imported from Russia *** in 1999.[186] Similarly, the SWU contained in this enriched UF_6 imported from Russia *** in 1999.[187] The SWU contained in U.S. imports of Russian LEU-HF represented *** in 1999.[188] The value of imported Russian LEU-HF accounted for *** of total U.S. imports of this product during the period of review and *** of the total value of U.S. sales and imports of enriched UF_6 in 1999.[189]

Russia has the capacity to produce all forms of uranium, including re-enrichment of uranium tails and reprocessing of spent nuclear fuel.[190] The Uranium Institute reports that Russia, Kazakhstan, and Uzbekistan together have about 30 percent of the world's class 1 uranium concentrate reserves, or about 1.4 billion pounds of U_3O_8.[191] Russia currently has one conventional mine in operation.[192] In a September 1999 statement, Minatom's Minister indicated that Russia held "around 200,000 t U (0.1-0.2 % grade)" of uranium reserves, which is equivalent to about 520 million pounds of U_3O_8.[193]

Russia produces about *** (compared with about 4.9 million pounds in the United States) at a rated capacity of about ***.[194] Russia's annual concentrate requirements reportedly include about *** for HEU blending.[195] ***.[196] Russia is estimated to have *** of the world's annual light-water-reactor fabrication capacity.[197]

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[186] CR/PR at Table I-5.

[187] ***.

[188] Calculated from CR at II-29/PR at II-18 and ***.

[189] CR at II-21/PR at II-13 and calculated from Table I-5.

[190] CR at II-22; PR at II-13.

[191] CR at II-22; PR at II-13.

[192] CR at II-22; PR at II-13. There is evidence that Russia is building a new commercial uranium mine applying the ISL mining method with an annual production volume expected to reach 1500 tonnes (or 3.9 million pounds) and sufficient reserves to ensure at least 50 years of operation. Mining at this deposit is expected to be twice as cheap as at Russia's only other uranium mine. Uranium Institute News Brief dated 3-8 May 2000, item NBOO.19-1; Uranium Coalition's Prehearing Brief at Exhibit 15.

[193] "Supply of Fuel for Nuclear Power - Present Situation and Perspectives," by Evgeny O. Adamov, in Uranium Institute 24th Annual Symposium, (8-10 September 1999-London) at 2; see Uranium Coalition's Prehearing Brief, Exhibit 21 at 2.

[194] CR at IV-4; PR at IV-2. There is evidence that Russia's natural uranium production capacity may be 9.1 million pounds based on information provided by Russia's Minatom to the International Atomic Energy Agency ("IAEA"). Ad Hoc Committee's Posthearing Brief at Attachment 1.

[195] CR at IV-4; PR at IV-2.

[196] CR at IV-4; PR at IV-2.

[197] CR at II-22 and IV-4; PR at II-14 and IV-2.

Russia also is estimated to have annual enrichment capacity of ***, although its home market demand for enrichment was estimated to average *** annually during 1997-1999, or *** of its capacity.[198] According to TENEX, however, Russia's enrichment capacity was ***.[199]

We find it likely that significant volumes of Russia's current enrichment capacity will be targeted to the U.S. market. Russia's home market demand is low. Only about *** of its enrichment capacity reportedly is used to meet home market demand, with *** which could be redirected to other enrichment activities for export.[200]

An important aspect of the Russian uranium industry is its stocks or inventories of uranium in addition to the mining reserves already discussed.[201] Russian Respondents provided no data on their inventories of uranium to the Commission. Russia holds substantial inventories of natural UF_6. While the exact quantity is not known, in 1999 the Russian Government agreed, as did the U.S. Government, to withhold natural UF_6 amounting to an equivalent of 58 million pounds of U_3O_8 from the world market for 10 years.[202] In addition, Russia holds significant and increasing inventories of natural UF_6 in the U.S. market that results largely from sales of the Russian LEU-HF blended down under the HEU Agreement.[203] This inventory can be sold and imported into the U.S. market subject to current limits, but some of the limits increase by 2 million pounds per year with an annual limit of 20 million pounds in 2009 under the USEC Privatization Act.

Russia also holds substantial inventories of uranium tails, a waste product of uranium enrichment production. However, in contrast to other enrichment producers, Russia reportedly uses some of its

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[198] CR at II-22-23; PR at II-13-14.

[199] CR at IV-4; PR at IV-2.

[200] CR at II-23, n.77 and IV-4; PR at II-14, n.77 and IV-2. See also "Cameco said to be very close to deal to buy re-enriched tails from Urenco," in Nuclear Fuel, Vol. 24, No. 17 at 1 (Aug. 23, 1999) ("According to sources, Cameco will begin buying a least 5 million lb. (and perhaps more) U3O8 equivalent through 2004 in tails that have been enriched for Urenco under a contract with Russia's Techsnabexport. . . . Urenco has been having some of its enrichment tails re-enriched in Russia for some time and then selling the resulting natural product to selected customers." Id. at 1 and 2.); Uranium Coalition's Prehearing Brief, Exhibit 14 at 1 and 2.

[201] The domestic industry has urged the Commission to consider the stockpile of uranium in Kazakhstan as Russian inventory. We note that Commerce indicated in its final results for the Russian review that USEC had requested a scope ruling on this stockpile in August 1999, but Commerce did not decide the issue and only stated that the "scope request is pending before the Department at this time." 65 Fed. Reg. at 41441 (July 5, 2000). Thus, we have not included the Kazak stockpile in our consideration of likely Russian inventory of uranium.

[202] CR at II-3; PR at II-2.

[203] CR at II-17; PR at II-11. The Russian feedstock resulting from the HEU Agreement had accumulated to a substantial volume through 1998 when it was purchased by the U.S. Government for $325 million in March 1999. The post-1998 Russian feedstock of the HEU-to-LEU shipments will be sold and possibly imported for the Russians by a consortium of Cogema, Cameco, and Nukem. CR at I-17, n. 18; PR at I-11, n.18. ***. CR at II-17; PR at II-11. GNSS and USEC reported in their questionnaire responses that at the end of 1999 they held combined U.S. inventories of the imported Russian LEU-HF amounting to ***. CR at II-18 and II-19; PR at II-11.

enrichment capacity to re-enrich uranium tails in its inventory as well as some from Europe, thereby providing another source of uranium.[204] Russia's inventory of uranium tails is estimated to equal about 609.3 million pounds of U_3O_8, or enough to satisfy uranium reactor requirements in the United States for about 12 years.[205]

Finally, while the Russian HEU Agreement governs the blending down of 500 metric tons of Russian HEU for importation into the United States as LEU, Russia holds substantial additional supply of HEU not governed by the HEU Agreement that could be blended down to LEU.[206] The parties disagree about whether this inventory is available for commercial or strategic use.[207] Evidence submitted by the Russian Respondents estimates that Russia's strategic HEU stockpiles in the late 1990s was "over 400 MT" and that "[i]t is possible that additional HEU inventories (possibly, on the order of 100MT) would be declared excess by the Russian government in the future."[208]

Russia's substantial inventories in conjunction with its enrichment capacity further indicate its ability to increase its exports to the United States within a reasonably foreseeable time upon termination of the suspended investigation. Moreover, Russian uranium faces barriers to entry in Europe, because imports of uranium from the former Soviet states are subject to EURATOM sales quotas.[209] The Euratom Commission currently allows about 25 percent of its utilities' annual uranium requirements to be filled with uranium from the former Soviet states.[210]

Russia has the resources and capacity to ship significantly increased volumes of imports of uranium in all forms to the United States. As discussed above, uranium imports from Russia, under the Russian HEU Agreement, have provided a large and increasing supply of uranium at the LEU stage to the U.S. market.[211] Under this Agreement, the United States has guaranteed to purchase 5.5 million SWU per year from Russia for the 1999-2014 period, which is projected to represent *** of U.S. electric utilities' requirements for enrichment in the reasonably foreseeable future.[212] In addition, the natural UF_6

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[204] CR at II-22; PR at II-13.

[205] CR at II-22, n.68; PR at II-13, n.68.

[206] CR at II-23; PR at II-14.

[207] The Uranium Coalition alleges that Russia holds another 770 metric tons of HEU which are not covered by the Russian HEU Agreement at this time but are covered by the Russian Suspension Agreement. Uranium Coalition's Prehearing Brief at 76; Tr. at 235-236 (Russian Respondents contend that the additional Russian HEU reportedly ***). CR at IV-5; PR at IV-3.

[208] "HEU-II, I- or 0? (Questions to Dr. Oleg Bukharin)," in The UX Weekly at 1 (dated June 12, 2000), in Russian Respondents' Posthearing Brief at Attachment 3.

[209] CR at II-4 and IV-3; PR at II-3 and IV-2.

[210] CR at IV-3; PR at IV-2. Since the 25 percent limit is defined in terms of actual usage, purchases and inventories could be higher. Id.

[211] During the period of review, USEC imported and shipped to U.S. utilities Russian LEU-HF blended down from HEU containing a total of ***. CR at II-2; PR at II-1.

[212] Calculated from CR at II-2 and II-29, and II-2, n.6; PR at II-1 and II-18, and II-1, n.6. We note that SWU purchased under the Russian HEU Agreement and Suspension Agreement represented

or Russian feedstock, which is credited to Russia under the HEU-to-LEU sales and is stored at USEC facilities, may be imported and sold in the U.S. market under increasing annual limits subject to the USEC Privatization Act and the Suspension Agreement.[213] Without the discipline of the Suspension Agreement, Russia would not be restricted to finding matching sales to import more uranium into the U.S. market. Russia likely would import additional volumes of the natural UF_6 that are increasing and already stockpiled in the United States above the limits provided for under the USEC Privatization Act[214] and would not be precluded from importing additional volumes of LEU whether or not blended down from its HEU stockpiles or produced from other reserves and inventories.

Consequently, based on the record in this review, we conclude that the volume of subject imports, which already is substantial, likely would increase significantly within a reasonably foreseeable time if the suspended investigation is terminated.

2. Likely Price Effects

We find that the increased volumes of subject imports of uranium from Russia that would be likely to enter the United States if the suspended investigation were terminated likely would have significant negative price effects for the U.S. product.

As discussed above, uranium is a commodity product and is price sensitive to significant changes in the supply of uranium on the market. Lowest price was the most important purchasing factor reported by U.S. electric utilities.[215] The importance of price reflects the intense competition among suppliers in the U.S. market as worldwide supplies overall have increased, including the growing availability of natural UF_6 and enriched UF_6 as finished products that bypass a portion of the fuel cycle.[216] There also is some evidence that prices for the processed products may have been lower than for products purchased through the traditional fuel cycle process.[217] The significant volumes of natural UF_6 and LEU act as substitutes for uranium concentrates, natural conversion, and enrichment services, and affect the prices, demand, and supply of these latter products/toll services.[218] The strength of such substitution may continue to increase in significance because worldwide inventories of uranium, particularly in the natural UF_6 form, are reportedly large.[219] The combined direct purchases by utilities of natural UF_6 and LEU accounted for 36.5 percent of total deliveries in 1999, substantially higher than the 15.7 percent share in

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*** of U.S. electric utilities' requirements for enrichment during the period of review. Id.

[213] CR at II-3 and II-4, n.12; PR at II-2, n.12.

[214] Currently, if Russia finds matching sales under the Suspension Agreement for sales of this UF_6 stockpile, these sales do not reduce its limits under the USEC Privatization Act. CR at II-4, n.12; PR at II-2, n.12.

[215] CR at II-36; PR at II-22.

[216] CR at II-36; PR at II-22.

[217] CR at II-12; PR at II-8.

[218] CR at II-11 and II-12; PR at II-8.

[219] CR at II-12; PR at II-8.

1997.[220] At the same time, due to deregulation of electricity supply, purchasers are facing increasing pressure to reduce their fuel costs and thus acquire uranium at the lowest possible price.[221]

While long-term contracts are prevalent within this industry, prices are typically negotiated and based on factors including consideration of various published spot prices at the time of negotiation.[222] Thus, subject imported uranium sold in the United States on a spot basis will likely impact domestic uranium sold on a long-term contract basis.[223]

The Commission's pricing analysis in this review does not yield meaningful direct comparisons between the domestic like product and the subject imports from Russia in part due to the matched sales and quota provisions governing imports under the suspension agreement.[224] Other evidence in the record indicates that prices for uranium generally have declined and have been at low levels during the period of review. The U.S. uranium price generally reflects the world price, including the differences in restricted and unrestricted uranium prices, because of extensive world trade in uranium and substantial U.S. imports of uranium through the enrichment stage.[225] World prices for uranium concentrates, as well as conversion and enrichment services, generally declined during 1997 and 1998, remained flat and then increased slightly during 1999, before declining in the first quarter of 2000.[226] Prices of uranium subject to restrictions, including Russian uranium continued to decline in 1999 and the first quarter of 2000.[227]

We find that without the discipline of the suspension agreement, there is a substantial likelihood that the Russian uranium would be priced aggressively in the U.S. market, which already has an abundance of supply, in order to gain market share.[228] The likelihood of price depression or suppression in this market is accentuated by the prevalence of the abundant supply of uranium and Russia's ability to provide large volumes of additional supply of uranium at all levels of production.

For the foregoing reasons, we find that termination of the suspended investigation on uranium from Russia would be likely to lead to significant underselling by the subject imports of the domestic like product, as well as significant price depression and suppression, within a reasonably foreseeable time.

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[220] CR at II-12, n.45; PR at II-8, n.45.

[221] CR at II-36; PR at II-22. Uranium accounts for about one-third of the total costs to produce electricity in nuclear power plants. Id. at II-34.

[222] CR at II-41 and V-6, n.10; PR at II-26 and V-4, n.10.

[223] CR at II-41, n.129; PR at II-26, n.129.

[224] For example, we recognize that imports from Russia under the matched sales provisions of the Russian Suspension Agreement were required to be priced less than the domestic product. CR at II-46, n.140, V-15, and V-25, n.20; PR at II-29, n.140, V-8, and V-9, n.20.

[225] CR at II-5, n.18; PR at II-4, n.18.

[226] CR at II-4; PR at II-3.

[227] CR at II-4 and n.14; PR at II-3 and n.14; Russian Respondents' Prehearing Brief, Tab 3 at Data Table 11.

[228] We find that Russian pricing behavior during the suspended investigation is more indicative of the controls under the suspension agreement than of any likely pricing practices absent the discipline of the agreement. See Russian Respondents' Prehearing Brief at 55.

3. Likely Impact

In the original preliminary investigation regarding uranium from the U.S.S.R. and the final investigation regarding uranium from Ukraine, the Commission segmented its analysis based on the four stages of the uranium fuel cycle, for example considering uranium concentrate imports in the context of the concentrators, and so on.[229] However, the uranium market has changed substantially since the early 1990's. As stated previously, we have analyzed the impact of the subject imports on the entirety of the domestic like product and industry. We recognize, however, that some degree of disaggregated analysis is unavoidable, particularly with respect to the financial performance of domestic producers at different stages of the uranium fuel cycle.

We find that the likely significant volume of subject imports would adversely impact the domestic industry if the suspended investigation was terminated. While the domestic producers showed disparate financial results during the period of review, all experienced declines in their overall financial performance. In the aggregate, concentrators reported operating losses throughout the review period, with operating loss margins exceeding 40 percent in 1997 and 1999.[230] Two concentrators closed their operations in 1999.[231] ConverDyn, the sole U.S. converter, experienced *** declines in its financial performance during the period of review.[232] The likely significant volume of imports from Russia would particularly affect the demand for USEC's enrichment services.[233] USEC's U.S. sales of its enrichment services experienced significant declines during the period of review and were *** of its sales level reported in the early 1990's.[234] Although the unit value for USEC's enrichment services did not change substantially during the period of review, its unit costs increased substantially when it reduced production levels in response to increased sales of Russian enriched UF_6, thereby sacrificing economies of scale.[235] In June 2000, USEC announced that it would cease uranium enrichment services at one of its

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[229] In the original preliminary determination, the Commission found that many indicators pertaining to the condition of the uranium industry were negative and that the industry overall had a very low and declining market share. The Commission found that "the record contains a reasonable indication that the domestic industry is materially injured." Soviet Uranium, USITC Pub. 2471 at 22 and 23.

[230] Operating losses were: $26.5 million in 1997, $9.0 million in 1998, and $26.9 million in 1999. The domestic concentrators' operating losses as a share of net sales were: 40.8 percent in 1997, 12.9 percent in 1998, and 44.9 percent in 1999. CR/PR at Table III-1 and III-2.

[231] CR at I-10 and n.8; PR at I-7 and n.8.

[232] CR/PR at Table III-3. ConverDyn's operating income *** over the review period as follows: *** in 1999. The converter's operating margins as a share of net sales were: *** in 1999. Id.

[233] USEC's enrichment service production was: *** in 1999. By comparison, USEC's annual production in the early 1990's was about ***. CR/PR at Table I-5.

[234] USEC's U.S. sales of its enrichment services were: *** in 1999. By comparison, USEC's annual U.S. sales in the early 1990's were ***. CR/PR at Table I-5.

[235] USEC's unit values for U.S. sales were: *** in the July-December 1999 interim period. The unit cost of goods sold increased from *** in the July-December 1999 interim period. CR/PR at Table III-4.

two production plants, Portsmouth, in June 2001 in order to align its cost of production with lower market prices.[236] Finally, the reported financial data for fabricators' operations that included both subject and non-subject operations showed large fluctuations between years, although there was a slight improvement reported over the period of review.[237] Given the weak and declining financial performance of the domestic industry overall, we conclude that the domestic industry is in a weakened state and currently is vulnerable to material injury by the likely significant volume of subject imports and subsequent negative price affects that would occur if the suspended investigation is terminated.[238] [239]

As discussed above, termination of the suspended investigation would likely lead to a significant increase in the volume of subject imports, and these aggressively priced shipments would likely undersell the domestic product and significantly depress or suppress the domestic industry's prices. With U.S. demand for uranium essentially stagnant in a price-sensitive market, the increase in subject imports is likely to cause decreases in both the prices and volume of domestic producers' shipments. We find that these developments would likely have a significant adverse impact on the production, shipments, sales, market share, and revenues of the domestic industry, particularly given its vulnerable condition. This reduction in the industry's production, shipments, sales, market share, and revenues would result in further erosion of the industry's profitability as well as its ability to raise capital and make and maintain necessary capital investments. In addition, we find it likely that termination of the suspended investigation will result in commensurate employment declines for the industry.

Accordingly, based on the record in this review, we conclude that, if the suspended investigation is terminated, subject imports from Russia would be likely to have a significant adverse impact on the domestic industry within a reasonably foreseeable time.

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[236] CR at III-14; PR at III-9.

[237] CR/PR at Table III-5 and III-6.

[238] SAA at 885 ("The term 'vulnerable' relates to susceptibility to material injury by reason of dumped or subsidized imports. This concept is derived from existing standards for material injury and threat of material injury . . . .If the Commission finds that the industry is in a weakened state, it should consider whether the industry will deteriorate further upon revocation of an order.").

[239] Commissioner Askey notes that the domestic industry is made up of four different segments, concentrators, converters, enrichers and fabricators, and those four groups each showed very different financial results during the review period. The record indicates that the concentrators have been experiencing poor financial performance during the period. CR and PR at Table III-2. By contrast, the enricher, which represents 59 percent of the value-added in the uranium fuel cycle, CR at I-11 and PR at I-8, showed strong financial returns, although there was a declining trend in some indicators. CR and PR at Table III-4. Likewise, the converter's financial indicators were positive but declining during the period. CR and PR at Table III-3. Finally, the fabricators showed a more mixed set of financial indicators. CR and PR at Table III-5. In sum, while the segmentation of the industry complicates the record somewhat, Commissioner Askey finds that the industry as a whole is not vulnerable.

D. Termination of the Suspended Investigation on Imports of Uranium From Uzbekistan Is Not Likely to Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

1. Likely Volume of Subject Imports

Uzbekistan has capacity to produce only uranium concentrate, and thus its direct imports have only been at that level of the fuel cycle.[240] The value of direct uranium imports from Uzbekistan increased from 1997 to 1999, and accounted for *** in 1999 of the total value of U.S. sales and imports of all uranium products.[241] Uranium concentrate imported directly from Uzbekistan into the United States also accounted for *** of the total value of all U.S. imports of all uranium products and only *** percent of total value of U.S. imports of uranium concentrates during the period of review.[242] The volume of all known uranium concentrate imported from Uzbekistan (direct and indirect) was *** in 1999.[243] Thus, Uzbek imports of uranium concentrate represented a relatively small share of total U.S. uranium sales and imports of all uranium during the period of review. We note, however, that the imports of Uzbek uranium were subject to quantity restrictions under the Suspension Agreement. Nonsubject imports of uranium concentrate accounted for *** percent in 1999 of the total value of U.S. sales and imports of all uranium products and *** percent in 1999 of the total value of U.S. sales and imports of uranium concentrate.[244]

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[240] In addition, during the period of review, *** of Uzbek natural uranium. CR at IV-2; PR at IV-1. These indirect subject Uzbek imports were equivalent to approximately *** in 1999. Calculated from ***. We note that the quantity and value of these indirect subject imports were reported by *** in kg of U. While the quantity can be calculated into pounds of U_3O_8 which is the measurement that corresponds to the only form of uranium produced in Uzbekistan, uranium concentrate, a similar adjustment to the value data is inappropriate because the reported data includes value for a later stage of production. Thus, the values of these indirect subject imports have not been included in any value-based calculations of market share regarding Uzbek imports.

[241] Calculated from CR/PR at Table I-2. The value of uranium concentrate imported directly from Uzbekistan was *** in 1999. Id. at Table I-3.

[242] CR at II-21; PR at II-15. Uzbek imports of uranium concentrate accounted for *** in 1999 of the total quantity of U.S. sales and imports of uranium concentrate. Calculated from CR/PR at Tables I-2 and I-3, and ***. While Uzbek imports accounted for *** in 1999 of the total quantity of U.S. sales and imports of uranium concentrate, the concentrate segment of the market accounted for a small share of the total uranium market, i.e., only *** of the value of total U.S. sales and imports of all uranium products in 1999. Id.

[243] Calculated from CR/PR at Table I-3 and ***. These volumes represented *** in 1999. Calculated from CR at II-29/PR at II-18, Table I-3 and ***. Expressing all Uzbek imports of uranium concentrate as a percentage of U.S. utilities' deliveries of uranium for enrichment yields similar results, with market shares of *** in 1999. Id.

[244] Calculated from CR/PR at Tables I-2 and I-3.

While Uzbek exports of uranium to the United States are projected to *** [245] ***.[246] Uzbekistan's production capacity has remained at almost *** of U_3O_8 annually and ***.[247] Production reportedly is ***.[248] Uzbek production of uranium concentrates was *** in 2000 and 2001.[249] Uzbekistan reportedly does not maintain any significant inventories of uranium.[250]

Uzbekistan has no home market demand and is completely export-oriented. Data believed to account for all uranium concentrate production in Uzbekistan show that between *** of total Uzbek uranium shipments were exported to the United States from 1997 to 1999 and are projected to account for *** of all Uzbek shipments in 2000 and 2001, respectively.[251] Uzbek's uranium concentrate is sold primarily under long-term contracts to utilities in ***.[252] The ***.[253]

Since imports of Uzbek uranium have been subject to quotas, which generally have been fully subscribed, it is likely that uranium shipments from Uzbekistan may increase to some degree without the suspension agreement quotas.[254] However, even if 100 percent of Uzbek's production capabilities were

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[245] CR at IV-7; PR at IV-4. Uzbek direct exports of uranium concentrate to the United States were *** in 2001. Id. and ***.

[246] CR at IV-7; PR at IV-4. Uzbek direct exports of uranium concentrate to the United States were *** in 2000 and 2001. Id. and ***.

[247] CR at IV-7/PR at IV-4 and ***. In fact, Uzbekistan reportedly has ***. Id. and Uzbek Respondents' Prehearing Brief at 17-18. It has been reported that Uzbek's mining company, Navoi, and Cogema had considered a joint venture to increase mining activities of uranium in Uzbekistan. Uranium Coalition's Prehearing Brief at Exhibit 29. However, both Navoi and Cogema have indicated that development and commercialization of new ISL mines in Uzbekistan are economically and politically infeasible, particularly in view of the current market conditions. CR at IV-7 and Uzbek Respondents' Posthearing Brief, Response to Questions at 21-23. Moreover, the record indicates that Cogema is not the first foreign partner with whom the Uzbeks have held discussions and that in prior talks with Nukem the two sides could not reach a satisfactory arrangement. "Cogema and Navoi Explore Joint Venture to Exploit Uzbekistan Uranium Deposits," in Nuclear Fuel (11/16/98); see also The UX Weekly at 4 (May 22, 2000). We find that any future joint venture is uncertain and it would be speculative to find that it would have any product commercially available in the reasonably foreseeable future.

[248] CR at II-24 and IV-7; PR at II-15 and IV-4. Uzbek's capacity utilization for production of uranium concentrate was: *** in 2000 and 2001. Id. at IV-7 and ***.

[249] CR at IV-7/PR at IV-4 and ***.

[250] CR at IV-7; PR at IV-4; Uzbek Respondents' Prehearing Brief at 18-19.

[251] CR at IV-7/PR at IV-4 and ***.

[252] CR at IV-7; PR at IV-4.

[253] CR at IV-7; PR at IV-4; Uzbek Respondents' Prehearing Brief at 20-21; Uzbek's Posthearing Brief at 3.

[254] Furthermore, we note that since Uzbek's shipments of uranium concentrate actually are committed to Nukem, a trader, it is possible that additional Uzbek uranium shipments could be directed

utilized and all such product were shipped only to the U.S. market, the volume of subject imports would still not rise to a significant or injurious level.[255] [256]

Accordingly, based on the facts in the record of this review, we conclude that while there may be some increase in the volume of subject imports of uranium from Uzbekistan if the suspended investigation is terminated, it is not likely to reach significant levels within a reasonably foreseeable time.

2. Likely Price Effects

Based in large part upon our finding of no likely significant volume increase, we also find that, in the event of termination, Uzbek subject imports are not likely to have significant negative price effects on the domestic like product. As discussed above, direct subject imports from Uzbekistan accounted for at most *** of the total value of U.S. sales and imports of uranium during the period of review.[257] We incorporate here our discussion above regarding pricing practices in the U.S. market.[258] The Commission's pricing analysis in this review does not yield meaningful comparisons between the domestic like product and the subject imports in part due to the price and quota provisions governing imports under the suspension agreement. Moreover, the limited evidence does not demonstrate likely significant price underselling by the subject imports from Uzbekistan, or of other price depressing or suppressing effects.[259] In view of our finding that the likely volume of Uzbekistan imports upon termination of the suspended investigation will not be significant, it is unlikely that such imports would result in significant adverse price effects in the U.S. market.

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to the U.S. market.

[255] Uzbek's total production capacity for uranium concentrate would represent approximately *** of U.S. utilities' projected reactor requirements in 2000, 2001, and 2002. Calculated from CR at II-29 and IV-7; PR at II-18 and IV-4. In contrast, actual non-Uzbek imports of uranium concentrate have accounted for as high as *** of U.S. utilities' reactor requirements compared to the *** share of these requirements accounted for by all Uzbek imports during the period of review.

[256] Commissioner Bragg does not join this sentence. As set forth in her separate views regarding cumulation, Commissioner Bragg finds that, in the event of termination, the volume of subject imports from Uzbekistan is not likely to exceed *** million pounds.

[257] Calculated from CR/PR at Table I-2.

[258] See IV.C.2. at 49-50 supra.

[259] We note that the Uzbek Respondents maintain that prices of Uzbek uranium would likely increase upon termination because the market would no longer discount Uzbek "unrestricted" market uranium for the restrictions imposed by the U.S. suspension agreement. Uzbek Respondents' Prehearing Brief at 33-36.

3. Likely Impact

As indicated in our discussion of the likely impact of subject imports from Russia, we find that the U.S. uranium industry is in a vulnerable condition.[260] We found above that significant volume changes or price effects are unlikely in the event of termination of the suspended investigation on Uzbekistan. In the absence of such volume or price effects, we conclude that it is not likely that termination of the suspended investigation will result in a significant adverse impact on the domestic industry. We therefore determine that termination of the suspended investigation on uranium from Uzbekistan is not likely to lead to the continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time.

E. Revocation of the Antidumping Duty Order on Imports of Uranium From Ukraine Is Not Likely to Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

As discussed above, we find that imports from Ukraine are likely to have no discernible adverse impact on the domestic industry if the order is revoked.[261] There were no reported direct U.S. imports of uranium from Ukraine during 1997-1999. We find that the volume of imports of uranium from Ukraine is not likely to change to a significant degree as a result of revocation of the antidumping duty order.

Similar to Uzbekistan, Ukraine only has capacity to produce uranium concentrates and consequently, Ukraine's conversion, enrichment, and fabricating services are purchased from Russia, along with the remainder of its needs for uranium concentrate.[262] In contrast to Uzbekistan, Ukraine, however, has significant home market demand for uranium since nuclear power reportedly accounts for 35-40 percent of Ukraine's electricity generation. While Ukraine reportedly has extensive uranium ore deposits, most are considered too deep or low grade to be economically recoverable. While Ukraine did not provide the Commission with data for this review, secondary sources report that Ukraine produced about 3.1 million pounds of U_3O_8 annually during 1997-1999, and is estimated to have had an annual home market demand of about 5.6 million pounds of U_3O_8 during the review period, meaning it is a net importer of uranium products.[263]

We recognize that since some fairly traded imports with natural components of Ukraine origin have entered the U.S. market during the period of review, some direct imports from Ukraine may enter the U.S. market upon revocation of the order.[264] Ukraine's need for hard currency could drive it to export

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[260] As noted above in footnote 239, Commissioner Askey does not find the industry as a whole to be vulnerable.

[261] For the reasons discussed herein, Commissioners Miller and Hillman do not exercise their discretion to cumulate subject imports from Ukraine and Uzbekistan. See Separate Views on Cumulation of Commissioners Marcia E. Miller and Jennifer A. Hillman.

[262] CR at II-23-24 and IV-6; PR at II-13-14 and IV-3.

[263] CR at II-24 and IV-6; PR at II-14-15 and IV-3.

[264] *** of Ukrainian natural uranium. CR at IV-2/PR at IV-1 and ***. These indirect nonsubject Ukrainian imports were equivalent to approximately *** in 1999. Calculated from ***. These volumes represented *** in 1999. Calculated from CR at II-29/PR at II-18, Table I-3 and ***. Expressing the natural Ukrainian component of these nonsubject imports as a percentage of U.S. utilities'

even with a home market demand that is almost double its domestic production of uranium concentrate. However, even if 100 percent of Ukraine's production were shipped to the U.S. market upon revocation of the order, the volume of subject imports would be too small a share of U.S. requirements to rise to a significant or injurious level.[265] [266]

The record in this review contains no evidence regarding the prices of the subject imports of uranium from Ukraine in the U.S. market because the subject imports have virtually ceased to enter the market subsequent to the imposition of the order. We find that the likely volume of subject imports of uranium from Ukraine would be too small to have any likely significant negative affect on domestic uranium prices.

As indicated in our discussion of the likely impact of subject imports from Russia, we find that the U.S. uranium industry is vulnerable to material injury.[267] However, we find that the likely insignificant volume and price effects of imports from Ukraine will not likely result in a significant adverse impact on the domestic industry upon revocation of the order. We therefore determine that revocation of the antidumping duty order on uranium from Ukraine is not likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time.

CONCLUSION

For the foregoing reasons, we determine that termination of the suspended investigation on imports of uranium from Russia would be likely to lead to continuation or recurrence of material injury to the U.S. uranium industry within a reasonably foreseeable time. We also determine that termination of the suspended investigation on imports of uranium from Uzbekistan and revocation of the antidumping duty order on imports of uranium from Ukraine would not be likely to lead to continuation or recurrence of material injury to the U.S. uranium industry within a reasonably foreseeable time.

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deliveries of uranium for enrichment yields similar results, with market shares of *** in 1999. Id.

[265] Ukraine's total reported production of uranium concentrate would represent only approximately *** of U.S. utilities' projected reactor requirements in 2000, 2001, and 2002. Calculated from CR at II-24, II-29, and IV-6; PR at II-15, II-18, and IV-3.

[266] Commissioner Bragg does not join this sentence. As set forth in her separate views regarding cumulation, Commissioner Bragg finds that, in the event of revocation, the volume of subject imports from Ukraine is not likely to exceed *** million pounds.

[267] As noted above in footnote 239, Commissioner Askey does not find the industry as a whole to be vulnerable.

SEPARATE VIEWS OF COMMISSIONER LYNN M. BRAGG

Based upon the record in these reviews, I join the Commission majority's discussion of background, domestic like product and domestic industry, and findings that, under section 751(c) of the Tariff Act of 1930, as amended, termination of the suspended investigation on subject uranium imports from Russia would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time;[25] and that revocation of the antidumping duty order on subject imports from Ukraine[26] and termination of the suspended investigation on subject imports from Uzbekistan[27] are not likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time. I provide the following separate views to detail my cumulation analysis for these grouped sunset reviews.

I. CUMULATION

A. ANALYTICAL FRAMEWORK

As set forth in previous views,[28] in considering whether to cumulate subject imports in a sunset review, I first assess: (1) whether the reviews were initiated on the same day; and (2) the likely reasonable overlap of competition among subject imports and between subject imports and the domestic like product, in the event the orders are revoked and/or the suspended investigations are terminated.

If, as a result of the foregoing assessment, I determine that subject imports are amenable to cumulation, I then proceed to examine whether the statutory exception precludes cumulation of such imports that are otherwise amenable to cumulation–i.e., I examine whether such imports, when considered individually, are likely to have no discernible adverse impact on the domestic industry. In instances where I find that subject imports from more than one subject country are likely to have no discernible adverse impact, I then consider whether these individual countries for which I have made a likely no discernible adverse impact finding are, in the aggregate, likely to have no discernible adverse impact on the domestic industry.

Upon review of the record in these reviews, I find, as discussed below, that there is likely to be a discernible adverse impact to domestic uranium producers as a result of termination of the suspended investigation on subject imports from Russia. I also find, however, that there is likely to be no discernible adverse impact to the domestic industry as a result of revocation of the antidumping duty order on subject imports from Ukraine and termination of the suspended investigation on subject imports from Uzbekistan, either individually or in the aggregate.

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[25] Section IV.

[26] Section IV.

[27] Section IV.

[28] See Separate Views of Chairman Lynn M. Bragg Regarding Cumulation in Sunset Reviews, Potassium Permanganate from China and Spain, Inv. Nos. 731-TA-125-126 (Review), USITC Pub. 3245 (Oct. 1999) at 27-30. See also, Brass Sheet and Strip from Brazil, Canada, France, Germany, Italy, Japan, Korea, the Netherlands, and Sweden, Inv. Nos. 701-TA-269-270 (Review) and 731-TA-311-317 and 379-380 (Review), *Separate Views of Chairman Lynn M. Bragg Regarding Cumulation*, USITC Pub. 3290, at 27-32 (March 2000).

B. REASONABLE OVERLAP OF COMPETITION

The parties agree that uranium from one country is generally physically interchangeable with uranium from another.[29] In addition, the record indicates that subject imports and the domestic like product have similar channels of distribution,[30] a geographical overlap of sales,[31] and an actual or likely simultaneous presence in the marketplace.[32] I therefore find a reasonable overlap of competition among subject imports and the domestic like product.

C. DISCERNIBLE ADVERSE IMPACT

As set forth below, I find that termination of the suspended investigation on subject imports from Russia would be likely to have a discernible adverse impact on the U.S. industry. I also find, however, that revocation of the antidumping duty order on subject imports from Ukraine and termination of the suspended investigation on subject imports from Uzbekistan would be likely to have no discernible adverse impact on the U.S. industry, both individually and in the aggregate. I therefore do not cumulate subject imports from any of the subject countries.

1. INDIVIDUAL COUNTRY ANALYSIS

A. RUSSIA

Much of the uncertainty in today's uranium market stems from the Russian industry's lack of transparency. The record indicates, however, that Russia has vast reserves of unmined uranium,[33] extensive capacity to produce all forms of uranium (including the processing of depleted uranium and the reprocessing of spent fuel),[34] considerable inventories of HEU which can potentially be blended down to LEU for sale into the United States,[35] and vast inventories of natural uranium (natural UF_6).[36] The record therefore indicates that Russia has the ability to significantly increase the volume of subject imports into the United States.

The record also indicates that Russia has the incentive to significantly increase its uranium imports into the United States in the event of termination of the suspended investigation. The United States is recognized as one of the primary markets for uranium consumption in the world and, in fact, Russia currently ships a large volume of uranium products to the United States. In addition, Russia currently faces barriers to entry in Europe as a result of EURATOM sales quotas on uranium imports from the former Soviet states.[37]

Based upon all of the foregoing, the record indicates that subject imports from Russia will likely

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[29] CR at II-34 and II-37.

[30] CR at II-2, II-3, and II-8.

[31] Uranium Coalition's Prehearing Brief at 66, n.196 and Exhibit 11.

[32] CR and PR at Tables I-4 and I-6. I note that while there were no subject imports from Ukraine over the period reviewed, subject imports from Ukraine were present in the U.S. market at the time of the Commission's original investigation on subject imports from Ukraine.

[33] CR at I-22.

[34] CR at II-22.

[35] CR at II-23.

[36] CR at II-3 and II-17.

[37] CR at II-4 and IV-3.

have a discernible adverse impact on the U.S. uranium industry. Such imports are therefore amenable to cumulation.

B. UKRAINE

Although no Ukranian respondent interested party participated in these reviews, there is some, albeit minimal, current record evidence regarding Ukranian uranium production. This evidence indicates that Ukranian domestic consumption for uranium exceeds domestic uranium production.[38] Thus, Ukraine is a net importer of uranium products. Because of Ukraine's domestic supply shortfalls and the fact that the country produces only uranium concentrate, Ukraine purchases uranium conversion, enrichment, and fabricating services from Russian, along with the remainder of its needs for concentrate.[39] While Ukraine's need for hard currency could provide an incentive for Ukraine to export uranium concentrate to the United States, the fact that Ukraine's home market demand is nearly double Ukranian uranium concentrate production makes any significant increase in exports unlikely.[40]

The record also indicates that during the period reviewed no uranium concentrate was imported into the United States from Ukraine. I recognize, however, that in 1998 and 1999, the equivalent of *** pounds of uranium concentrate was imported into the United States from *** as non-subject imports.[41] Even if one were to assume that in the event of revocation Ukraine would choose to export uranium concentrate directly to the United States rather than sell the product to the ***, that volume of *** pounds of concentrate would have no discernible adverse impact on the domestic industry if imported into the United States in the event of revocation.

Based upon all of the foregoing, the record indicates that subject imports from Ukraine will likely have no discernible adverse impact on the U.S. uranium industry. Such imports are therefore not amenable to cumulation.

C. UZBEKISTAN

As with Ukraine, Uzbekistan produces only uranium concentrate. However, unlike Ukraine, Uzbekistan exports all of its uranium concentrate production. Uzbek uranium production capacity is forecast at *** pounds in 2000 and 2001.[42] Of this amount, it is expected that approximately *** pounds will be imported into the United States in 2000 and 2001.[43] The remaining production is expected to be sold in *** under long-term supply contracts.[44]

The record also indicates that Uzbekistan's uranium concentrate production capacity has *** pounds annually and ***.[45] In addition, the Uzbek uranium concentrate industry operated at *** percent

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[38] CR at II-24 and IV-6.

[39] CR at II-23-24 and IV-6.

[40] CR at II-24, IV-6, and ***.

[41] CR at IV-2 and ***.

[42] CR at IV-7 and ***.

[43] CR at IV-7 and ***.

[44] CR at IV-7.

[45] CR at IV-7. I recognize that the Government of Uzbekistan is actively seeking foreign investment partners to assist in the expansion of Uzbekistan's uranium industry. The record indicates, however, that no expansion projects have developed beyond the feasibility stage. The evidence therefore indicates that any proposed expansion in the Uzbek uranium industry will not take place in the reasonably foreseeable future.

capacity utilization in 1999, and is projected to operate at *** percent capacity utilization in 2000 and 2001, thus indicating that Uzbekistan has *** in order to increase exports to the United States in the event of termination.[46]

The record also indicates that the overwhelming majority of ***.[47] And while these commitments are through the uranium trader Nukem, the record nonetheless indicates that Uzbekistan sells most of its uranium under long term contracts to utilities in ***. I find it unlikely that Uzbekistan would seek to modify these existing contracts so that additional volumes of uranium may be redirected to the U.S. market in the event of termination.

Based upon all of the foregoing, I determine that there is likely to be no discernible adverse impact to the domestic industry in the event of termination of the suspended investigation on uranium imports from Uzbekistan.

2. AGGREGATE ANALYSIS

Upon finding no likely discernible adverse impact in the event of revocation for Ukraine and termination for Uzbekistan, I now turn to the issue of whether these countries in the aggregate are likely to have an adverse impact. Upon review of the record in these grouped reviews, the record indicates that even in the aggregate, subject imports from Ukraine and Uzbekistan are still likely to have no discernible adverse impact on the domestic industry in the event of revocation.

While revocation may lead to a small increase in the volume of subject imports from Ukraine, as discussed above such volume is not likely to exceed *** pounds. In addition, I find that, in the event of termination, the volume of subject imports from Uzbekistan is not likely to exceed *** pounds. It is therefore reasonable to assume that in the event of revocation and termination, the aggregated volume of subject imports from Ukraine and Uzbekistan will not exceed *** pounds. I find that this volume and its approximate value of ***, based upon the highest price received for Uzbek uranium concentrate in the U.S. market over the period reviewed, would be minuscule in relation to the total value of $2.0 billion for 1999 U.S. imports and U.S. uranium sales.[48]

Accordingly, I find that, even in the aggregate, the likely volume of subject imports from Ukraine and Uzbekistan are likely to have no discernible adverse impact on the domestic industry.

II. CONCLUSION

Based upon the foregoing analysis, I find that termination of the suspended investigation on subject imports from Russia is likely to have a discernible adverse impact on the domestic industry, and that revocation of the antidumping duty order on subject imports from Ukraine and termination of the suspended investigation on subject imports from Uzbekistan and are likely to have no discernible adverse impact on the domestic industry, either individually or in the aggregate. I therefore do not cumulate subject imports from any of the subject countries.

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[46] CR at IV-7.

[47] CR at IV-7.

[48] CR at V-15; Table C-1 at CR-C-3. I note that this aggregated volume is equivalent to only *** percent of U.S. utilities' year 2000 reactor requirements. CR at II-29.

SEPARATE VIEWS ON CUMULATION OF COMMISSIONERS MARCIA E. MILLER AND JENNIFER A. HILLMAN

In these views, we discuss our decision not to cumulate subject imports of uranium from Russia, Ukraine, and Uzbekistan.

I. No Discernible Adverse Impact

The Russian and Uzbek respondents have argued that subject imports from the respective countries would be likely to have no discernible adverse impact on the domestic industry if the suspended investigations were terminated. However, given the likely volume of subject imports and impact on the domestic industry in the reasonably foreseeable future, we do not find that the subject imports from any of the three countries are likely to have no discernible adverse impact on the domestic industry if the order on Ukraine is revoked and the suspended investigations on Russia and Uzbekistan are terminated.

Subject imports from Russia have been present in the U.S. market in the years since the imposition of the suspension agreement, and have accounted for a significant and increasing share of both total imports and domestic consumption during the review period.[12] Based on the current level of imports from Russia and the likely volume of subject imports and impact on the domestic industry in the reasonably foreseeable future, we do not find that the subject imports from Russia would be likely to have no discernible adverse impact on the domestic industry if the suspended investigation is terminated.[13]

Although there were no reported subject imports from Ukraine during the period investigated, independent data show that during 1999, over 2 million pounds of Ukrainian U_3O_8 were purchased and delivered to U.S. utilities after further processing in third country facilities.[14] In addition, purchaser questionnaires indicated deliveries of *** to U.S. utilities during 1997-99.[15] Although such imports were further processed in third countries before entering the United States, such data indicate the ability of Ukraine-produced U_3O_8 to enter the U.S. market despite its strong home market.

Subject imports from Uzbekistan have remained in the U.S. market in the years since the imposition of the suspension agreement. The value of uranium imports from Uzbekistan increased from 1997 to 1999.[16] Uzbek exports of uranium to the United States are projected to increase in 2000 from

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[12] CR/PR at Table I-2.

[13] CR at II-2, II-4, and IV-3; PR at II-1, II-3, and IV-2-3.

[14] Energy Information Administration, Uranium Industry Annual 1999 at 11 and 16, Fig. 12.

[15] Ad Hoc Committee's Posthearing Brief, Appendix A at 4. Importers' questionnaire responses indicated imports of *** during 1998 and 1999. ***.

[16] CR/PR at Table I-2. The value of direct U.S. imports of uranium from Uzbekistan *** in 1999. Id. The value of direct U.S. imports of uranium concentrates from Uzbekistan, based on questionnaire responses, accounted for 5.1 percent of the total value of all U.S. imports of uranium concentrates during the period of review and *** of the total value of U.S. sales and imports of uranium concentrate in 1998 and 1999, respectively. CR at II-24 and calculated from Table I-3.

actual 1999 levels.[17] Moreover, since imports of Uzbek uranium have been restricted by quotas, which generally have been fully subscribed, it is likely that uranium shipments from Uzbekistan would increase without the suspension agreement quotas. Uzbekistan, which has no home market demand, is completely export-oriented.[18] Accordingly, we do not find that the subject imports from Uzbekistan would be likely to have no discernible adverse impact on the domestic industry if the suspended investigation is terminated.

II. Cumulation

In determining whether to exercise our discretion to cumulate subject imports from Russia, Ukraine, and Uzbekistan, we examine whether upon revocation of the antidumping duty order and termination of the suspended investigations, the subject imports would likely compete in the U.S. market under similar conditions of competition.[19] We find that the subject imports from Russia, Ukraine, and Uzbekistan would not likely compete under similar conditions of competition with each other and therefore we do not exercise our discretion to cumulate subject imports from Russia, Ukraine, and Uzbekistan.

Uranium is a highly fungible product, thus the subject imports are easily physically interchangeable among the different country sources. Further, all uranium travels through similar channels of distribution, reaching electrical utilities nationwide by way of U.S. producers, processors and traders. However, important differences among the uranium industries in Russia, Ukraine, and Uzbekistan lessens the similarity of conditions of competition in the U.S. market.

Russia produces and exports uranium at all four stages of production, with most exports at the enriched uranium level.[20] Ukraine and Uzbekistan have no facilities to further process uranium and all exports are at the uranium concentrate stage. Consequently, Ukraine and Uzbekistan are dependent on other countries for converting and enriching their uranium concentrate.

Russia and Ukraine both have substantial home market demand for uranium products. Russia also reports home market demand for enrichment, but this accounts for only a fraction of its capacity, leaving a substantial share of such capacity for potential export shipments.[21] Ukraine's strong uranium home market consumption exceeds its present production capabilities and it is therefore a net importer of uranium. In contrast, Uzbekistan has no home market demand, and exports all of its uranium concentrate

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[17] CR/PR at IV-7. Direct Uzbek exports to the United States of uranium concentrate were *** in 2000. Id. In addition, nonsubject imports of enriched UF_6 were imported into the United States containing ***.

[18] Data believed to account for all uranium concentrate production in Uzbekistan show that between *** of total Uzbek uranium shipments were exported to the United States from 1997 to 1999 and are projected to account for *** of all Uzbek shipments in 2001. CR at IV-7; PR at IV-4; and ***.

[19] These reviews are unusual in that the Commission during the original investigation did not address cumulation. The original investigation was filed on uranium from the U.S.S.R. and suspension agreements were reached with these three countries after dissolution of the Soviet Union and prior to a final Commission determination.

[20] From 1997-99, U.S. imports of Russian enriched uranium accounted for over 95 percent of the value of total imports of all uranium from Russia. Calculated from CR/PR at Tables I-3 and I-5.

[21] Russia's home market demand for enrichment if estimated at about *** percent of its enrichment capacity. CR at II-22-23; PR at II-13-14. Ukraine's annual production accounts for about half of its annual reactor requirements (10 percent by value), although the country continues to export some uranium concentrate to gain foreign currency. CR at II-24, IV-6; PR at II-14-15, IV-4.

production. The absence of a home market provides additional incentive for Uzbek producers to increase uranium exports to the U.S. market, ***.[22]

Additionally, because Russian uranium is subject to the HEU Agreement, it will continue to enter the U.S. market in the significant quantities at which the United States is required to make purchases. Neither the Ukraine nor Uzbek industries have such guaranteed sales in the U.S. market.

Thus, we find that if the antidumping duty order on Ukraine were revoked and the suspended investigations on Russia and Uzbekistan were terminated, the subject imports would not likely compete under similar conditions of competition and we do not cumulate the subject imports in these reviews.

[22] CR at IV-7; PR at IV-4.

PART I: INTRODUCTION AND OVERVIEW

BACKGROUND

On August 2, 1999, the Commission gave notice, pursuant to section 751(c) of the Tariff Act of 1930 (the Act), that it had instituted reviews to determine whether revocation of the antidumping duty order on uranium[1] from Ukraine and termination of the suspended investigations on uranium from Kyrgyzstan, Russia and Uzbekistan would likely lead to the continuation or recurrence of material injury to a domestic industry. Effective November 3, 1999, the Commission terminated its review on Kyrgyzstan pursuant to Commerce's notice (64 FR 59737, November 3, 1999) that it was terminating its suspended investigation. On November 4, 1999, the Commission determined that responses to its notice of institution for the remaining reviews were such that full reviews pursuant to section 751(c)(5) of the Act should proceed. Accordingly, the Commission published a schedule for full reviews on Russia, Ukraine, and Uzbekistan (and later a revised schedule for these reviews).[2] Information relating to the background and schedule of the reviews is provided in table I-1.

The Original Investigations

The original investigations resulted from a petition filed with the Commission and Commerce 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,[3] alleging that an industry in the United

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[1] The product scope, as defined by Commerce, includes 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 U^{235} (including highly-enriched uranium for Russia and Uzbekistan) and its compounds; alloys, dispersions (including cermets), ceramic products, and mixtures containing uranium enriched in U^{235} or compounds or uranium enriched in U^{235}; and any other forms of uranium within the same class or kind. These imports are classified in subheadings 2612.10.00, 2844.10.10, 2844.10.20, 2844.10.50, and 2844.20.00 of the HTS. Imports of uranium under HTS subheadings 2612.10.00 (uranium ores and concentrated ores), 2844.10.20 (natural uranium oxide (concentrate), natural uranium hexafluoride, and natural uranium compounds other than uranium oxide and uranium hexafluoride), and 2844.20.00 (enriched uranium) are free of duty regardless of origin. Imports of uranium under subheadings 2844.10.10 (natural uranium metal) and 2844.10.50 (natural uranium other than compounds and natural uranium metal) are subject to a column 1-general duty rate of 5 percent *ad valorem*, applicable to Russia, Ukraine, and Uzbekistan. Imports from Russia, Ukraine and Uzbekistan under subheading 2844.10.10 are eligible for duty-free treatment under the Generalized System of Preferences. See app. A for Commerce's final scope of review definitions.

[2] The Commission's notice of institution (64 FR 41965, August 2, 1999), notice of termination of the Kyrgyzstan review (64 FR 61939, November 15, 1999), notice to conduct full reviews (64 FR 62691, November 17, 1999), scheduling notice (65 FR 3737, January 24, 2000), notice of revised schedule (65 FR 15353, March 22, 2000), and statement on adequacy appear in app. A and may also be found at the Commission's web site (internet address *http://www.ustic.gov).* The Commissioners' votes on whether to conduct expedited or full reviews may also be found at the web site.

[3] At the time of filing, the petitioners included Ferret Exploration Co., Inc., Denver, CO; First Holding Co., Denver, CO; Geomex Minerals, Inc., Denver, CO; IMC Fertilizer, Inc., Northbrook, IL; Malapai, Houston TX; Pathfinder, Bethesda, MD; Power Resources, Denver, CO; Rio Algom, Oklahoma City, OK; Solution Mining Corp., Laramie, WY; Total Minerals Corp., Houston, TX; Umetco Minerals Corp., Danbury, CT; and Uranium Resources, Dallas, TX. Since 1991, however, several plant closings and consolidations have taken place in the industry. The

(continued...)

Table I-1
Uranium from Russia, Ukraine and Uzbekistan: Background and schedule of reviews

Effective date	Action
October 16, 1992	Commerce's suspension agreements with Russia and Uzbekistan (57 FR 49220, October 30, 1992)
August 30, 1993	Commerce's antidumping duty order on Ukraine (58 FR 45483)
August 2, 1999	Commission's institution of reviews (64 FR 41965)
November 4, 1999	Commission's decision to conduct full reviews (64 FR 62691, November 17, 1999)
January 14, 2000	Commission's scheduling of full reviews (65 FR 3737, January 24, 2000)
February 28, 2000	Commerce's final results of expedited sunset review on Ukraine (65 FR 11552, March 3, 2000)
March 15, 2000	Commission's revised schedule (65 FR 15353, March 22, 2000)
June 27, 2000	Commerce's final results of full sunset reviews on Russia and Uzbekistan (65 FR 41439 and 41441, July 5, 2000)
June 13, 2000	Commission's hearing[1]
July 26, 2000	Commission's votes
August 7, 2000	Commission's determinations transmitted to Commerce

[1] A list of witnesses who appeared at the hearing is presented in app. B.

Source: *Federal Register.*

States is materially injured and threatened with material injury by reason of LTFV imports of uranium from the USSR including each republic of the USSR. In response the Commission instituted investigation No. 731-TA-539 (Preliminary) under section 733 of the Act (19 U.S.C. 1673b(a)) and, on December 23, 1991, determined that there was a reasonable indication of such material injury. Commerce then continued its investigation into the existence and extent of LTFV sales. On December 25, 1991, the USSR dissolved, and shortly thereafter the United States recognized the former Soviet republics as independent countries. Commerce investigated each in turn and determined 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 FR 23380, June 3, 1992). Accordingly, the Commission instituted final investigations Nos. 731-TA-539-A through F under section 735(b) of the Act (19 U.S.C. 1673d(b)).

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[3] (...continued)
remaining petitioners of the Ad Hoc Committee are Rio Algom and Uranium Resources, joined recently by two other producers–Cotter, Denver CO; and Everest, Corpus Christi, TX. After merging with paper workers in 1998, the Oil, Chemical and Atomic Workers International Union changed its name to PACE. In 1999 USEC, Inc., and its subsidiary, the USEC, Bethesda, MD, entered a separate appearance in support of the petition. For these reviews USEC, PACE, and the Ad Hoc Committee have entered separate appearances.

On October 20, 1992, before the Commission reached determinations on the subject countries, Commerce notified the Commission that it was entering into suspension agreements with all of the subject countries and was therefore suspending its investigations (57 FR 49220, October 30, 1992). The Commission suspended its final investigations immediately thereafter.

The suspensions remained in effect for all six subject countries until April 1993, when Commerce notified the Commission that its agreements with Tajikistan and Ukraine were terminated and its corresponding investigations were resumed (58 FR 21144, April 19, 1993; and 58 FR 29197, May 19, 1993). The Commission thereupon continued investigations Nos. 731-TA-539-D (Tajikistan) and 539-E (Ukraine), and on August 6, 1993, determined negatively with respect to Tajikistan and affirmatively with respect to Ukraine (*Uranium From Tajikistan and Ukraine, Investigations Nos. 731-TA-539-D and 539-E (Final)*, USITC Pub. 2669, August 1993). Commerce's final antidumping margin for Ukraine was 129.29 percent.

Commission activity on the remaining investigations remained suspended until January of 1999 when Commerce notified the Commission that it was resuming its antidumping investigation on Kazakhstan (64 FR 2877, January 19, 1999) as a result of the Government of Kazakhstan's termination of its suspension agreement on uranium. Continuing this investigation, the Commission reached a negative determination on July 13, 1999 (*Uranium From Kazakhstan, Investigation No. 731-TA-539-A (Final)*, USITC Pub. 3213, July 1999). As noted previously, Commerce terminated its suspended investigation on Kyrgyzstan on November 3, 1999. The countries that remain under suspension agreements (Russia and Uzbekistan) and under an antidumping duty order (Ukraine) are those subject to these reviews.

Statutory Criteria

Section 751(c) of the Act requires Commerce and the Commission to conduct a review no later than five years after the issuance of an antidumping or countervailing duty order or the suspension of an investigation to determine whether revocation of the order or termination of the suspended investigation "would be likely to lead to continuation or recurrence of dumping or a countervailable subsidy (as the case may be) and of material injury."[4]

Section 752(a)(1) of the Act states that the Commission "shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated. The Commission shall take into account--

> *(A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued or the suspension agreement was accepted,*
>
> *(B) whether any improvement in the state of the industry is related to the order or the suspension agreement,*
>
> *(C) whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated, and*

[4] Certain transition rules apply to the scheduling of reviews (such as these) involving antidumping and countervailing duty orders and suspensions of investigations that were in effect prior to January 1, 1995 (the date the WTO Agreement entered into force with respect to the United States). Reviews of these transition orders will be conducted over a three-year transition period running from July 1, 1998, through June 30, 2001. Transition reviews must be completed not later than 18 months after institution.

(D) in an antidumping proceeding, Commerce's findings regarding duty absorption."

Section 752(a)(2) of the Act states that in "evaluating the likely volume of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether the likely volume of imports of the subject merchandise would be significant if the order is revoked or the suspended investigation is terminated, either in absolute terms or relative to production or consumption in the United States. In so doing, the Commission shall consider all relevant economic factors, including--

(A) any likely increase in production capacity or existing unused production capacity in the exporting country,

(B) existing inventories of the subject merchandise, or likely increases in inventories,

(C) the existence of barriers to the importation of such merchandise into countries other than the United States, and

(D) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products."

Section 752(a)(3) of the Act states that in "evaluating the likely price effects of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether--

(A) there is likely to be significant price underselling by imports of the subject merchandise as compared to domestic like products, and

(B) imports of the subject merchandise are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of domestic like products."

Section 752(a)(4) of the Act states that in "evaluating the likely impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated, the Commission shall consider all relevant economic factors which are likely to have a bearing on the state of the industry in the United States, including, but not limited to--

(A) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity,

(B) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and

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

The Commission shall evaluate all such relevant economic factors within the context of the business cycle and the conditions of competition that are distinctive to the affected industry."

Section 752(a)(6) of the Act states that in making its determination, "the Commission may consider the magnitude of the margin of dumping or the magnitude of the net countervailable subsidy. If a countervailable subsidy is involved, the Commission shall consider information regarding the nature of the countervailable subsidy and whether the subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement."

Questionnaire recipients in these reviews were asked to address several questions concerning the significance of the existing antidumping duty order and suspension agreements and the likely effects of revocation. Photocopies of their comments, as presented in the questionnaires, are contained in OINV memorandum INV-X-119, June 1, 2000.

COMMERCE'S RESULTS OF EXPEDITED REVIEW ON UKRAINE AND FULL REVIEWS ON RUSSIA AND UZBEKISTAN

On March 3, 2000, Commerce found that revocation of the antidumping duty order on uranium from Ukraine would likely lead to continuation or recurrence of dumping at a weighted-average margin of 129.29 percent. Commerce did not issue a duty absorption determination with respect to this order. On June 27, 2000, Commerce found that revocation of the antidumping duty suspension agreements on uranium from Russia and Uzbekistan would likely lead to continuation or recurrence of dumping at a weighted-average margin of 115.82 percent for each country.[5]

COMMERCE'S ADMINISTRATIVE REVIEWS AND ANTIDUMPING DUTIES COLLECTED

Commerce undertook only one administrative review of its suspension agreements with Russia and Uzbekistan and no review of its antidumping order with respect to Ukraine. The reviews of its suspension agreements with Russia and Uzbekistan, covering the period October 1, 1994 to September 30, 1995, were terminated at the request of the Ad Hoc Committee. There have been no known imports from Ukraine since the imposition of the antidumping order.

THE PRODUCT AND INDUSTRY

In all of its investigations concerning uranium, the Commission found uranium to be a single like product consisting of the four basic forms of uranium, coextensive with the product scope (p. I-1). In general, parties in these reviews presented no arguments to the contrary; however, counsel for the Russian parties presented an argument for disregarding the inclusion of HEU in Commerce's scope on the grounds that it is not a commercially tradable commodity and is outside the control of Commerce and the Russian Suspension Agreement.[6]

The four basic forms of uranium are manufactured products consisting of uranium in combination with other elements. Uranium itself is one of over 100 basic chemical elements, or types of

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[5] Commerce's notices are presented in app. A.

[6] Posthearing Brief of the Russian respondents, June 22, 2000, app. H. There has been no known trade or production of HEU in the periods covered by these reviews, so the inclusion or exclusion of HEU in Commerce's scope does not affect the data presentations and summaries in this report.

atoms, known to occur in nature. Each element is defined by the number of its atoms' protons, one of the atom's 3 building blocks along with electrons and neutrons. The uranium atom has 92 protons and thus ranks 92nd among the elements. Although the number of protons and electrons in the element's atoms is equal and consistent, the number of neutrons can vary, resulting in different "isotopes" of the same element, each with slightly different properties. Uranium has 3 principal isotopes, U^{238}, U^{235}, and U^{234}, which constitute 99.285 percent, 0.71 percent, and 0.005 percent, respectively, of the element's weight in its natural elemental state. It is the properties of its U^{235} isotope that are important for uranium's principal uses–primarily as a fuel to generate electricity in nuclear power plants and secondarily as a fuel to propel naval vessels and as an active ingredient in atomic weaponry.

Uranium is generally found in molecular combination with another element, oxygen, embedded in various concentrations in rock formations, known as uranium ores, throughout the world. To bring it to usable form, four successive processes by four types of generally independent producers are required, each resulting in a different uranium product and each successive product being closer to the product required for actual use. The processes and products include: (1) mining and concentrating the uranium into the molecular form U_3O_8 (3 atoms of uranium combined with 8 atoms of oxygen, otherwise known as "natural uranium concentrate"); (2) converting the U_3O_8 into UF_6 (natural uranium hexafluoride); (3) enriching the UF_6 by increasing the proportion of U^{235} in its constituent uranium (enriched uranium hexafluoride); and (4) fabricating the enriched uranium for final use. The latter process consists of two phases. First, the enriched UF_6 is transformed into enriched oxides (enriched UO_2), nitrates, and metals and then converted into ceramic pellets, a relatively standardized product within the scope of the reviews. The second phase, which prepares the uranium for final use, produces customized products that are outside the scope of these reviews: the pellets are encapsulated into fuel rods and the rods are assembled into working units in accordance with the design specifications of individual nuclear power plants. There are hundreds of nuclear power plants throughout the world, most owned by electric utility companies that generate electricity by a variety of means and distribute it throughout defined regions. About 20 percent of the United States' electricity is generated by nuclear fuel, and the United States accounts for about one-quarter of the world's nuclear electric power generation.

Natural Uranium Concentrate (Concentrated U_3O_8) and the Concentrate Producers

The first step in transforming uranium ore into a usable form is to mine it from the earth and extract the uranium in a concentrated form of U_3O_8. For the ore to be mined at all, it historically required a natural U_3O_8 concentration of at least 0.1 percent, by weight; however, variations in production processes and conditions allow lower concentrations to be mined. The highest natural concentrations known to exist are about 15 percent. Conventional mining operations entail the excavation of the ore from the ground, either by means of large earth moving equipment for open pit operations, or standard mining equipment for underground operations, followed by crushing (milling) and concentration. A more cost-effective method for low-grade ores widely used in the United States, called "*in situ* (in place) leaching" (ISL), recovers the U_3O_8 by leaching the ore in place with specialized liquid solutions from which the concentrate is precipitated. Not all deposits, however, lend themselves to this method of extraction. Most uranium mined in Canada and Australia, the world's two largest producers, continues to be extracted by conventional means. Uranium concentrates are also produced as a by-product of phosphoric acid production, and from gold, copper, and other mineral mining.

Most uranium concentrates, otherwise known as "yellowcake," contain a minimum of 75 percent, and usually 80-85 percent, U_3O_8. The concentrate accounts for about 31 percent of the total

nuclear fuel costs within the scope of these reviews.[7] The majority of uranium mining and concentrating sites today are in Canada, Australia, South Africa, Niger, Namibia, the United States, and some of the former republics of the USSR, particularly Russia, Ukraine, Kazakhstan, and Uzbekistan. The largest producers are COGEMA, France; Cameco, Saskatoon, Canada; and ERA, Australia. COGEMA and Cameco own mining and concentrating assets throughout the world, including the United States. In Russia the production and storage of concentrate and all other forms of uranium is controlled by a government agency, Minatom; another government agency, TENEX, controls its sale and distribution, and a related company, GNSS, is the sole importer of record for imports of Russian concentrate into the United States. Uranium production in Ukraine is limited to ore and concentrate and is under the control of the Ministry of Energy of Ukraine; however, there have been no imports of ore or concentrate from Ukraine in recent periods. Uzbekistan's uranium production is also limited to ore and concentrate and is under the control of a government agency, Navoi. An unrelated international trading firm, Nukem, is the sole importer of record for imports into the United States.

Consolidations and closings have substantially reduced the number of operating concentrate producers in the United States since 1992, when at least 15 separate entities produced concentrate. In the period for which data were collected for these reviews, 7 firms produced concentrate in the United States, and two of the seven ceased production in 1999.[8]

Natural Uranium Hexafluoride (Natural UF_6) and the Converters

The next step in the process is converting the concentrate into a compound that can be readily turned into a gas, in this case natural uranium hexafluoride, to facilitate the enrichment process that follows. Conversion accounts for about 3 percent of total nuclear fuel costs within the scope of these reviews. There are only a handful of converters worldwide, including ConverDyn in the United States, Cameco in Canada, BNFL in England, Comurhex in France, and Minatom in Russia. (Small facilities serving the local market exist in Brazil, Japan, and China). ConverDyn owns and operates a single conversion facility in Metropolis, IL. The company functions basically as a toll producer, converting the utilities' concentrate into natural UF_6. With separate equipment, ConverDyn also produces other fluorine compounds, but natural UF_6 accounts for about *** percent of its overall sales. Natural UF_6 has not been imported from Russia in recent periods and is not produced in either Ukraine or Uzbekistan.

Enriched (and Highly-Enriched) Uranium Hexafluoride (Enriched UF_6) and the Enrichers

Before uranium can be used as a fuel in most nuclear power plants, the proportion of its U^{235} isotope must be increased relative to that of its other isotopes.[9] This process, which starts by vaporizing

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[7] The share of nuclear fuel cost accounted for by the forms of uranium herein discussed are all derived from *WISE Uranium Project,* "Nuclear fuel cost calculator," *http://antenna.nl/wise/uranium/nfcc.html,* April 2, 2000.

[8] The firms producing concentrate in the United States in 1997-99 were COGEMA, Inc. a subsidiary of COGEMA; Power Resources, a subsidiary of Cameco; Rio Algom, one of the original petitioners; International Uranium, which, until recently, only toll produced for another firm; Cotter, which mined ore during the review period but only activated its concentrate-producing facilities in April 1999; Uranium Resources, which ceased producing concentrate in 1999; and IMC Global, which produced concentrate as a by-product of its phosphoric acid production and also ceased producing concentrate in 1999. Everest remained shut down during the review period, ***.

[9] Most of the world's and all of the United States' nuclear power plants are so-called "light-water" reactors and require enriched uranium for fuel; however, there are a small number of others, known as "heavy-water" reactors,

(continued...)

natural UF_6, uses units of effort called "separative work units" (SWUs) to increase the proportion of U^{235} in the uranium from 0.71 percent to 3-5 percent by weight (low-enriched uranium or LEU) for use in generating electricity, or to 20 percent or more (highly-enriched uranium or HEU) for use in nuclear weapons and nuclear propulsion.[10] The process also produces a waste stream, or "tails," which is depleted in U^{235}.[11] (This product, depleted in its natural concentration of U^{235}, has separate applications, like armor-piercing ordnance; however, as discussed under "Alternative Products," it can also be re-enriched with U^{235} and recycled into nuclear fuel). LEU can also be produced by de-enriching surplus HEU, i.e., by diluting its concentration of U^{235} to LEU levels. Enrichment represents about 59 percent of subject total nuclear fuel costs within the scope of these reviews. The bulk of the world's enrichment capacity, over 95 percent, is controlled by 4 entities: USEC in the United States; Minatom in Russia; COGEMA in France; and Urenco with facilities in Germany, the Netherlands, and the United Kingdom. (The remaining capacity is in Japan and China and is primarily reserved for these countries' domestic needs).

The U.S. Government created USEC in 1992 as a step toward the privatization of its enrichment activities then under the control of DOE. Its enabling legislation intended USEC to operate independently as a market-oriented business, but it was not allowed to be fully divested of Government ownership and become a publicly-held corporation until July 1998. Its enrichment plants are in Paducah, KY, and Piketon, OH. In addition to enriching uranium in the United States, USEC is required to import large quantities of Russian enriched UF_6 (LEU blended down from Russian HEU) and purchase the SWU component thereof pursuant to a special agreement between the governments of Russia and the United States known as "the Russian HEU Agreement." The details of this agreement and its relationship to the Russian Suspension Agreement will be discussed in later sections. The importation of all other Russian enriched UF_6 is exclusive to GNSS. Enriched uranium is not produced in Ukraine or Uzbekistan.

Enriched Uranium Oxides, Nitrates, and Metals and the Fabricators

The final process in producing nuclear fuel for electricity generation, fabrication, involves converting the enriched UF_6 to enriched uranium oxides, nitrates, and metals;[12] pelletizing this material; encapsulating the pellets into protective metal sheaths, called "fuel rods"; and then assembling the rods into the specific configuration the nuclear power facility requires. The converting and pelletizing process

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[9] (...continued)
that are capable of using natural uranium.

[10] The production of HEU requires additional processing and special considerations. Although the actual details of HEU production are classified for national security reasons, it is believed to involve the processing of LEU through hundreds, or even thousands, of additional cycles. Additionally, the production of HEU requires extra security measures, precautions against increased levels of radiation, and, because the product is more unstable than LEU, precautions against premature fission reactions. U.S. stockpiles of HEU are currently sufficient to meet defense needs for some time to come, and HEU has neither been produced nor imported during the period of review.

[11] For a given quantity of enriched UF_6, the SWUs expended during the enrichment process are inversely related to the quantity of natural UF_6 consumed (feed stock) and the proportion of U^{235} remaining in the tails, or tails "assay." This means that the same output can be produced by either increasing the SWUs and decreasing the feed stock and tails assay or by decreasing the SWUs and increasing the feed stock and tails assay. The optimal combination will depend on the relative price of feedstock and SWUs, the latter depending largely on the price of electricity. Occasionally, the price of electricity will allow the same output to be produced with less feedstock than contracted for, resulting in "excess" feedstock which the enricher can either resell or use later.

[12] The overwhelming bulk of enriched UF_6, often referred to as "LEU-HF," is converted into enriched UO_2 often referred to as "LEU-DO."

represents about 7 percent of the total cost of producing the subject product and about 55-60 percent of the total cost of fabrication. Several fabricators are located throughout the world, with five in the United States alone. They include ABB, Festus, MO;[13] GE, Wilmington, NC; Siemens, Richland, WA; Westinghouse, Columbia, SC; and a fifth producer that provides encapsulation and assembly services only. Unlike U.S. producers of the other forms of uranium, which are primarily in the business of processing uranium, the fabricators are large, multi-product corporations in which the fabrication of uranium is only one among many operations. There are no fabrication operations in Ukraine or Uzbekistan, and there have been no imports of fabricated uranium from Russia in recent periods.

The forms of uranium produced prior to encapsulation and assembly are made to standard specifications worldwide and are generally considered world commodities. Each is widely traded and imported into the United States from many countries. Concentrated U_3O_8, natural UF_6, enriched UF_6, and enriched uranium oxides, nitrates, and metals have no major civilian use or marketable value other than for nuclear fuel, and the equipment and production workers used to produce them are specific to the subject product.

Provisions for Imports Under the Suspension Agreements with Russia and Uzbekistan

The basic provision of the Russian Suspension Agreement for controlling imports is a "matched-sales" provision which allows certain annual quotas of natural uranium (in pounds U_3O_8 or equivalent) and enriched uranium (in SWUs) into the United States provided that a U.S. partner with an equivalent form and quantitiy of U.S.-produced uranium is also part of the sale or contractual arrangement and that the Russian material is priced so that the price of the U.S. component can be greater than the averaged price to the customer. Several U.S. producers, including USEC, benefit from this arrangement, which is due to expire on March 31, 2004. In view of having to sell below already low market prices under this scheme, Russia chose not to fill its matched sales quota in 1998 and 1999. USEC's imports of Russian LEU under the Russian HEU Agreement are outside the control of the suspension agreement; however, the sale and distribution in the United States of the feed (natural) component of this material is also subject to a quota. In this case the quota limitations are defined by the USEC Privatization Act, signed into law in April 1996, and are separately administered.

The basic provision of the suspension agreement controlling imports from Uzbekistan is a production-based annual quota which allows certain quantities of natural uranium for long-term contracts into the United States according to the level of U.S. production in that year, and any unused portion of the quota may be sold on the spot market as long as the price is above an average market price bi-annually calculated by Commerce. Uzbekistan has regularly filled this quota. (The provision is due to expire on October 12, 2004). Commerce administers these provisions through the importers and consignees on a transaction-by-transaction basis.

For a time after the Russian and Uzbek Suspension Agreements went into effect, the basic provisions were circumvented by further processing Russian and Uzbek uranium in a third country and importing the uranium as the third country's product. Typically, natural uranium from Russia and Uzbekistan would be enriched in Europe before importation into the United States. In 1996, to prevent Russian and Uzbek uranium from being further processed in a third country and imported into the United States at will, Commerce added "by-pass" provisions to the suspension agreements, which required that the original component of such uranium be counted against the quotas. This provision, however, expired for Russia in October 1998.

The suspension agreements also contain "re-export" provisions which allow certain quantities of Russian and Uzbek uranium to be imported for further processing and re-exported provided that they not

[13] ABB's nuclear operations were purchased by Westinghouse earlier this year, and ***.

remain in the United States for more than a 12-month or 36-month period, depending on the type of transaction. Russia normally fills this quota, or at least that portion that relates to the 12-month track; the Uzbek quota has not been used.[14]

Alternative Products

At least three products other than the subject product can be used as fuel in nuclear power plants. Both the waste product of the enrichment process, depleted uranium or "tails," and the waste product of nuclear power plants, or spent fuel, can be re-enriched for further use.[15] Stockpiles of these materials have been accumulating throughout the world; and, although economic considerations have as yet discouraged their widespread commercial exploitation, they remain a large potential source of natural uranium. Of the world's enrichers only Minatom has re-enriched significant quantities of depleted uranium in recent years, mostly for use in blending down its excess HEU. For the most part the process remains economically prohibitive to other enrichers.[16] Programs for reprocessing spent fuel exist in Belgium, France, Germany, Japan, Switzerland, and the United Kingdom; and four countries--France, Japan, the United Kingdom, and Russia--operate reprocessing facilities.[17] A third alternative fuel for uranium in some nuclear power plants is MOX, consisting of a mixture of depleted or natural uranium oxides and plutonium, which can be extracted from spent nuclear fuel. Both the United States and Russia have large quantities of excess plutonium for potential use in MOX. MOX fuel fabrication capacity is extremely limited, however, and MOX fuel is not expected to be widely produced or used anytime in the near future. Nuclear power plants differ widely on their readiness to use MOX, and national security concerns both in the United States and Europe weigh against the production and transport of plutonium (from which nuclear weapons can more readily be made than from uranium).

Perhaps more competitive with uranium than unconventional nuclear fuels are non-nuclear fuels. The bulk of electricity generation in the United States, about 70 percent, derives from burning fossil fuels, particularly coal. While the share of electricity generated by fossil fuels has increased since 1991, that generated by nuclear fuel has declined somewhat. Although burning cleaner than fossil fuel plants, nuclear power plants present singular health risks for the society at large (despite considerable safeguards) and produce a highly radioactive waste product that necessitates special means of storage and disposal. For these reasons, and others more economic in nature, uranium has gained less public acceptance as a commercial fuel than other sources of energy, and nuclear power plants have not made any significant inroads into the business of generating electricity during the period of these reviews.

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[14] Deliveries in the United States of Russian and Uzbek uranium in fulfillment of long-tern contracts signed before the suspension agreements went into effect are subject to separately provided "grandfather quotas" in the agreements.

[15] These products are separately provided for in the HTS and were not specifically enumerated, either by description or by HTS number, in Commerce's scope.

[16] Depleted natural UF_6 consists of about 0.2-0.3 percent by weight of U^{235}. Re-use applications include: (1) blending directly with plutonium to produce MOX, (2) re-enriching to 1.5-2.0 percent U^{235} and blending with HEU to produce LEU, (3) re-enriching to the level of natural UF_6 (known as "reconstituted uranium"), and/or (4) reconverting to oxide form (U_3O_8) for storage and future use.

[17] Spent fuel (wasted enriched UO_2) consists of U^{235} at about 0.85 percent by weight and various isotopes of plutonium. The reprocessing process separates the uranium from the plutonium. The uranium can then be reconverted to UF_6, re-enriched to 3-5 percent levels of U^{235} (either by the normal enrichment process or blending with HEU), and re-fabricated; and the plutonium can be used in the production of MOX by combining it with either depleted or natural uranium.

THE MARKET–AN OVERVIEW

Traditionally, electric utilities operating nuclear power plants have contracted with concentrate producers or uranium brokers for quantities of natural U_3O_8, which they then have consigned successively to a converter, enricher, and fabricator for the requisite processing, paying a toll fee for each of these services. Most of this trade, known as the "fuel cycle," is defined in terms of long-term (3-7 year) contracts between the concentrate producer (or broker for imports) and utility based on the utility's replacement (reload) cycle of about one-third of its fuel rods every 18-24 months. This basic market still accounts for much of the uranium produced and used throughout the world, but today the market is much more complex and reflects fundamental changes in the industry's environment since 1991.

At least four major events are associated with broad changes in the world uranium industry and market in the 1990's:

1) The dissolution of the USSR and the end of the cold war;
2) The development of high-grade, low-cost resources in Canada and Australia;
3) Deregulation of the electric utilities in the United States; and
4) The Asian economic crisis.

The net effect of these changes has been a stagnation in demand and a rapid increase in the available supply of all forms of uranium, resulting in declining prices, an emphasis on cost-cutting measures, a rising spot market (or at least contracts tied to the spot market), a general contraction and consolidation of users and producers, a host of new trading options, and active participation in the market (buying and selling) by other than the primary producers and utilities.

The end of the cold war in 1991, following the breakup of the USSR into independent republics, had great consequences for the supply of uranium. In the previous decades the United States and the USSR had stockpiled large quantities of both LEU and HEU for potential use in both propulsion and weaponry. Russia inherited the stockpiles of the former USSR. In response to bilateral and unilateral defense downsizing after 1991, large quantities of these inventories were officially declared excess and were potentially available for commercial use. To aid Russia financially and keep weapons grade uranium off the world market, the U.S. Government agreed in February 1993 to purchase large quantities of Russian LEU blended down from HEU over a 20-year period (the Russian HEU Agreement). The actual purchase and distribution of this material, in addition to U.S. Government surpluses, is charged to USEC under The USEC Privatization Act.[18] Although USEC is under statutory guidelines to minimize market disruption by controlling the timing and quantity of such stockpiles' release, there remains a

[18] Under the Russian HEU Agreement, USEC imports LEU blended down in Russia from HEU and sells it directly to utilities. USEC pays Russia in cash for the enriched component of this material (i.e., for the SWUs Russia expends in the blend-down) and in credit for the feed component (i.e., for the natural UF_6 that went into the making of the original HEU). The utilities pay USEC in like fashion, substituting actual natural UF_6 for the credit and shipping it to USEC. Then, by transferring this material to Russian ownership, USEC effectively returns the natural component of the original LEU. The latter, known as "Russian feed," has been accumulating in USEC's storage facilities for some time due to restrictions on its distribution under The USEC Privatization Act. In March 1999 the United States agreed to purchase all of the natural uranium component of Russia's 1997 and 1998 shipments under the Russian HEU Agreement for $325 million, although DOE agreed to keep this uranium off the market for 10 years in an effort to stabilize prices. At the same time, Russia signed a long-term contract, with market-based pricing, to sell the post-1998 natural uranium component of the HEU-to-LEU shipments to a consortium of COGEMA, Cameco, and Nukem.

considerable degree of uncertainty in the market as to the ultimate disposal of surplus U.S. and Russian government material.

The breakup of the USSR brought to market more than just surplus defense inventories. Production facilities and resources existed in several of its former republics–notably, Kazakhstan, Russia, Ukraine, and Uzbekistan. These resources, formerly under the control of the USSR, were now in the hands of these countries' governments and available to the world market. Although an antidumping duty order affects imports from Ukraine, and suspension agreements still restrict direct and "by-pass" imports from Russia and Uzbekistan, a substantial quantity of uranium originating in these countries is sold throughout the world. One of the effects of restricting imports from these countries into the United States was to create a separate price schedule for these countries' uranium throughout the world. Such uranium, which could only be sold freely in unrestricted markets outside the United States, has become known as "unrestricted uranium" and sells at a lower price worldwide because of the limitations in the United States on its distribution. Uranium from other countries, which can be sold freely in restricted markets such as the United States, became known as "restricted uranium" and sells at a higher price because of the lack of these limitations.

Further adding to the worldwide abundance of uranium has been the development of relatively high-grade, low-cost resources in Canada and Australia. In the late 1970's the United States ranked number one in the quantity of uranium mined worldwide, about 35 million pounds per year. Canada ranked second with about half that total. Today, Canada ranks first, producing over 20 million pounds annually, Australia ranks second, and the United States, with less than 5 million pounds annually, ranks no higher than fifth. Together, Canada and Australia have about 40 percent of the world's known recoverable resources,[19] and Canada is the largest single source of imports into the United States.

Today, all forms of uranium are available throughout the world from many different sources. In lieu of the traditional fuel cycle, utilities can purchase all forms of uranium ready made. The utilities themselves have even become sources as they seek to reduce their strategic inventories (material held for security of supply reasons) in the face of abundant supply. Trading often occurs without a corresponding flow of goods. Ownership of a certain inventory may shift several times without any movement of the inventory itself. As partial or full payment for a toll service or product, a certain quantity of uranium is sometimes "book-transferred" to another. To change the location of equivalent material without the need for actual transportation or to change the country of origin of equivalent material, ownership can be "swapped." This type of trading complicates any assessment of inventory locations, quantities, ownership, and country of origin. (In general, swaps involving Russian or Uzbek uranium are not permitted under the Russian and Uzbek Suspension Agreements without Commerce's consent).

Affecting the demand of uranium has been the recent and ongoing deregulation of the utilities' generation, transmission, and distribution of electricity, while the regulations on their use and storage of uranium remain in place. Because of safety, environmental, and proliferation concerns, uranium is subject to strict regulation on international, national, and local levels. Overseeing this regulation in the United States are the Nuclear Regulatory Commission, the Federal Energy Regulatory Commission, the Environmental Protection Agency, and numerous regulating bodies in the individual States. Compliance with these regulations translates into additional cost for utilities' nuclear power plants, costs which only add to the relatively high cost of the plant's construction. But while the regulations associated with nuclear fuel use have gone relatively untouched, State governments have moved to allow electric customers to choose their suppliers, effectively putting the utilities in price competition with one another. This competitive environment has pressured the utilities to operate as cost effectively and efficiently as possible. Because fuel costs are about a third of their electric generation costs and sunk costs in nuclear

[19] "The Uranium Mining Climate in Australia," 1998, Ian Hore-Lacy, General Manager, Uranium Information Center, presented at the NEI International Uranium Fuel Seminar 98.

power plants are considerable, they have shown a much keener interest in finding the lowest cost uranium in whatever form, helping give rise to an active spot market and to non-traditional buyers and sellers. As an additional cost-cutting measure, the utilities have reduced their inventories of uranium by selling or trading it on the open market, adding to the number of suppliers and the already excess supplies. In the meantime, alternative sources of electric energy have remained competitive. To ease the financial stress, some utilities have merged. Others have simply divested themselves of their nuclear power plants and/or shut down the more inefficient plants altogether. Since 1978, at least 11 nuclear power plants in the United States have been closed and no new plants have been constructed. Moreover, all nuclear plants ordered in the United States since 1973 have either been cancelled or face rejection from State governments. The increased operating efficiency of the remaining plants, however, has allowed domestic demand to remain fairly steady.

Demand has also been affected by slower than expected economic growth in Asia. Throughout the 1990's suppliers expected most of the world's new growth in demand to come from China, Japan, Korea, and southeast Asia and planned accordingly. With the sudden downturn of these countries' economies in 1998, nuclear power plant production was forestalled, and the anticipated market for uranium has not materialized. Aside from these events, there are a host of safety, environmental, economic, and political concerns that have caused a reduction in the projected growth of commercial nuclear power.

The increase in the sources and availability of uranium combined with a cost-conscious and fixed, if not weakened, demand has increased the market and financial risk for the industry and intensified competitive pressures throughout. Undiversified producers, broker/traders, and users have become increasingly marginalized, and many have either dropped out of the market or have been absorbed by others. Some with larger resources, like COGEMA, Cameco, and Nukem GmbH, a large trader based in Germany, have sought to better place themselves in this environment by expanding their uranium activities both horizontally and vertically. Consolidation notwithstanding, today's uncertainties in the global supply and demand for uranium prevent any one segment of the industry from controlling today's market, and stability may remain elusive for some time to come.

SUMMARY DATA FROM THE ORIGINAL INVESTIGATIONS AND CURRENT REVIEWS

Uranium does not lend itself as conveniently and meaningfully to summary presentation and analysis as most products. The four basic forms of uranium–natural uranium concentrate, natural uranium hexafluoride, enriched uranium hexafluoride, and uranium oxides, nitrates, and metals–are separately produced and traded in the marketplace, yet they are all intermediate products, each successively contained in the other, and ultimately contained in an end product that is not within the scope of these reviews. Just as their mutual competitiveness (trade in one form can impact trade in another) frustrates their individual analysis, their non-additive nature (they are simply different forms of the same quantity of uranium) frustrates their analysis as a whole. Further complicating the latter is that they are produced and traded in different units of measurement. Such complications notwithstanding, table I-2 presents a summary of data from the original investigations[20] and from these reviews that are relatively uncompromised by the above considerations and can be used to reasonably characterize the industry as a whole. Even these data, however, are limited by the unavailability of import data for the subject countries

[20] The Commission's original investigations were terminated when Commerce entered into suspension agreements with the subject countries. The data in table I-2 reflect the data obtained in the Commission's first completed final investigations, Invs. Nos. 731-TA-539-D and E (Final), Uranium from Tajikistan and Ukraine.

in the earlier periods shown (1990-92),[21] and by many anomalies and misclassifications for individual countries. For this reason the import data for Russia, Ukraine, and Uzbekistan were compiled from questionnaire responses (which are believed to account for 100 percent of imports from these countries during the period for which data were collected (1997-99)). There were no imports from Ukraine in this period. The distortions in the import data related to the anomalies and misclassifications for individual countries are reduced to a minimum in the data for all countries combined. Data relating to U.S. production represents 100 percent of the U.S. industry.[22] Sales data are used in lieu of shipment data in order to incorporate the industry's swaps and book transfers of original material, which, as noted previously, involve an exchange of ownership but not a corresponding flow of material.

For purposes of a causal analysis, U.S. "consumption" of uranium is not as definitive a calculation as it is for most products. U.S.-based nuclear power plants annually consume a finite quantity of enriched uranium oxides, nitrates, and metals, but in today's market there is a vast amount of U.S. trading in all forms of uranium–trading which often takes on a life independent of uranium's end use–and a proliferation of market players other than the utilities. The quantities of the various forms of U.S.-produced and imported uranium, however, cannot simply be aggregated, for each is successively embedded in the other and reducing them to a common unit of measure entails broad assumptions. The total value of all forms of uranium produced and imported in the United States, though not indicative of consumption in the usual sense, is less inclined than the total quantity to distort an aggregate summation and is a reasonable index of the relative importance of imports vs. U.S. production in the U.S. market for uranium. Table I-2 shows the total value of the various forms of uranium produced in the United States (based on total sales) combined with the total value of imports (based on Commerce data). A comparison of import values with U.S. domestic sales alone would overstate the impact of imports to the extent that an unknown but significant quantity of imports were re-exported after further processing.

The relative stability of uranium's total U.S. value (the value of U.S. production and imports) throughout the 1990's (with or without adjustment for inflation) reflects the relatively stagnant market in the use of uranium; moreover, the increase in the value of imports and decrease in the value of U.S. producers' sales reflects the U.S. industry's declining production and share of the market during the period. As shown, Russia's share of this value was relatively large and increasing, while Uzbekistan's share remained less than *** percent. Despite the industry's overall contraction, its reported employment increased significantly; however, rather than a genuine increase this appears to reflect differences in respondents' interpretation of the questionnaires for the original investigations and these reviews. Percentage changes for the 1997-99 data in table I-2 are shown in appendix C, table C-1.

Data for the individual forms of uranium, shown in tables I-3, 4, 5, and 6, reflect to varying degrees the general contraction of the U.S. industry as a whole. Please note that the value of imports in these tables represents the total value of the product, whereas the value of U.S. production (for other than concentrate) represents only the value added by the process in converting the uranium into that form. Although the quantity data for U.S. production and imports for each form are comparable, their summation, as an approximation to consumption, is not shown because of the mutual competitiveness between the forms and the relative inconclusiveness of import market effects for anything less than uranium as a whole. Also, the anomalies and misclassifications for individual countries in the "all country" import data tend to distort the data more for the individual forms than for the aggregate. In the

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[21] Although the independence of the individual republics of the former USSR was officially recognized in 1992, official data on their individual exports to the United States are not available prior to 1994.

[22] In cases where questionnaires for these reviews remained outstanding, questionnaires for Inv. No. 731-TA-539-A (Final), Uranium from Kazakhstan, were used as estimates. Data for January-March 1999 in these questionnaires were annualized.

early 1990's a segmented analysis of the industry was more viable in that the primary players consisted of the concentrators and the utilities, and the bulk of the market consisted of the buying and selling of concentrate and toll services therefor. Today, in addition to concentrate and toll services, all forms of uranium are bought and sold by a host of traders, producers, and users alike, resulting in a dynamic market where each form of uranium competes with every other form. A sale of concentrate can displace a sale of enriched uranium no less than a sale of enriched uranium can displace a sale of concentrate, or any other form of uranium for that matter. A loss of share in the concentrate market can have as much or more to do with activity (or perceived activity) in the enriched uranium market as with the natural uranium market. A segmented analysis presupposes the independence of the various forms of uranium, a market in reasonable equilibrium, and knowledge of the amount and disposition of worldwide supplies, none of which are today's realities.

Table I-2
Uranium: Summary data from the original investigations and current reviews, 1990-92 and 1997-99

(Value=*1,000 dollars*)

Item	1990	1991	1992	1997	1998	1999
Value of imports and sales from U.S. production: Amount	2,538,507	2,844,382	2,834,048	2,642,242	2,749,775	2,633,740
Producers' share[1]	65.0	65.2	68.1	59.9	55.3	44.7
Importer's share: Russia[1]	(2)	(2)	(2)	***	***	***
Ukraine[1]	(2)	(2)	(2)	0.0	0.0	0.0
Uzbekistan[1]	(2)	(2)	(2)	***	***	***
All other[1]	(2)	(2)	(2)	***	***	***
Total[1]	35.0	34.8	31.9	40.1	44.7	55.3
Value of U.S. imports from-- Russia:	(2)	(2)	(2)	***	***	***
Ukraine:	(2)	(2)	(2)	0	0	0
Uzbekistan:	(2)	(2)	(2)	***	***	***
All other countries:	(2)	(2)	(2)	***	***	***
All countries:	889,520	989,844	904,856	1,059,150	1,229,376	1,455,725
Sales from U.S. production-- U.S. sales	1,149,494	1,259,555	1,192,721	842,699	876,694	546,833
Exports	499,492	594,883	736,412	740,393	643,705	631,182
Total sales	1,648,986	1,854,438	1,929,133	1,583,092	1,520,399	1,178,015
Production workers	3,462	3,471	3,361	5,952	5,806	5,347
Hours worked (*1,000 hours*)	8,264	8,114	7,329	12,469	12,153	11,221
Wages paid	126,278	132,792	128,259	314,822	323,692	307,580
Hourly wages	$15.28	$16.37	$17.50	$25.25	$26.64	$27.41

[1] In *percent*.
[2] Data not available for former republics of the USSR.

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

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics. Import data for Russia, Ukraine, and Uzbekistan compiled from Commission questionnaires; import data for all countries compiled from official Commerce statistics (HTS statistical reporting numbers 2844.10.10.00, 2844.10.20.10, 2844.10.20.25, 2844.10.20.55, 2844.10.50.00, 2844.20.00.10, 2844.20.00.20, and 2844.20.00.30).

Table I-3
Natural uranium concentrate: Summary data from the original investigations and current reviews, 1990-92 and 1997-99

(Quantity=*1,000 pounds U_3O_8*; value=*1,000 dollars*; unit values, unit labor costs, and unit financial data are *per pound*)

Item	1990	1991	1992	1997	1998	1999
U.S. imports[1] from-- Russia:						
Quantity	(2)	(2)	(2)	***	***	***
Value	(2)	(2)	(2)	***	***	***
Unit value	(2)	(2)	(2)	***	***	***
Uzbekistan:						
Quantity	(2)	(2)	(2)	***	***	***
Value	(2)	(2)	(2)	***	***	***
Unit value	(2)	(2)	(2)	***	***	***
All countries:						
Quantity	15,387	22,972	19,419	16,838	12,022	6,914
Value	236,165	354,848	298,075	265,843	177,332	97,753
Unit value	$15.35	$15.45	$15.35	$15.79	$14.75	$14.14
U.S. producers'-- Capacity quantity	26,095	27,145	25,551	12,722	14,072	13,472
Production quantity	8,379	7,995	5,917	4,989	4,389	4,936
Capacity utilization[3]	32.1	29.5	23.2	39.2	31.2	36.6
U.S. sales: Quantity	6,756	6,891	3,305	3,796	3,707	3,775
Value	166,196	150,609	62,220	51,290	53,507	55,791
Unit value	$24.60	$21.86	$18.83	$13.51	$14.43	$14.78
Export sales: Quantity	2,249	4,018	3,494	1,256	1,116	200
Value	55,683	84,463	74,223	24,236	21,701	4,375
Unit value	$24.75	$21.02	$21.24	$19.30	$19.45	$21.88
Total sales: Quantity	9,005	10,909	6,799	5,052	4,823	3,975
Value	221,879	235,072	136,443	75,526	75,208	60,166
Unit value	$24.64	$21.55	$20.07	$14.95	$15.59	$15.14
Continued on next page.						

Item	1990	1991	1992	1997	1998	1999
Ending inventory quantity	11,057	8,143	7,128	3,097	2,663	3,624
Inventories/total sales[3]	108.3	74.6	104.8	61.3	55.2	91.2
Production workers	696	603	387	423	475	494
Hours worked (*1,000 hours*)	1,302	1,125	786	862	1,019	1,045
Wages paid (*1,000 dollars*)	16,968	15,624	11,692	13,038	15,512	15,938
Hourly wages	$13.03	$13.89	$14.88	$15.13	$15.23	$15.25
Productivity (*pounds per hour*)	6.5	7.2	7.5	5.8	4.3	4.7
Net sales:						
Quantity	9,008	10,277	5,909	([4])	([4])	([4])
Value	218,413	224,985	139,362	([4])	([4])	([4])
Unit value	$24.25	$21.89	$23.58	([4])	([4])	([4])
COGS	155,310	165,471	102,036	([4])	([4])	([4])
Gross profit or (loss)	63,103	59,514	37,326	([4])	([4])	([4])
Operating income or (loss)	43,530	41,608	24,747	([4])	([4])	([4])
Unit COGS	$17.24	$16.10	$17.25	([4])	([4])	([4])
Unit operating income or (loss)	$4.83	$4.05	$4.34	([4])	([4])	([4])
COGS/sales[3]	71.1	73.5	73.2	([4])	([4])	([4])
Operating income or (loss)/sales[3]	19.9	18.5	17.8	([4])	([4])	([4])

[1] There were no imports from Ukraine in the periods shown.
[2] Not available.
[3] In *percent*.
[4] These data, presented later in this report, do not include 100 percent of the industry and are not directly comparable with the earlier periods.

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

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics. Import data for Russia and Uzbekistan compiled from Commission questionnaires; import data for all countries compiled from official Commerce statistics. Concentrate = HTS statistical reporting number 2844.10.20.10 (conversion factor: kg(0.825) = kg U).

Table I-4
Natural uranium hexafluoride: Summary data from the original investigations and current reviews, 1990-92 and 1997-99

(Quantity=*1,000 kg U*; value=*1,000 dollars*; unit values, unit labor costs, and unit financial data are *per kg U*)

Item	1990	1991	1992	1997	1998	1999
U.S. imports[1] from-- Russia:						
Quantity	([2])	([2])	([2])	0	0	0
Value	([2])	([2])	([2])	0	0	0
Unit value	([2])	([2])	([2])	0	0	0
Uzbekistan:						
Quantity	([2])	([2])	([2])	0	0	0
Value	([2])	([2])	([2])	0	0	0
Unit value	([2])	([2])	([2])	0	0	0
All countries:						
Quantity	6,378	5,483	3,964	8,256	8,767	7,353
Value	230,344	229,258	148,886	325,745	333,530	211,701
Unit value	$36.12	$41.81	$37.57	$39.45	$38.04	$28.79
U.S. producers'-- Capacity quantity	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***
Capacity utilization[3]	***	***	***	***	***	***
U.S. sales: Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Export sales: Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Total sales: Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Continued on next page.						

Item	1990	1991	1992	1997	1998	1999
Ending inventory quantity	***	***	***	***	***	***
Inventories/total sales[3]	***	***	***	***	***	***
Production workers	***	***	***	***	***	***
Hours worked (*1,000 hours*)	***	***	***	***	***	***
Wages paid (*1,000 dollars*)	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***
Productivity (*kg U per hour*)	***	***	***	***	***	***
Net sales: Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
COGS	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***
COGS/sales[3]	***	***	***	***	***	***
Operating income or (loss)/sales[3]	***	***	***	***	***	***

[1] There were no imports from Ukraine in the periods shown.
[2] Not available.
[3] In *percent*.

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

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics. Import data for Russia and Uzbekistan compiled from Commission questionniares; import data for all countries compiled from official Commerce statistics. Natural uranium hexafluoride = HTS statistical reporting number 2844.10.20.25 (conversion factor: kg(0.67618) = kg U).

Table I-5
Enriched uranium hexafluoride: Summary data from the original investigations and current reviews, 1990-92 and 1997-99

(Quantity =*1,000 kg U* and/or *1,000 SWUs*; value=*1,000 dollars*; unit values, unit labor costs, and unit financial data are *per SWU*)

Item	1990	1991	1992	1997	1998	1999
U.S. imports[1] from-- Russia:						
Quantity *(1,000 kg U)*	(2)	(2)	(2)	***	***	***
Value	(2)	(2)	(2)	***	***	***
Unit value	(2)	(2)	(2)	***	***	***
Uzbekistan:						
Quantity *(1,000 kg U)*	(2)	(2)	(2)	0	0	0
Value	(2)	(2)	(2)	0	0	0
Unit value	(2)	(2)	(2)	0	0	0
All countries:						
Quantity *(1,000 kg U))*	405	583	583	581	847	2,063
Value	253,019	346,317	427,224	367,025	647,325	1,100,384
Unit value	$624.74	$594.03	$732.80	$632.03	$764.37	$533.32
U.S. producers'-- Capacity quantity *(1,000 SWU)*	***	***	***	***	***	***
Production quantity *(1,000 SWU)*	***	***	***	***	***	***
Production quantity *(1,000 kg U)*	(2)	(2)	(2)	***	***	***
Capacity utilization[3]	***	***	***	***	***	***
U.S. sales: Quantity *(1,000 SWU)*	***	***	***	***	***	***
Quantity *(1,000 kg U)*	(2)	(2)	(2)	***	***	***
Value	***	***	***	***	***	***
Unit value *(per SWU)*	***	***	***	***	***	***
Export sales: Quantity *(1,000 SWU)*	***	***	***	***	***	***
Quantity *(1,000 kg U)*	(2)	(2)	(2)	***	***	***
Value	***	***	***	***	***	***
Unit value *(per SWU)*	***	***	***	***	***	***
Continued on next page.						

Item	1990	1991	1992	1997	1998	1999
Total sales: Quantity *(1,000 SWU)*	***	***	***	***	***	***
Quantity *(1,000 kg U)*	([2])	([2])	([2])	***	***	***
Value	***	***	***	***	***	***
Unit value *(per SWU)*	***	***	***	***	***	***
Ending inventory *(1,000 SWU)*	***	***	***	***	***	***
Inventories/total sales[3]	***	***	***	***	***	***
Production workers	***	***	***	***	***	***
Hours worked *(1,000 hours)*	***	***	***	***	***	***
Wages paid *(1,000 dollars)*	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***
Productivity *(SWUs per hour)*	***	***	***	***	***	***
Net sales: Quantity *(1,000 SWU)*	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
COGS	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***
COGS/sales[3]	***	***	***	***	***	***
Operating income or (loss)/sales[3]	***	***	***	***	***	***

[1] There were no imports from Ukraine in the periods shown.
[2] Not available.
[3] In *percent*.

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

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics. Import data for Russia and Uzbekistan compiled from Commission questionnaires; import data for all countries compiled form official Commerce statistics. Enriched uranium hexafluoride = HTS statistical reporting number 2844.20.00.20 (conversion factor: kg(0.67618) = kg U).

Table I-6
Enriched uranium oxides, nitrates, and metals: Summary data from the original investigations and current reviews, 1990-92 and 1997-99

(Quantity=*1,000 kg U*; value=*1,000 dollars*; unit values, unit labor costs, and unit financial data are *per kg U*)

Item	1990	1991	1992	1997	1998	1999
U.S. imports[1] from-- Russia:						
Quantity	(2)	(2)	(2)	0	0	0
Value	(2)	(2)	(2)	0	0	0
Unit value	(2)	(2)	(2)	0	0	0
Uzbekistan:						
Quantity	(2)	(2)	(2)	0	0	0
Value	(2)	(2)	(2)	0	0	0
Unit value	(2)	(2)	(2)	0	0	0
All countries:						
Quantity	321	239	56	166	53	325
Value	165,774	54,679	24,749	90,121	64,934	21,578
Unit value	$516.43	$228.78	$441.95	$542.90	$1225.17	$66.39
U.S. producers'-- Capacity quantity	3,800	3,800	3,800	4,050	4,050	4,050
Production quantity	2,503	2,622	2,593	2,583	2,571	2,478
Capacity utilization[3]	65.9	69.0	68.2	63.8	63.5	61.2
U.S. sales: Quantity	1,943	2,058	2,325	1,790	1,887	1,869
Value	(2)	(2)	(2)	217,010	240,246	222,660
Unit value	(2)	(2)	(2)	$121.20	$127.28	$119.14
Export sales: Quantity	586	216	566	784	748	568
Value	(2)	(2)	(2)	79,088	70,131	59,576
Unit value	(2)	(2)	(2)	$100.91	$93.70	$104.87
Total sales: Quantity	2,529	2,474	2,891	2,574	2,636	2,437
Value	(2)	(2)	(2)	296,098	310,377	282,236
Unit value	(2)	(2)	(2)	$115.03	$117.75	$115.82
Continued on next page.						

Item	1990	1991	1992	1997	1998	1999
Ending inventory quantity	1,028	1,121	997	595	543	549
Inventories/total sales[3]	40.6	45.3	34.5	23.1	20.6	22.5
Production workers	678	693	741	722	732	670
Hours worked (*1,000 hours*)	1,833	1,899	1,990	1,557	1,584	1,433
Wages paid (*1,000 dollars*)	23,858	25,786	28,669	37,747	39,075	38,759
Hourly wages	$13.01	$13.58	$14.40	$24.24	$24.67	$27.05
Productivity (*kg U per hour*)	1.3	1.4	1.3	1.7	1.6	1.7
Net sales:[4]						
Quantity	(2)	(2)	(2)	***	***	***
Value	(2)	(2)	(2)	***	***	***
Unit value	(2)	(2)	(2)	***	***	***
COGS[4]	(2)	(2)	(2)	***	***	***
Gross profit or (loss)[4]	(2)	(2)	(2)	***	***	***
Operating income or (loss)[4]	(2)	(2)	(2)	***	***	***
Unit COGS[4]	(2)	(2)	(2)	***	***	***
Unit operating income or (loss)[4]	(2)	(2)	(2)	***	***	***
COGS/sales[3 4]	(2)	(2)	(2)	***	***	***
Operating income or (loss)/sales[3 4]	(2)	(2)	(2)	***	***	***

[1] There were no imports from Ukraine in the periods shown.
[2] Not available.
[3] In *percent*.
[4] The data do not include Westinghouse.

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

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics. Import data for Russia and Uzbekistan compiled from Commission questionnaires; import data for all countries compiled from official Commerce statistics. Enriched oxides, nitrates, and metals = HTS statistical reporting number 2844.20.00.10 and 2844.20.00.30 (conversion factor: kg(0.88149) = kg U).

PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET

CHARACTERISTICS OF THE U.S. AND GLOBAL INDUSTRY

Uranium is consumed commercially throughout the world primarily in its low-enriched state as fuel for nuclear reactors producing electricity;[1] enrichment for this use ranges from 3 to 5 percent in the U^{235} isotope.[2] The traditional production stages required to produce LEU are called the uranium fuel cycle, where electric utilities have typically purchased the uranium concentrates, contracted with converters and enrichers to toll-produce the natural uranium hexafluoride (natural UF_6) and low-enriched uranium hexafluoride (LEU-HF), and then contracted with fabricators both to toll-produce the LEU-HF into low-enriched uranium dioxide (LEU-DO) and pelletize this latter product, and to construct the fuel assemblies. Based on the total value of the final uranium product that is within the scope of these reviews, uranium concentrates account for about 31 percent, natural conversion accounts for about 3 percent, enrichment accounts for about 59 percent, and enriched conversion (and pelletizing) account for about 7 percent.[3]

Although the LEU fuel cycle remains the dominant process by which electric utilities obtain LEU, a significant new alternative source of supply is LEU-HF produced directly by blending down HEU. Blended-down LEU-HF in the U.S. market derives largely from the Russian HEU Agreement with the United States;[4] ***.[5] ***.[6] In the future, USEC is committed to purchasing 5.5 million SWUs annually during 2000-14 pursuant to the Russian HEU Agreement and an additional, but smaller, amount of Russian SWUs through March 31, 2004, pursuant to matched sales provisions under the Russian Suspension Agreement. Electric utilities will purchase the entire LEU-HF product (enrichment and feedstock, which is sometimes referred to as EUP), or any of the other processed uranium products, when the total price is less than the costs of obtaining uranium via the fuel cycle.[7]

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[1] In Canada, natural uranium is used as fuel in heavy water reactors to produce electricity (U.S. utilities use LEU as their reactor fuel). In addition, some electric utilities in Japan and several European countries use a hybrid nuclear reactor fuel called MOX. According to purchaser questionnaire responses of U.S. electric utilities, U.S. reactors do not use MOX and some reactors would require equipment alterations to use this type of fuel.

[2] In the United States the enrichment level is typically between *** percent.

[3] These figures are based on a 4.3 percent product assay, a 0.3 percent tails assay, and spot market uranium prices in *Ux Weekly* (*WISE Uranium Project*, "Nuclear fuel cost calculator," *www.antenna.nl/wise/uranium/nfcc.html,* last updated on June 21, 2000). In addition, questionnaire responses of fabricators were used to adjust the calculated value of fabrication to include only the costs of conversion and pelletizing.

[4] In 1994, the U.S. Government (with USEC as its executive agent) and the Russian Government (with TENEX as its executive agent) agreed that by 2014 the United States would buy 500 metric tons of bomb-grade Russian HEU (from dismantled nuclear weapons) that were blended-down to LEU-HF in Russia. Under the agreement, acceptable LEU-HF enrichment assays are 3.6, 4.0, 4.4, or 4.95 percent, which most closely match requirements of USEC's customers. As a rule of thumb, 1 unit of 90 percent HEU equals about 30 units of 4.4 to 4.9 percent LEU-HF (assumes a blend-stock assay of 1.5 percent and tails assay of 0.3 percent); ***.

[5] ***.

[6] Based on annual U.S. reactor requirements for LEU-HF that average about 10.5 million SWUs, the Russian LEU-HF sold to U.S. electric utilities during 1997-99 averaged *** percent of total U.S. reactor requirements during this period.

[7] ***. These price data are based on USEC's questionnaire responses and are discussed more fully in Part V of

(continued...)

Large worldwide inventories of uranium are principally held as uranium concentrates and natural UF_6; the latter product is also a potential source of processed uranium that could be sold and, thereby, act to bypass a portion of the uranium fuel cycle.[8] These inventories are stored at producers/processors' locations worldwide and are owned by electric utilities, uranium producers/processors, and traders.[9] Many electric utilities, particularly in Western Europe and Asia, have typically maintained strategic inventories of uranium to cover their reactor requirements, sometimes up to 3 years or more, and excess (smaller) inventories for an additional margin of safety. Nukem reported that 1997 year-end natural uranium inventories held by electric utilities throughout the world amounted to 69,000 metric tons U of strategic inventories and 44,000 metric tons U of excess inventories.[10] Increased worldwide availability of uranium in processed form and substantial uranium mining/recovery operations may have led some electric utilities, particularly a few in the United States, to sell, or make available for sale, a portion of their uranium inventories.[11] Huge inventories of natural UF_6 held by the U.S. Government and by USEC and inventories of the Russian Government, which have been significantly augmented by USEC's purchases under the Russian HEU Agreement and by U.S. LEU-HF imports under matched sales provisions, may have dampened market prices as both governments announced that they would each withhold natural UF_6 amounting to an equivalent of 58 million pounds of U_3O_8 from the world market for 10 years.[12] Market supply uncertainties continue, however, as cutbacks in uranium mining/recovery

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[7] (...continued)
this report.

[8] In addition to extensive inventories of natural uranium, significant excess world enrichment capacity appears to exist.

[9] Safety and nuclear proliferation concerns have led most governments, including the U.S. Government, to license commercial firms in their countries to produce, store, or use uranium. In the United States, the miners/concentrators, converter, enricher, and fabricators are essentially the only firms licensed to store the uranium products; the electric utilities are licensed to use the uranium. Regardless of ownership title, inventories of uranium concentrates are usually held by converters (some are also held by the concentrators), inventories of natural UF_6 are usually held by the enrichers, and inventories of LEU-HF and LEU-DO are usually held by the enrichers and fabricators. Concentrators may also hold inventories of mined uranium ore. This inventory pattern is worldwide and facilitates the use of swaps and loans that minimize the physical movement of uranium once it is at the various inventory locations. In addition, because uranium inventories are located primarily at downstream processing locations, shipments (deliveries) often involve a book transfer of ownership title rather than the physical movement of uranium.

[10] *Nukem Market Report*, November 1998, p. 6.

[11] In addition, deregulation of electricity production and distribution, most recently in the United States and earlier in several European countries, may also have led some electric utilities to reduce their inventories. Under historical regulation, electric utilities were able to pass their inventory costs on to consumers. In the developing competitive market, producers of electricity should face more cost constraints and may likely continue to reduce their inventory holdings (*Nukem Market Report*, November 1998).

[12] *Wall Street Journal*, "U.S. and Russia Forge $325 Million Accord to Stockpile Uranium," March 25, 1999. However, the USEC Privatization Act allows deliveries in 1998 to U.S. electric utilities of up to 2 million pounds of the natural uranium feed obtained by Russia through sales of the blended-down HEU; the allowable amount increases in increments of 2 million pounds each year through 2009, when the annual limit will be 20 million pounds. Each year thereafter, up to 20 million pounds of the Russian natural uranium feed may be delivered to end users in the U.S. market. To the extent any of this Russian natural uranium feed is sold under a matched sales provision pursuant to the quotas under the Russian Suspension Agreement, it will not be counted in the annual limits
(continued...)

production and postponements in bringing on new production facilities have recently occurred in Australia, Canada, and the United States.[13]

As indicated in Part I, reprocessed spent fuel and re-enriched tails are also used as sources of nuclear fuel in some countries, but not in the United States. These products are another source of processed uranium that act to bypass a portion of the uranium fuel cycle and, in turn, increase total supplies of uranium to the market, including the United States.

Worldwide prices of uranium concentrates generally fell during 1997 and 1998, then stabilized and rose somewhat during 1999, before softening in the first quarter of 2000.[14] Falling prices suggest that supply exceeded both current and expected future demand, but announced cutbacks in uranium supply,[15] if substantial enough, will likely cause prices to stabilize and then rise. The responsiveness of uranium supply to price changes suggests, however, that eventual price increases may be modest due to the large potential supply of uranium, both in the ground and in inventories.

During 1997-99 the United States and the European Union had programs in place that restricted imports of uranium from at least some countries of the former USSR. Publicly reported spot market prices of uranium concentrates on a monthly basis showed that during 1997-99 prices of uranium concentrates that are sold freely in markets that restrict sales of some sources of uranium, such as that from Russia, Ukraine, and Uzbekistan, significantly exceeded prices of uranium concentrates from sources that can be sold freely only in markets not restricting sales of uranium by source.[16] Percentage differences between the restricted and unrestricted monthly uranium market prices ranged from 3.0 percent to 30.0 percent during 1997-99, with price differences during 1999 and the first quarter of 2000 generally above 20.0 percent.[17] Despite the apparent positive effects of import restrictions, U.S. uranium

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[12] (...continued)
enumerated here, which are subject to the U.S. Privatization Act.

[13] Nukem reported that world production of uranium concentrates fell steadily during 1997-99 by 12.4 percent, from 35,527 metric tons of natural elemental uranium (U) (92.4 million pounds of U_3O_8) in 1997 to 31,130 metric tons of natural U (80.9 million pounds of U_3O_8) in 1999 (*Nukem Market Report*, April 2000, p. 30).

[14] Prices for conversion and enrichment followed similar trends during this period, as did long-term contract prices for uranium concentrates negotiated during this period. However, prices of the uranium subject to restrictions continued to fall in 1999 and the first quarter of 2000 (*Nukem Market Report*, April 2000, pp. 45-52).

[15] Uranium supply cutbacks included reductions in both production and availability of inventory.

[16] Uranium industry publications refer, somewhat confusingly, to prices of the former type of uranium as restricted prices (prices of uranium concentrates that can be sold freely in restricted, as well as, unrestricted markets) and prices of the latter type of uranium as unrestricted prices (prices of uranium concentrates that can be sold freely only in unrestricted markets). This two-tiered price structure began shortly after the start of the suspension agreements. However expressed, the price data indicate that prices of the uranium from Russia, Ukraine, and Uzbekistan are generally lower than prices of uranium not subject to the suspension agreements and the antidumping duty order.

[17] *Nukem Market Report*, April 2000, p. 50; the price differences were based on the average of the high and low prices reported each month for restricted and unrestricted uranium. Purchaser questionnaire responses of U.S. electric utilities indicated that the uranium products subject to the suspension agreements and antidumping duty order were generally priced lower than unrestricted sources of uranium due to paperwork and approvals required by Commerce, prohibitions on its use in swaps and loans, and the uncertainty whether what is purchased today can legally be delivered and used when needed several months later. As a result, many U.S. electric utilities reported that they tended to avoid purchasing uranium from the subject countries. ***.

concentrators, as well as ***, reported in their producer questionnaire responses that ***. Abundant worldwide supplies of uranium apparently blunted the effects of import restrictions in the U.S. market.[18]

A majority of electric utilities' purchases of uranium and uranium processing are based on long-term contracts; in the United States, these contracts run 3 to 7 years or longer with primary producers and processors.[19] Long-term contracts provide for a secure future supply of uranium and reportedly reflect the need to accommodate long lead times in the fuel cycle and a concern to maintain reactor operations.[20] Spot purchases make up the balance of a utility's total uranium purchases.[21] Spot-market uranium purchases in the United States reportedly account for 10 to 20 percent of total uranium purchases made by all market participants, including U.S. utilities, producers, and traders.[22] The share of spot purchases is least when uranium prices are high and greatest when uranium prices are low.[23] Electric utilities typically make spot purchases to meet current or near-term requirements that are not covered by long-term contracts.[24] Producers and processors generally make spot purchases to supply at least some of their maturing contract requirements, especially when spot prices are lower than their costs of production.[25]

Reliance on long-term contracts to meet the majority of reactor requirements suggests that purchases in the current period are largely for consumption in the long-term future and to a lesser degree for consumption in the current period or near-term future.[26] Future reactor demand for uranium is

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[18] Because of extensive world trade in uranium and substantial U.S. imports of uranium through the enrichment stage, the U.S. uranium price is pretty much subject to the world price, including the difference in restricted and unrestricted uranium prices. The influence of world demand and supply in the U.S. market affects U.S. uranium producers' prices for both their domestic sales and ***.

[19] Based on questionnaire responses of U.S. uranium concentrators, the converter, the enricher, and fabricators.

[20] ***.

[21] Although electric utilities generally contract for conversion and enrichment on a long-term basis, their spot purchases of a completed uranium product, such as natural UF_6 or LEU-HF, sometimes involve both a transfer of the physical equivalent of the natural uranium component of the purchased product from the utility to the seller and a separate payment for the conversion or enrichment service component of the purchased product. This payment for conversion or enrichment constitutes a spot purchase of the service.

[22] ***.

[23] ***.

[24] Spot purchases of uranium at low prices enable utilities to obtain at least some of their uranium requirements at least cost. If uranium prices were high, utilities would likely use more of their inventories to cover current uranium needs that were not met by long-term supply agreements instead of making spot purchases.

[25] U.S. electric utilities reported in their purchaser questionnaire responses that they negotiate several uranium purchase contracts, especially for uranium concentrates, that include spot, medium-term, and long-term contracts. Each utility's contract portfolio reflects the firm's assessment of price and supply security.

[26] Conversely, prices of the majority of uranium and uranium services consumed in the current period were based on past decisions that involved expectations about current market conditions. As a result, prices currently paid for previously contracted material/services may be substantially different from spot and long-term prices negotiated in the current period.

divided between covered demand and uncovered demand.[27] Uncovered future demand up to about 2 years is generally considered spot-market demand in the uranium market, while uncovered future demand beyond 2 years is considered long-term demand.[28]

BUSINESS/MARKET CYCLES

Uranium consumption is highly dependent on the number of operating nuclear reactors producing electricity and on the level at which each utility is operating.[29] Demand for electricity, in turn, depends on economic growth, particularly in developing countries,[30] and on population growth. Utility operating levels and, hence, uranium consumption are subject somewhat to business cycles.[31]

MARKET SEGMENTS/CHANNELS OF DISTRIBUTION

As mentioned earlier, the traditional uranium fuel cycle is still the primary way in which U.S.-produced uranium is sold in the U.S. market. Except for the producers of uranium concentrates, the uranium producers at the other stages in the uranium cycle have, until recently, provided only toll-services to further process uranium. The converter prices its toll services based on the number of kilograms of uranium in the converted uranium, while USEC prices its toll service based on the SWUs, required to enrich the natural uranium.[32] On the other hand, the fabricators toll process uranium into LEU-DO and pelletize this product as part of the total contract agreement to produce fuel-rod assemblies; U.S.-produced LEU-DO or its toll conversion is generally not sold separately by U.S. uranium producers. USEC now also sells, or has available for sale, natural and low-enriched UF_6; however, USEC sells only the SWU component of LEU-HF it imports through the Russian HEU Agreement, while the natural UF_6 feed component of this imported LEU-HF is sold separately under

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[27] Expected future reactor requirements that are to be filled by long-term contracts and planned inventory drawdowns are considered covered demand; the remaining future reactor requirements are uncovered demand.

[28] *The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," The Uranium Institute, 1998, p. 31. This is a recent study by the Uranium Institute, a uranium trade association located in the United Kingdom.

[29] Uranium consumption in any one period is also affected by the length of the reload cycle (the length of time between refuelings of nuclear reactors, typically 18 or 24 months in the United States). Technical operating considerations and the level of reactor operations reportedly are the key factors that determine the length of the reload cycle.

[30] As developed economies continue to switch from manufacturing to services, they tend to use less electricity per dollar of GDP; on the other hand, growth in developing countries tends to be accompanied by an increase in manufacturing and they use more electricity per dollar of GDP as this growth continues (*The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," 1998, p. 22).

[31] Annual real GDP in the United States grew continuously during 1992-98. World real GDP also grew during this period, but slowed markedly beginning in 1997 as the economic downturn in Asia also began in 1997; economic turmoil in Russia beginning in August 1998 and in Brazil in early 1999 have contributed to the continued softness in world GDP.

[32] ***. The number of SWUs required to enrich uranium varies by the product and tails assays and the amount of LEU-HF required. Higher product assays and/or lower tails assays require more SWUs.

provisions of the USEC Privatization Act and Russian Suspension Agreement.[33] Imports of the individual uranium products, including uranium concentrates from Russia and Uzbekistan and LEU-HF from Russia, are sold principally to U.S. electric utilities but also to U.S. producers, processors, and traders. Sales of natural or low-enriched UF_6 products, either produced in the United States or imported, can involve the entire product, such as the EUP,[34] or just the conversion or enrichment component; in the latter case the purchaser transfers to the seller the equivalent natural uranium feed component of the product and pays a separate price for the conversion or enrichment component of the product.[35] These latter types of transactions, called de-conversion and de-enrichment, explain how exports of conversion and enrichment services to the United States are accomplished.

Uranium may also be obtained through swaps and loans, which involve both physical uranium products and conversion and enrichment services. Swaps and loans generally permit greater efficiency in the transfer and consumption of uranium, but they could also be used to facilitate the export of restricted uranium by changing the uranium's country of origin designation through flag swaps.[36] The effect of swaps and loans on the distribution of uranium is difficult to measure as they are reportedly not monitored as closely as the other uranium transactions.[37]

SUPPLY AND DEMAND CONSIDERATIONS

Both supply and demand are frequently measured by the weight of uranium and the number of SWUs, reflecting the stages in the uranium fuel cycle.[38] The multiple measures for supply and demand are difficult to estimate, especially for future supply and demand. Long supply lead times are required at each stage of the fuel cycle and are accompanied by long-term purchase contracts; emerging re-enrichment of uranium tails and potential increased use of MOX should be considered; large uranium inventories, particularly of natural UF_6, have accumulated over the last few years; and production of LEU-HF blended down from HEU has increased. These factors have complicated efforts to estimate supply and demand, especially as the last two factors have led to disruption of the traditional fuel cycle and led to market uncertainty on the part of uranium suppliers, particularly the uranium concentrate producers and enrichers, and the purchasing electric utilities.[39] Further complicating estimates is the use

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[33] USEC buys only the SWU (enrichment) component of the Russian LEU-HF. U.S. utilities purchasing the Russian LEU-HF transfer their inventory of natural UF_6 to TENEX for the natural feed component and pay USEC for the SWU (enrichment) component of the Russian product.

[34] Except as noted above.

[35] Prices of just the conversion or enrichment are negotiated between the buyer and seller; they both likely refer to published price data for these processing services in negotiating a price.

[36] The suspension agreements prohibit swaps and loans of the uranium imported from Russia and Uzbekistan.

[37] Swaps and loans are discussed in detail in Part V.

[38] The quantity of uranium concentrates is expressed in pounds of U_3O_8 or kgs/metric tons of U in the U_3O_8; conversion to produce natural UF_6 is frequently expressed in kgs/metric tons of U; and conversion to produce natural uranium dioxide (UO_2) and low-enriched UO_2 is expressed in metric tons of U of heavy metal (tHM)--the weight of uranium in the natural or LEU uranium compound. Sometimes, however, a collective measure of all the uranium products is reported in pounds of equivalent U_3O_8 or kgs/metric tons of equivalent U as natural uranium. Enrichment services are expressed in units of SWUs.

[39] U.S. electric utilities reported in their purchaser questionnaire responses on significant changes in uranium supply and demand factors in the United States during 1992-99. On the supply side, the most frequently discussed

(continued...)

of two alternative concepts of uranium demand: nuclear reactor uranium requirements or the volume of uranium purchases. Due to long-term purchase contracts, purchased quantities of uranium can be very different from reactor requirement quantities during a particular period. Overfeeding and underfeeding by enrichers also complicate efforts to measure supply and demand.[40]

The technology to produce uranium varies among producing countries and by the type of uranium product.[41] Production of uranium concentrates in the United States is based primarily on ISL recovery of uranium, whereas production in Canada and Australia, the major world producers of uranium concentrates, is based primarily on conventional mining (underground and open-pit).[42] Ore deposits in Canada are particularly rich, while deposits in the United States are considered to be of a much lower quality. The methods used to convert uranium concentrates to natural UF_6 generally do not impart a significant advantage to one producer over another; the principal converters are located in Canada, France, Russia, and the United States. Enrichment processes, however, differ significantly. The gaseous diffusion process of enriching uranium is used in China, France, and the United States, while the centrifuge process is used in China, Germany, Japan, Russia, the Netherlands, and the United Kingdom. The gaseous diffusion process uses more energy than the centrifuge process, while capital costs of a centrifuge plant are greater than for a gaseous diffusion facility. The gaseous diffusion process allows for larger-scale production that can be changed relatively easily to allow for changing market conditions, but such changes may involve higher unit production costs.[43] On the other hand, high investment costs and relatively low operating costs of a centrifuge plant provide little incentive to operate at less than full capacity. Processes to produce LEU-DO, particularly the ability to handle different types and qualities

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[39] (...continued)
factors were increased supplies of uranium concentrates principally from new and expanded mining operations in Canada and Australia, and increased supplies of natural UF_6 and LEU-HF from the Russian HEU Agreement and from USEC and DOE uranium inventories. U.S. uranium concentrates production was generally characterized as small scale and based on very low ore contents, which generally made it difficult for such U.S. production to be competitive with larger-scale, high-grade ore producers in Canada and Australia. U.S. enrichment was characterized as based on old, inefficient technology that is more energy intensive than newer facilities, such as those in Russia. On the demand side, purchasers noted the ongoing deregulation of the electricity market in the United States and the need to maintain low fuel costs.

[40] USEC reportedly uses less natural uranium feed (underfeeds) and more SWU to achieve a given enrichment level when its power costs are low relative to prices of the feed; USEC keeps as its inventory the excess natural uranium from that shipped by the utilities for the enrichment. On the other hand, USEC uses natural uranium feed from its vast inventory of natural UF_6, in addition to that shipped to it by utilities for the enrichment (overfeeds), to achieve a given enrichment level when its power costs are high relative to prices of the feed. In the first example, the tails assay would be less than that specified in the contract, while, in the second example, the tails assay would be higher than that specified in the contract. For a given amount of natural uranium feed, more SWUs are required to achieve higher product assays.

[41] World uranium production, even at the uranium concentrates level, involves relatively few firms, but supply of the various products and toll-production services remain competitive. Abundant supplies, generally comparable uranium quality and specifications worldwide, and generally large-scale operations requiring high output levels have helped ensure competitive markets. Trade restrictions on uranium, however, could easily lead to supplier-dominated markets due to the large-scale supply operations of relatively few producers.

[42] ISL recovery of uranium allows greater flexibility to adjust production levels of uranium concentrates than conventional mining, which is geared to much greater volumes. In addition, the ISL recovery method requires less capital investment and can be installed more quickly.

[43] ***.

of low-enriched feed compounds, may favor one fabricator over another;[44] the principal world fabrication facilities are located in Canada, France, Japan, Russia, and the United States.

Production or toll processing of uranium at each stage of the traditional fuel cycle requires substantial capital investment and use of energy. Uranium converters, enrichers, and fabricators that enjoy ready access to low-priced electricity and uranium concentrators that have access to high-grade ore bodies have a significant advantage over producers that do not; proximity to utilities, however, does not confer an advantage, as uranium has a high value-to-weight ratio and swaps, loans, and book transfers frequently occur, minimizing the physical movement of uranium.

The changes in the U.S. uranium industry noted above have disrupted traditional demand and supply relationships along the stages of the nuclear fuel cycle. In the past, there was limited substitution between uranium concentrates and toll-enrichment services and virtually no substitution for the natural conversion and toll processing of uranium (the latter at the fabrication stage). Even today there are essentially no substitutes for uranium at the reactor stage in the U.S. market, although MOX is used by several electric utilities in Europe and Japan. However, the availability of significant volumes of natural UF_6 and LEU-HF act as substitutes for uranium concentrates, natural conversion, and enrichment services, and affect the prices, demand, and supply of these latter products/toll-services.[45] Although the strength of such substitution is not clearly known and may still be developing, it may continue to increase in significance because worldwide inventories of uranium, particularly in the natural UF_6 form, are reportedly large. In addition, re-enriched uranium tails, which are produced in Russia, substitute for natural UF_6 produced via the mining/concentrate and conversion stages in the fuel cycle. Continuing production of LEU-HF blended down from Russian HEU and, to a lesser extent, from U.S. HEU bypasses much of the traditional fuel cycle and could provide a more direct and simpler way for electric utilities to obtain their uranium requirements.[46] U.S. electric utility demand for EUP may increase in the future as a result of continuing U.S. deregulation of electricity generation and distribution as it may provide nuclear power generating companies with greater flexibility in supplying fuel for nuclear reactors and enable them to operate with less inventory.[47] Eleven U.S. electric utilities indicated in their questionnaire responses that since 1993 they began purchasing directly or increased their direct purchases of natural UF_6 and EUP because these processed products were becoming increasingly available and were priced lower than if they obtained the products through the fuel cycle process.[48] One

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[44] U.S. fabricators assert that they are the most efficient in the world.

[45] Based on total 1999 deliveries of U.S. electric utility purchases of uranium, 26.8 percent were direct purchases of natural UF_6 and 9.7 percent were direct purchases of LEU; most, if not all, of the latter product was likely LEU-HF (*Uranium Industry Annual 1999*, EIA, DOE, May 2000, table 13, p. 22). The combined direct purchases of natural UF_6 and LEU of 36.5 percent of total deliveries in 1999 was substantially higher than the 15.7 percent share in 1997 (*Uranium Industry Annual 1997*, EIA, DOE, April 1998, table 13, p. 22).

[46] Most enriched uranium purchased by U.S. electric utilities is transacted by paying for the SWU content and transferring the natural feed component. ***. Buying the Russian LEU-HF directly may be problematic because the natural uranium component would still fall within the confines of the Russian HEU Agreement and the USEC Privatization Act and possibly delay full use of the Russian low-enriched product. As U.S. electricity deregulation continues, the U.S. utilities will want to have available the maximum number of alternatives to achieve the lowest cost of obtaining enriched uranium (purchaser questionnaire response of ***).

[47] EIA, DOE, *Commercial Nuclear Fuel from U.S. and Russian Surplus Defense Inventories: Materials, Policies, and Market Effects*, May 1998, pp. 69-70.

[48] On the other hand, 22 U.S. electric utilities indicated in their questionnaire responses that they have either not directly purchased processed uranium or not increased their purchases of such products during 1997-99. Most of

(continued...)

of these responding utilities, ***.

U.S. Supply

Based on the available information, U.S. producers in the uranium fuel cycle have a *** ability to change their supply quantities in response to changes in demand for uranium. This is based largely on excess capacity and significant uranium inventories, particularly natural UF_6.[49] Inventories of natural UF_6 held by DOE and USEC alone reportedly provide for *** of U.S. nuclear reactor uranium product requirements. On the other hand, most U.S. electric utilities have sold off what they considered to be excess inventories.

U.S. enrichers and fabricators have sufficient total capacity to supply total annual U.S. nuclear reactor requirements at their respective stages in the fuel cycle.[50] In addition, USEC imports LEU-HF under the Russian HEU Agreement and ***, the latter enabling it to be a supplier of EUP as well as enrichment services.[51] The imported LEU-HF reportedly led to *** and likely reduced sales opportunities for U.S. concentrators and the U.S. converter.[52]

Domestic uranium production is discussed below by the four main stages in the nuclear fuel cycle–concentrators, converters, enricher, and fabricators. A discussion of foreign supply follows the discussion of domestic supply, again with respect to the four main product stages.

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[48] (...continued)
these utilities noted that they already had contracts in place to buy uranium concentrates and to obtain the conversion, enrichment, and fabrication services. Two of these purchasers, ***, indicated that they continued to buy their uranium in the traditional manner because their long-term contracted component prices were lower than prices of natural UF_6 or EUP.

[49] U.S. uranium producers all along the uranium fuel cycle reported in their U.S. producer questionnaire responses during these five-year review investigations that they were not able to produce other products on the equipment and with the labor used to produce the subject uranium products.

[50] On the other hand, total capacity of U.S. concentrate producers equals about *** percent of annual U.S. reactor demand and total capacity of the U.S. converter equals about *** percent of annual U.S. reactor demand. These figures are based on capacity for 1999 reported in U.S. producer questionnaires during these five-year review investigations and U.S. 1999 reactor requirements of 18,864 metric tons U (49.0 million pounds of U_3O_8) reported by the Uranium Institute. Due to increased direct purchases of natural UF_6 and EUP, the amount of contracted uranium concentrates and natural conversion needed for the same level of nuclear fuel requirements may have fallen.

[51] USEC imports additional LEU-HF from Russia under provisions of the Russian Suspension Agreement. Because it also has large inventories of natural UF_6, it can also act as a supplier of this product as well.

[52] As noted earlier, U.S. electric utilities have purchased directly the LEU-HF generally by a book transfer of their natural UF_6 as the feed component and paid for the SWU component. This type of transaction displaces not only some current SWU production but also displaces some future U_3O_8 production and conversion as the natural UF_6 was transferred from an electric utility's inventory for use to a trader's inventory for sale. Hence, sales of LEU-HF blended down from HEU also act to increase the supply of the natural feed component.

Domestic Production[53]

U.S. Concentrators

The United States is estimated to have 382,000 metric tons of natural U ore reserves, with 56,000 metric tons of class I, low-cost, reserves (recovery costs less than $40.00 per kg U). This latter figure represents about 4.2 percent of total world class I, low-cost, uranium reserves.[54]

Industry capacity--Average annual U.S. production capacity and production of uranium concentrates fluctuated during 1997-99, such that capacity utilization fluctuated but fell from 39.2 percent in 1997 to 36.6 percent in 1999 (table I-3).

Expansion of capacity to produce uranium concentrates is expensive and typically would take more than 1 year to complete. ***.[55] ***.[56] ***.

Inventory levels--U.S. concentrators generally produce uranium concentrates to meet their sales commitments, such that the bulk of their inventories as reported in Parts I and III are not likely to be available as additional supply.

Export markets--U.S. producers' export value of uranium concentrates averaged 23.6 percent of their total sales value during 1997-99, but this ratio was only 7.3 percent in 1999. U.S. producers reported in their questionnaire responses that they could not easily switch sales of uranium concentrates from the domestic market to foreign markets within a 12-month period. They cited most frequently the unpredictability of U.S. safeguards requirements that are not easily overcome with economic incentives alone,[57] but they also noted that long-term contract obligations effectively prevent shifting of sales in the short run, and that it was difficult to enter the European and Japanese markets because those electric utilities have sufficient inventories to fill their needs for several years.

U.S. Converter

ConverDyn, the sole U.S. converter, processes U_3O_8 into natural UF_6 on a toll basis. U.S. utilities typically have their uranium concentrates converted to natural UF_6 by ConverDyn or by Cameco in Canada.

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[53] Data and information on U.S. production, capacity, capacity utilization, inventories, and exports of uranium are shown in detail in Parts I and III. Such information is briefly summarized in this section.

[54] *The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," pp. 88-89.

[55] ***.

[56] The Nuclear Regulatory Commission allows up to 2 years of standby status for a uranium mining and milling operation, but this period can be extended if there is evidence of future production capability at the site. Permanent shutdown likely entails significant costs and regulatory procedures/inspections.

[57] Under U.S. law, U.S.-produced nuclear material remains subject to U.S. jurisdiction even after it has left the customs territory of the United States. Some foreign uranium purchasers perceive this continuing U.S. control as unreasonably intrusive, and will seek to avoid U.S. material (including USEC's SWUs) that is subject to these controls (based on questionnaire responses by ***).

Industry capacity--*** (table I-4). As a major supplier of conversion services to the U.S. market, ConverDyn's recent drop in capacity utilization reportedly resulted from the increase in sales of natural UF_6, EUP, and Russian LEU-HF.

Expansion of natural uranium conversion capacity is very expensive and would take more than 1 year to complete. ***.

Inventory levels--ConverDyn produces natural UF_6 on a toll basis only, such that its inventories of this product reported in Part I meet its toll-service commitments. As a result, these inventories would not be a source of additional supply. On the other hand, ***.[58] TENEX reportedly has significant and increasing holdings of natural UF_6 in the U.S. market that result largely from sales of the Russian LEU-HF blended down from HEU. In addition, ***.[59]

Export markets--ConverDyn's export value of its toll-converted natural UF_6 averaged *** percent of its total toll-conversion sales value of this product during 1997-99. ConverDyn indicated in its questionnaire responses that ***.

U.S. Enricher

USEC is the only U.S. enricher of uranium. Although traditionally USEC had produced LEU-HF for electric utilities almost exclusively on a toll basis, it has increasingly also become a supplier of EUP based primarily on its domestic production.

Industry capacity--*** (table I-5). As a major supplier of enrichment services to the U.S. market, USEC's low and falling capacity utilization reportedly has resulted, at least partially, from the increase in sales of Russian LEU-HF during 1997-99.[60]

Expansion of uranium enrichment capacity is very expensive and would take more than 1 year to complete.

* * * * * * *

Inventory levels--USEC's U.S. inventories of its U.S.-produced LEU-HF, as a ratio of its total SWU sales, ***. These inventories represent ***;[61] ***. On the other hand, USEC and GNSS reported in their importers' questionnaires that at the end of 1999 they held combined U.S. inventories of the imported Russian LEU-HF amounting to *** kgs of enriched U containing almost *** SWUs.

Export markets--USEC's SWU exports of U.S.-produced LEU-HF averaged almost *** percent of its total SWU sales during 1997-99. USEC indicated in its questionnaire responses that ***. In addition, the aforementioned U.S. law regarding continuing U.S. jurisdiction over U.S.-produced nuclear material also applies to LEU-HF. These legal requirements dampen foreign demand for U.S. uranium

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[58] In addition, DOE owns natural UF_6, amounting to the equivalent of about 58 million pounds of U_3O_8, that it has agreed to hold from the market for 10 years (*Uranium Industry Annual 1999*, EIA, DOE, May 2000, p. 30 and ***); this inventory would not contribute to short-run supply. However, a U.S. electric utility, ***.

[59] ***.

[60] ***.

[61] ***.

and make it difficult to quickly shift sales between domestic and foreign markets. Long-term contracts for toll-enrichment services typically run 5-7 years and also constrain shifting enrichment services to foreign customers.

U.S. Fabricators

Four U.S. firms operate nuclear fuel-rod assembly fabrication facilities that include the conversion processing and pelletizing of low-enriched uranium.[62] Based on responses of the three responding fabricators, uranium processing at the fabrication stage represents about *** percent of the total fabrication costs to produce the completed fuel-rod assemblies. The U.S. suspension agreements and antidumping duties may put U.S. fabricators at a competitive disadvantage vis-a-vis their foreign competitors, although fabricators in the EU must contend with EU import quota restrictions on uranium from countries of the former USSR.

Industry capacity--*** (table I-6). Expansion of low-enriched uranium processing capacity in connection with nuclear fuel-rod assembly production is very expensive and would take more than 1 year to complete. ***.

Inventory levels--U.S. fabricators' process LEU-HF into LEU-DO primarily on a toll bases, such that their inventories of this product reported in Part I would not be a source of additional supply. In converting and processing LEU-HF into LEU-DO and pelletizing this latter compound, U.S. fabricators typically need to adjust the enrichment of the low-enriched feed. As a result, they frequently borrow some feed of one utility that they hold in inventory to adjust the enrichment of another utility's feed that they are currently converting and pelletizing. This type of flexibility is prohibited for the uranium subject to the suspension agreements.

Export markets–***.

Imports[63]

Major foreign producers of uranium at all of the major production and processing stages of the fuel cycle are important suppliers of these products/services to the U.S. market. Nineteen countries exported uranium products and services to the United States during 1997-99. Although swaps and loans may mask somewhat the full extent of the foreign uranium in the U.S. market, official U.S. import statistics may be indicative of foreign uranium used by U.S. electric utilities.[64] The total landed duty-paid value of U.S. imports of uranium concentrates fell significantly during 1997-99 as did the total value of U.S. imports of natural UF_6, low-enriched uranium oxides, and other LEU. On the other hand,

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[62] In addition, they frequently make small adjustments to the enrichment assay of the uranium to fit their customers' needs.

[63] The data on uranium imports are shown in detail in tables I-2 through I-6 and are briefly discussed here. Data on foreign-country production, capacity, capacity utilization, and shipments of uranium are shown in detail in Part IV of the report and are briefly discussed here.

[64] As indicated in Part I, official U.S. import statistics for uranium may contain significant classification errors by products and countries.

the total value of U.S. imports of other natural uranium and LEU-HF increased significantly during this period.[65]

Russia

The value of U.S. imports of all uranium products from Russia, based on questionnaire responses, increased steadily during 1997-99; such imports involved uranium concentrates and LEU-HF. Uranium imported from Russia accounted for *** percent of the total value of all U.S. imports of uranium during this period. The landed duty-paid value of imported Russian uranium concentrates accounted for *** percent of total U.S. imports of this product during 1997-99, while the value of imported Russian LEU-HF accounted for *** percent of total U.S. imports of this uranium product.

As discussed in Part IV, it is believed that Russia has capacity to produce all the uranium products, including re-enrichment of uranium tails and reprocessing of spent nuclear fuel.[66] Although Russia's home market demand for uranium enrichment was estimated to have averaged about 2.1 million SWUs annually during 1997-99, it is estimated to have annual enrichment capacity of 20 million SWUs.[67] Russia reportedly uses some of its enrichment capacity to re-enrich uranium tails in its inventory as well as some from Europe, providing another source of uranium.[68]

Russia also produces uranium concentrates and has both natural uranium conversion capacity and fabrication facilities. Russia, Kazakhstan, and Uzbekistan together have about 30 percent of the world's class 1 uranium concentrate reserves, or about 1.4 billion pounds of U_3O_8.[69] Russia currently has one conventional mine in operation, but is investigating the practicality of applying ISL mining methods. Nukem reports that Russia averaged 1,613 metric tons of natural U production (4.2 million pounds of U_3O_8) annually during 1997-99 and estimates annual production of 1,500 metric tons of natural U

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[65] These import trends were based on official U.S. import statistics of Commerce. The other natural uranium category includes only natural uranium as natural uranium metal, natural uranium other than in compounds, and natural uranium compounds other than uranium oxide and uranium hexafluoride. The other LEU category includes enriched uranium alloys, dispersions, ceramic products, and mixtures.

[66] The potential to divert shipments from third-country markets, however, may be constrained by long-term contracts.

[67] *The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," pp. 172 and 136, respectively.

[68] It was estimated that the world inventory of uranium tails at the end of 1997 stood at 1.35 million tons of U, with Russia holding about 40 percent of the total (*The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," p. 121). Assuming that the Russian tails averaged about 0.3 percent U^{235}, this would equal about 609.3 million pounds of U_3O_8, or enough to satisfy uranium reactor requirements in the United States for about 12 years. The United States holds almost 42 percent of the world tails, which, assuming an average assay of 0.3 percent, would equal about 626.0 million pounds of U_3O_8, or enough to satisfy uranium reactor requirements in the United States for about 12.5 years.

[69] Class 1 reserves are ore bodies where uranium can be recovered at a cost of less than $80 per kg of natural U (*The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," p. 90).

(3.9 million pounds of U_3O_8) during 2000-01.[70] Russia has 25 percent of the world's annual natural UF_6 conversion capacity,[71] and 15 percent of the world's annual light-water-reactor fabrication capacity.[72]

Excess capacity in the Russian uranium industry may exist at least at the enrichment level of the fuel cycle, based on domestic enrichment requirements estimated to be only about 10 percent of enrichment capacity. However, Russia reports that its enrichment capacity is fully utilized, including *** percent of this capacity used for its domestically designed reactors (at home and in other countries).[73]

The extent of inventories of uranium concentrates, natural UF_6, and LEU-HF located in Russia are not precisely known,[74] although it was indicated at the hearing that the Russian Government held 770 metric tons of HEU in addition to the 500 metric tons as part of the HEU agreement with the United States.[75] Despite reports of vast inventories, the Russians testified at the hearing that ***.[76] In addition, the Russians reportedly have been re-enriching their uranium tails to use as a feed component in their blend-down operations.[77]

Ukraine

There were no reported direct U.S. imports of uranium from Ukraine during 1997-99.[78] Ukraine produces uranium concentrates, but does not have capacity to produce other products in the uranium fuel cycle. Although Ukraine has extensive uranium ore deposits, most are considered too deep and low grade to be economically recoverable.[79] Nukem reported that Ukraine produced 1,200 metric tons of natural U (3.1 million pounds of U_3O_8) annually during 1997-99 and estimates the same level of production during 2000-01.[80]

Nuclear power reportedly accounts for 35-40 percent of Ukraine's electrical generation. Ukraine's annual home market demand for uranium was estimated to have averaged the equivalent of

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[70] *Nukem Market Report*, April 2000, p. 30. On the other hand, the Russian respondents report production of *** metric tons U annually (Russian respondents' posthearing brief, app. A).

[71] Russia's annual natural uranium conversion capacity is estimated to be 15,000 metric tons of U compared to 12,700 metric tons of capacity in the United States.

[72] Russia's annual light water reactor fabrication capacity of 1,700 metric tons of heavy metal compares to that in the United States of 4,050 metric tons.

[73] Russian respondents' posthearing brief, app. A.

[74] In addition to uranium inventories in Russia, stocks of Russian-produced LEU-HF and LEU-DO exist in Kazakhstan. These inventories amounted to *** kgs U in LEU-HF and *** kgs U in LEU-DO in early 1999. As discussed in detail in Part IV, quality concerns cloud the commercial viability of at least some of this uranium and Commerce has yet to make a ruling on the origin of this uranium.

[75] The additional 770 metric tons of Russian HEU reportedly ***.

[76] TR, pp. 235-236.

[77] *Nuclear Fuel*, "Urals Plant Enriching Tails for Both Minatom and Urenco," October 6, 1997, p. 3.

[78] ***. As discussed in detail in part IV, questionnaire responses revealed a single instance where Ukrainian natural uranium was exported into the United States after being enriched in ***.

[79] *The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," p. 89.

[80] *Nukem Market Report*, April 2000, p. 30.

about 5.6 million pounds of U_3O_8 during 1997-99.[81] Ukraine has depended upon Russia for its enriched uranium, but recently the United States agreed to provide Ukraine with $30 million of assistance to enable the country to evaluate and certify the reliability and safety of non-Russian nuclear fuel.[82] This should allow Ukraine in the future to use its natural uranium as the feedstock for its enriched uranium needs.

Uzbekistan

The value of U.S. imports of uranium concentrates from Uzbekistan, based on questionnaire responses, increased steadily during 1997-99 and accounted for *** percent of the total value of all uranium concentrate imports during this period. Uzbekistan produces uranium concentrates, but does not have capacity to produce other products in the uranium fuel cycle.[83] Uzbekistan does not have any home market demand for uranium, but has capacity to produce almost *** million pounds of U_3O_8 annually and reportedly is ***.[84] During 1997-99, *** percent of Uzbekistan's total uranium shipments were exported to the United States and the remaining *** percent were exported to third countries. Uzbekistan projects that during 2000-01, *** percent of its total uranium shipments will be exported to the United States.

Nonsubject Imports[85]

Uranium concentrates--The two largest sources of U.S. imports of uranium concentrates during 1997-99, in descending order of importance by value, were Canada and Australia. Together these countries accounted for almost 72 percent of all U.S. imports of uranium concentrates during this period.

Worldwide uranium reserves (in the ground) amount to approximately 3.4 million metric tons, with about 52 percent of these classified as class 1 reserves (well-proven reserves) and 75 percent of these latter reserves in the low-cost category (recovery costs estimated to be under $40/kg U of natural uranium). These low-cost, well-proven reserves represent over 20 years of world reactor requirements at the current rate of consumption. Australia has the world's most extensive uranium reserves, amounting to 1.2 million metric tons or 35 percent of total world uranium reserves.[86] Canadian uranium reserves are also extensive and account for about 13 percent of world reserves, but, because a substantial portion of the Canadian uranium reserves are high grade, they have about 20 percent of the world's low-cost reserves. The United States currently has total uranium reserves that account for about 4.6 percent of the

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[81] *The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," p. 168.

[82] Ad Hoc Utilities Group posthearing brief, pp. 3-4.

[83] As indicated earlier, Kazakhstan, Russia, and Uzbekistan all have large class 1 reserves of uranium concentrates.

[84] Uzbekistan uses the ISL production method to produce uranium concentrates.

[85] The following discussion of U.S. imports of the major uranium product categories is accompanied by a short discussion of world production capacity. This latter information is based primarily on information reported in *The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020."

[86] Of Australia's total uranium reserves, 28 percent are called class 1 reserves and all of these are considered low-cost reserves totaling about 484,000 metric tons of the natural uranium (*The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," p. 87).

world total. Canada, Australia, Niger, and Namibia, in descending order of output, accounted for about 64 percent of total world production of uranium concentrates during 1997-99.[87]

Natural UF_6--The largest foreign source of natural UF_6 shipped to the U.S. market during 1997-99 was Canada, accounting for 88.4 percent of the total value of U.S. imports of this product during this period.

Annual world conversion capacity for processing uranium concentrates into natural UF_6 equals about 60,110 metric tons of natural U, which slightly exceeds current world annual reactor requirements of about 60,000 metric tons of natural U. Russia, France, the United States, and Canada, in descending order of capacity, together account for almost 87 percent of the total world conversion capacity to produce natural UF_6.

Low-enriched UF_6--The top sources of nonsubject U.S. imports of LEU-HF during 1997-99, in descending order of importance by value, were France, Germany, the United Kingdom, and the Netherlands. Together these countries accounted for almost 42 percent of all U.S. imports of LEU-HF during this period.

Annual world capacity for processing natural UF_6 into LEU-HF equals about 54.9 million SWUs, which easily exceeds estimated annual world enrichment requirements of 35 to 36 million SWUs. Russia, the United States, and France, in descending order of capacity, together account for about 90 percent of total world enrichment capacity.

Low-enriched uranium oxides--The official U.S. import data appear particularly erroneous for this uranium category; Kazakhstan is listed as the top source of the LEU oxides, although it was clear during Inv. No. 731-TA-539-A (Final), Uranium from Kazakhstan, that all such imports were not for U.S. consumption.

Annual world conversion capacity for producing LEU oxides for light water reactors equals 11,339 metric tons of enriched U (also expressed in tons of heavy metal or tHM), which exceeds current annual world reactor requirements by approximately 40 percent. The United States, Japan, Russia, and France, in descending order of capacity, account for almost 77 percent of this capacity.

U.S. Demand

The traditional uranium fuel cycle involves four major elements of U.S. electric utility's nuclear-reactor demand for uranium: the amount of uranium concentrates, conversion services to produce natural UF_6, enrichment services to produce LEU-HF, and conversion and pelletizing services to produce LEU-DO and the uranium pellets. The nature of this demand may be changing, however, as U.S. electric utilities are now able to bypass the fuel cycle by purchasing directly the processed products, especially natural UF_6 and EUP. This change, in turn, could lead to shorter lead times and allow electric utilities to reduce their long-term purchases of uranium in favor of shorter-term contracts, including spot contracts.

U.S. electric utilities have purchased a majority of the natural uranium and processing required for the final uranium product used in fuel-rod reloads largely through long-term contracts, i.e., three or more years prior to use of the purchased product/service. Reload cycles for U.S. utilities are typically 18 and 24 months. Each reload typically refuels about 36.0 percent of the total number of a utility's fuel

[87] *Nukem Market Report 1999*, April 2000, p. 30.

cells and averages about 35 days to complete.[88] During this period the entire plant is shut down and the utility usually purchases at least some electricity to supply its customers,[89] while also using electricity output from any other plants owned by the utility. While the plant is shut down, the utility company also undertakes routine maintenance and repair.

Annual reload requirements, expressed as the quantity of uranium and the number of SWU required, appear to be widely used measures of uranium demand. Numerous trade reports forecast annual reload requirements for individual countries and for the world based on the quantity of uranium and the number of SWUs required. In addition, the EIA reports U.S. uranium purchases (in pounds of U_3O_8 equivalents) in its annual reports of the U.S. uranium industry.[90] Long-term purchase contracts negotiated each year for uranium concentrates as reported by EIA fluctuated from 44.8 million pounds of U_3O_8 in 1997 to 27.1 million pounds in1998 and then to 44.1 million pounds in1999.[91]

U.S. nuclear reactor requirements in metric tons of natural uranium and in uranium enrichment SWUs during 1997 and estimates/forecasts for 1998-2002 are shown in the following tabulation.[92] The Uranium Institute provided three estimate/forecast scenarios, low, middle (reference), and high. The estimates/forecasts for 1998-2002 shown in the tabulation are based on its reference scenario.[93]

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[88] U.S. electric utilities do not refuel all of the reactor's fuel rods at once, because they achieve higher burn-up rates (consumption of the U^{235}) when done partially (***).

[89] Higher operating levels and/or longer reload cycles require more uranium at higher levels of enrichment. Although *** percent or more of reload costs are accounted for by the costs of uranium and fabrication services, U.S. electric utilities reported in their questionnaire responses that energy requirements, core design, plant operation and maintenance, and safety are the most important considerations in the length of the fuel cycle. Five utilities noted, however, that lower fuel costs make the longer fuel cycles more beneficial.

[90] The quantity of uranium and toll processing purchased annually and typically negotiated in the form of long-term contracts, but also including some spot contracts, also represents uranium demand. This measure of demand is principally for reload requirements in the future and, therefore, is based on perceptions, in the current period, of distant future demand and supply conditions. Because of different contract lengths, such demand is a mix of several future time periods and this mix can change from contract year to contract year; such a change in mix could by itself lead to apparent changes in demand even when underlying perceptions of future demand remain unchanged. In addition, it is not clear when or where long-term contract purchases of uranium/processing would actually be consumed; electric utilities could choose to increase their inventories when deliveries occur and purchase their requirements in the spot market, they could sell the contracted uranium/processing to draw down their inventories, and/or they could swap or loan the contracted uranium/processing. Due to the uncertainties resulting from this disconnect between the period of purchase and the period of actual consumption, purchases represent a more ambiguous basis to measure demand than reactor requirements.

[91] These figures represent contract purchases negotiated in the specified year for deliveries in subsequent years. Purchases in 1997 were for deliveries up to 8 years in the future, purchases in 1998 were for deliveries up to 7 years in the future, and purchases in 1999 were for deliveries up to 10 years in the future.

[92] The link between uranium requirements and enrichment requirements is not one-to-one. Although most factors affecting uranium demand and enrichment work in the same direction, as indicated earlier, tails assays work in the opposite direction in terms of the impact on demand for uranium and enrichment. As a result, sometimes small changes in uranium requirements in one direction will be associated with changes in enrichment requirements in the opposite direction.

[93] The reference scenario is based on the following 4 assumptions: (1) Slight improvement in the relative economics of nuclear power generation compared to alternative power generation such as coal and natural gas; (2) concerns regarding global warming fail to pass enough of the external costs of fossil-fuel-based electricity generation through to the prices of this electricity to achieve a major shift in the mix of energy sources; (3) gradual

(continued...)

Year	Metric tons of U in natural uranium	SWU (1,000's)
1997	18,750	10,300
1998	19,008	10,933
1999	18,864	10,996
2000	18,739	10,859
2001	18,565	10,693
2002	18,417	10,743
Source: *The Uranium Institute Market Report 1998*, "The Global Nuclear fuel Market: Supply and Demand 1998-2020," pp. 75-76, 168 and 172.		

U.S. electric utilities' historical deliveries of uranium feed for enrichment by delivery year, 1997-99, and U.S. electric utilities' anticipated uranium market requirements by delivery year, 2000-02, are shown in the following tabulation (the estimates for 2000-02 are as of December 31, 1999).

Year	Thousands of pounds of U_3O_8 equivalent	Year	Thousands of pounds of U_3O_8 equivalent			
			Uranium under contracts	Unfilled market requirements	Anticipated total market requirements	Enrichment feed deliveries
1997	40,302	2000	43,436	3,927	47,363	51,848
1998	40,630	2001	36,004	8,081	44,085	42,786
1999	43,909	2002	27,734	18,054	45,788	48,842
Source: *Uranium Industry Annual 1999*, EIA, DOE, May 2000, tables 21 and 22, p. 26.						

The utilities' deliveries of uranium feed shown in this tabulation are for U.S. and foreign natural uranium sent to the enricher in the United States and to foreign enrichers. The enrichment may satisfy reload requirements in the year shown and/or the following year. The quantity of uranium under contract, estimated for 2000-02, includes the minimum required under the contracts plus optional deliveries specified in the contracts. Unfilled market requirements represent uranium estimated by EIA

[93] (...continued)
restructuring and liberalization of electricity sectors continues; and (4) public wariness toward nuclear projects continues.

that will be purchased in the future.[94] Anticipated total market requirements are the sum of the first two figures. The quantity of enrichment feed deliveries includes the anticipated total market requirements plus the utilities' estimated inventory adjustments (draw downs and build ups) and purchases of EUP.

The derived nature of demand for uranium indicates that the level of U.S. demand for uranium depends on the level of U.S. demand for electricity, the number of operating U.S. nuclear power plants fueled by uranium, and the capacity utilization (load factor) of these nuclear power plants.[95]

As indicated earlier, demand for electricity is affected by the rate of economic growth and by population changes. The U.S. economy has experienced a sustained period of growth since about midyear 1991; U.S. real GDP is expected to grow by 4.8 percent in 2000 and 3.3 percent in 2001.[96] Electricity demand in the OECD countries is expected to grow at an average annual rate of 2.0 percent to 2.6 percent during the current period through 2005.[97]

The number of U.S. operating nuclear power plants and their level of electricity output are affected by a number of factors, including competition with other types of power plants, public concern for safety and political concern regarding nuclear proliferation, and the age and physical condition of the existing nuclear power plants. In addition, ongoing U.S. deregulation of electricity generation and distribution will continue to affect the makeup of U.S. power generation.

U.S. nuclear power plants compete principally with coal-fueled power plants, but also importantly with hydroelectric and natural gas power plants.[98] Nuclear-fuel plants use a much smaller volume of fuel compared to the other types of power plants. This advantage allows stockpiling of uranium to meet several years of fuel requirements, leading to energy independence and security of supply; nuclear refueling programs tend to be less exposed to large swings in prices, supply disruptions, and currency fluctuations. In addition, operations of nuclear power plants do not emit pollutants like the fossil-fuel power plants. On the other hand, nuclear power plants involve complex engineering of safety systems and long construction lead times which have resulted in high capital costs compared to the other types of power plants.[99] In addition, nuclear power plants must dispose of highly radioactive spent fuel and the tails waste (a concentrated form of uranium). Debate on a disposal solution for these products has continued for years, with public safety interest groups skeptical of proposed solutions. Increased use of MOX in Europe and Japan may provide an alternative to storage proposals of the spent nuclear fuel and tails that have been resisted so far by the U.S. general public. USEC reported in its questionnaire

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[94] Estimates of unfilled requirements and enrichment feed deliveries that are more than 2 or 3 years into the future are often subject to substantial revisions (telephone conversation with Doug Bonnar, EIA on June 10, 1999).

[95] Downtime for fuel-rod reloads and unexpected breakdowns in equipment lower the load factor of a nuclear power plant.

[96] *Blue Chip Economic Indicators*, June 10, 2000, pp. 2-3.

[97] This is lower than the average annual growth rates of 7.6 percent in the 1960's, 4.4 percent in the 1970's, and 2.8 percent in the 1980's. The declining growth rate of electricity consumption in developed countries reflects the relative increase in the services sector of developed economies.

[98] During 1996, about 56 percent of the electricity produced in the United States was generated by coal-fueled power plants, 22 percent was by uranium-fueled nuclear power plants, 11 percent by hydroelectric plants (water as fuel), 9 percent by natural-gas fueled power plants, and 2 percent by oil-fueled power plants. In 1997, nuclear power plants accounted for an estimated 20.1 percent of total electricity produced in the United States. (*The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," p. 27).

[99] This disadvantage may be reduced in the future as new nuclear power plant designs require lower capital costs and shorter construction lead times (*The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," p. 39).

response that ***. Another disadvantage of nuclear fuel power plants is the concern for nuclear proliferation. This has resulted in close worldwide monitoring and licensing of the production, storage, use, and disposal of uranium; these measures have resulted in higher administrative costs to use uranium compared to fossil fuels.

The aging U.S. nuclear power plants, with some approaching their operating lifetime of 40 years,[100] may be subject to excessive downtime for maintenance that will act to lower operating capabilities and raise operating costs.[101] Load capacities of U.S. nuclear power plants, which generally improved during 1990-95, declined in 1996 and 1997, to 70.9 percent of full capacity, or almost 5 percent below the world average.[102] Commonwealth Edison closed two nuclear power plants in 1998 prior to expiration of their 40-year operating licenses reportedly because the plants were uneconomic. Ongoing U.S. deregulation of the electricity sector is creating more competition in the production and distribution of electricity. As part of this change, power plants, including nuclear power plants, are being divested from electricity distribution functions. The restructuring of electricity markets will likely lower selling prices of electricity, thereby affecting the investment climate for new power plants, including nuclear power plants.[103]

Based on the above factors, the outlook over the next few years for nuclear power plants in the United States is mixed; some plants are likely to close due principally to restructuring and others are likely to improve their performance and become cost-competitive generators of electricity.[104] Whether total electricity output of U.S. nuclear power plants changes will depend on whether any increase in load factors will offset the decline in the number of operating plants.

The price sensitivity of U.S. uranium demand depends on the availability of substitutes for uranium and the cost share of uranium to the total costs to produce electricity. There are effectively no substitutes for the final uranium product used in U.S. nuclear power plants. As indicated earlier, MOX is an alternative nuclear fuel, which uses some uranium, in some foreign power plants. Although MOX is being considered for use by U.S. nuclear power plants, there is no schedule for introduction and it is not clear how much investment may be required to alter U.S. nuclear reactors to permit the use of this

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[100] U.S. regulatory agencies have developed procedures for nuclear power plants to qualify for extensions of their operating licences beyond the 40-year period. Although several U.S. electric utilities have indicated that they will seek extensions, it is too early to tell how many petitioning nuclear power plants will be able to satisfy extension requirements. One consideration in closing down a nuclear power plant is the reportedly large cost of decommissioning a nuclear facility, because it is radioactive even after the fuel rods have been removed.

[101] The United States has the largest number of nuclear power plants of any country and accounts for about 28 percent of world annual operating capacity, or 96,831 megawatts of electricity. The United States has no new nuclear power plants under construction. (*The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," p. 33).

[102] The operating load factor of U.S. nuclear power plants depends on the level of electricity demand, on the relative price of the nuclear-generated electricity versus electricity prices of fossil-fuel and hydroelectric plants, and the amount of downtime. Longer fuel-rod reload cycles and refurbishment of aged nuclear power plants will lead to less downtime.

[103] The high capital costs and relatively long construction periods of nuclear power plants make new investments in these plants less attractive than some lower cost non-nuclear power plants, such as the combined cycle gas-fired plant. This latter type of plant is providing most of the new electrical generating capacity in deregulated electricity markets (*The Uranium Institute Market Report 1998*, "The Global Nuclear Fuel Market: Supply and Demand 1998-2020," p. 40).

[104] Nuclear power plants in good condition and with their investment costs already sunk should be in a good position to produce electricity cheaply, as long as they have continued access to low fuel costs.

alternative nuclear fuel.[105] Excess inventories of natural UF_6 and availability of LEU-HF act as substitutes for the mining/production of uranium concentrates and natural UF_6 conversion services.[106] Large sources of LEU-HF in the U.S. market are the imports of LEU-HF from blended-down HEU that are controlled by the Russian HEU Agreement and U.S. imports of LEU-HF from Russia under the matched sales and grandfather provisions of the Russian Suspension Agreement. Partial bypass of the nuclear fuel cycle also occurs due to some re-enrichment of uranium tails by Russia.

Uranium accounts for about one-third of the total costs to produce electricity in nuclear power plants.[107] In light of the large capital costs, the cost share of uranium would be more significant after the capital costs have been fully depreciated than during the period of depreciation.

SUBSTITUTABILITY ISSUES

U.S.-produced uranium and imported uranium are generally physically interchangeable from the electric utilities' perspective in meeting product requirements of their U.S. nuclear power plants.[108] On the other hand, quality of uranium feedstock is an issue for the downstream processor, who may prefer specific supply sources.[109] U.S. imports of uranium from the two countries subject to U.S. suspension agreements reportedly are perceived to be less desirable because of the administrative burdens and swap/loan prohibitions of the suspension agreements.[110] It is not clear how the U.S. market perceives uranium from Ukraine. Foreign uranium and uranium services from the former USSR are frequently purchased by U.S. utilities on both spot and long-term contract bases.[111] As noted earlier, worldwide

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[105] Nineteen U.S. electric utilities reported in their purchaser questionnaire responses that they cannot use MOX in their nuclear reactors and they have no intention to do so, while 11 U.S. electric utilities indicated that they could use MOX, although one answering yes, ***. DOE's MOX fuel fabrication facility may be operational by 2007 (the Ad Hoc Utilities Group posthearing brief, p. 3).

[106] In addition, utilities substitute natural uranium feed for SWU, depending on the relative product prices. ***. As indicated earlier, USEC also substitutes between SWU and natural uranium feed depending on its power costs relative to the feed value by under- or overfeeding.

[107] ***.

[108] In the nuclear fuel cycle, U.S. electric utilities purchase uranium under contracts specifying that, as the uranium passes through successive stages of the fuel cycle, the producers and processors must correct any deficiencies in the quantity, assay, or purity of the uranium that they produced or processed.

[109] ***. During Inv. No. 731-TA-539-A (Final), Uranium from Kazakhstan, testimony of GE indicated that at least a portion of the low-enriched uranium in Kazakhstan had substantial quality problems.

[110] ***. Purchasers generally reported that swaps of uranium take the form of location swaps, country of origin swaps, and deconversion swaps, which facilitate processing, lower fuel costs, provide flexibility to the end user to control fuel costs, and make the market more efficient. On the other hand, loans help match excess uranium of some firms with shortfalls in uranium of other firms. The responding utilities indicated that the exact amount of uranium feed required for enrichment and LEU-DO conversion is difficult to predict such that sometimes the enricher and more frequently the fabricator temporarily borrow uranium feed of one firm to make up a shortfall in feed from another firm in producing LEU-HF and LEU-DO. Such loans reportedly increase the efficiency of production and reduce fuel costs to the electric utilities.

[111] Toll-processing of uranium by foreign companies is purchased by U.S. utilities either directly or indirectly. In a direct purchase, U.S. electric utilities contract for the foreign conversion, enrichment, or fabrication and the feed product owned by U.S. utilities is physically processed in the foreign country and finally shipped to the United States. In an indirect purchase, U.S. utilities import or purchase the imported foreign-processed uranium, pay for

(continued...)

regulation and monitoring of uranium production, distribution, inventories, and waste/spent-fuel disposal have led to a world market where spot and long-term contract price indicators for uranium and the toll-processing services are published, usually on a monthly basis and typically on a restricted and unrestricted market basis. Further evidence of the substitutability of uranium and uranium processing unrestricted by import programs is the reportedly frequent, but largely untracked, use of swaps and loans. Such activity is usually indicative of a product that has fairly homogeneous physical characteristics and is traded competitively and relatively freely.

Factors Affecting Purchasing Decisions

Purchase Factors

Thirty-one U.S. electric utilities operating nuclear power plants responded to a request in the purchaser questionnaires to rank 14 purchase factors shown in table II-1 as very important (VI), somewhat important (SI), and not important (NI). A majority of the electric utilities responded for all countries and all uranium products/processing-services combined, while a few reported for individual countries of origin and or individual uranium products/processing-services. The latter responses were similar to the combined responses such that the presentation and discussion in the report aggregates all responses. The total number of responses is shown separately for each purchase factor.[112] In descending order, lowest price, reliable supply,[113] availability, and product quality were the most important factors. U.S. freight costs, packaging, product range, and transportation network were ranked as the least important factors. Lowest price was ranked the highest in importance by the purchasing U.S. electric utilities; this likely reflects intense competition among suppliers worldwide, increasing fuel-price pressure from deregulation of electricity supply, as well as the growing availability of natural UF_6 and EUP as finished products that bypass a portion of the fuel cycle and provide substitute products in addition to alternative supply sources.[114] Product quality was ranked only fourth in importance and likely reflects the general comparability in product characteristics and processing facilities, which, in turn, likely result at least partially from the close national and international tracking of uranium production, use, and inventory.

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[111] (...continued)
the conversion, enrichment, or fabrication service component, and transfer title of the utilities' upstream uranium product to the account of the foreign processor; this latter transfer accounts for the feed component of the imported uranium product.

[112] Every responding electric utility did not necessarily report for every purchase factor listed; on the other hand, some utilities responded for several separate countries and/or products or processing services. As a result, the total responses for each category do not necessarily correspond to the number of firms reporting.

[113] Questionnaire responses of U.S. electric utilities indicated that the identity of the producer is generally known for long-term contracts for uranium and uranium services, unless the contract is with a well known trader or broker. This information is one way in which utilities try to assure supply reliability; production experience, delivery record, and financial viability were cited most frequently as the factors used to evaluate a potential supplier.

[114] On the other hand, 9 U.S. electric utilities reported in their questionnaire responses that the lowest priced bidder does not always get the sale and at times they have contracted with suppliers who are not the lowest priced. Most frequently mentioned reasons for doing this were concerns about financial stability, supplier reliability, ability to meet the requested delivery date, ability to meet a minimum delivery quantity, payment terms, and quantity flexibilities.

Table II-1
Ranking of purchase factors by U.S. electric utilities operating nuclear power plants

Ranking of purchase factors			
Purchase factors	**VI**	**SI**	**NI**
Availability	27	7	2
Delivery terms	17	17	2
Delivery time	21	13	2
Discounts offered	19	13	4
Lowest price	31	5	0
Minimum quantity requirements	13	16	7
Packaging	1	12	22
Product consistency	16	15	4
Product quality	26	7	3
Product range	2	14	17
Reliable supply	30	6	0
Technical support	2	22	11
Transportation network	2	16	17
U.S. freight costs	2	8	24

Source: Compiled from data submitted in response to Commission questionnaires.

Comparison of the U.S.-Produced and Subject Imported Uranium

U.S.-produced and subject imported uranium are both purchased by U.S. electric utilities for their nuclear generating plants. Purchaser questionnaire responses indicated that all of the responding electric utilities generally purchased their uranium products and toll processing on an open-country basis,[115] subject to the uranium/toll services being legally acceptable in the U.S. market.[116] The importance of reliability and availability of supply, however, lead some purchasers to consider the

[115] Open country essentially means that the purchaser will accept uranium from any country; generally implicit in the open-country designation is that the uranium is legally acceptable.

[116] The uranium from the subject countries is reportedly sold at a discount to compensate for additional administrative costs associated with the suspension agreements and the Russian HEU Agreement. Some U.S. utilities may also be reluctant to purchase this foreign uranium because of restrictions on its availability for swaps or loans.

political stability of the countries being considered.[117] Although most movements of uranium are tracked by country of origin and ownership title with meticulous record-keeping and accountability to U.S. and international monitoring agencies, the product is physically commingled across country of origin and ownership at the various processing stages due to its highly fungible nature. As a result, U.S. electric utilities cannot guarantee that their uranium inventories are physically those of the recorded country of origin.

Purchaser Sourcing Patterns

The purchaser questionnaires asked U.S. electric utilities that operate nuclear power plants to use the 14 purchase factors discussed earlier to compare U.S.-produced uranium products and processing services with those that are imported, indicating for each factor whether the domestic product/processing service was superior, comparable, or inferior to the product/processing service imported from the subject countries. Ten U.S. electric utilities provided comparisons between U.S. and imported Russian uranium, 3 provided comparisons between U.S. and imported Uzbekistan uranium, 1 provided comparisons between U.S. and imported Ukraine uranium, and 15 electric utilities provided comparisons between U.S. and imported uranium from all other countries.[118] In most such comparisons, the uranium products and processing services were generally ranked as comparable across countries of origin. The notable exceptions involved the purchase factors of lowest price and discounts where the U.S. uranium/ processing services were generally ranked inferior to those from the three subject countries. As noted earlier in Part II, U.S. electric utilities ranked these two factors first and sixth, respectively, in importance out of 14 purchase factors.

ELASTICITY ESTIMATES [119]

This section discusses the elasticity estimates used in the COMPAS analysis.

U.S. Supply Elasticity

The domestic supply elasticity for uranium measures the sensitivity of quantity supplied by U.S. producers to a change in the U.S. market price of uranium. The elasticity of domestic supply depends on several factors including U.S. producers' level of excess capacity, the ease with which U.S. producers can alter productive capacity, the existence of inventories, and the availability of alternate markets for U.S.-produced uranium.[120] Analysis of these factors indicates that, based principally on excess capacity, U.S. producers have significant flexibility to alter their supply of uranium concentrates, and provision of uranium conversion, enrichment, and fabrication services. In addition, large inventories of natural UF_6

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[117] ***.

[118] U.S. electric utilities reported various comparisons including all products and all countries, specific products and all countries, all products and specific countries, and specific products and specific countries.

[119] The economic consultants for the parties opposed to the revocation and for the parties supporting revocation, provided comments on the staffs' elasticity estimates in the prehearing briefs of the parties. These comments are discussed below.

[120] Domestic supply response is assumed to be symmetrical for both an increase and a decrease in demand for the domestic product. Therefore, factors opposite to those resulting in increased quantity supplied to the U.S. market result in decreased quantity supplied to the same extent.

held principally by USEC and DOE suggest that significant flexibility exists for U.S. producers to supply this product and EUP. As a result, the domestic supply elasticity is estimated to be in the range of 5 to 10 for uranium concentrates, natural UF_6, conversion services, EUP, enrichment services, and fabrication services.

Parties opposed to revocation did not disagree with the staff's domestic supply elasticity range, but felt that the exact values would vary for the different segments of the uranium industry. In particular, they felt that the concentrators would be very sensitive to price changes, but the enricher would be less sensitive to price changes.[121] Parties supporting revocation felt the domestic industry had a limited ability to increase supply, but used the staff's supply elasticity range in their analysis.[122]

U.S. Demand Elasticity

The U.S. price elasticity of demand for uranium measures the sensitivity of the overall quantity demanded of this commodity to changes in its U.S. market price of uranium. The price elasticity depends on the cost share of uranium in the production of electricity, the price elasticity of this downstream product, and the substitutability of other inputs for uranium in the downstream products. Based on available information, overall U.S. demand elasticity for uranium is estimated to be in the range of -0.5 to -1.5 individually for uranium concentrates, natural UF_6, LEU-HF, and natural conversion and enrichment services, due principally to substitution among these products/services. However, the demand elasticity for uranium in its final product form, LEU-DO, for the fabrication services to process and pelletize the low-enriched uranium, or for the aggregate bundle of uranium products/services is estimated to be in the range of -0.1 to -0.3.[123]

Parties opposed to revocation and those supporting revocation agreed with the staff's demand elasticity range.

Substitution Elasticity[124]

The elasticity of substitution largely depends upon the degree to which there is an overlap of competition between U.S.-produced and imported uranium and the degree of product differentiation. Product differentiation, in turn, depends on such factors as physical characteristics (e.g., grades and quality) and conditions of sale (e.g., delivery lead times, reliability of supply, product service, import restrictions, etc.). Based on available information discussed earlier, the elasticity of substitution between

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[121] The staff believes that concentrators may not be very sensitive to incremental price changes, but when prices reach *** per pound U_3O_8, they would increase production more readily. This latter supply flexibility, however, may be reduced if Russian uranium concentrates for matched sales were not available. On the hand, USEC may be very sensitive to price changes because of the significance of ***, in its enrichment process; *** percent of total production costs in 1999.

[122] In addition, respondents' economic consultant also used this supply elasticity range for the Russian and non-subject country uranium, but used a range of 2 to 3 for the Uzbek uranium; the elasticity ranges for the Russian and non-subject countries appear reasonable, but the supply elasticity for Uzbekistan may be low.

[123] In the short run, electric utilities could delay purchases of the uranium products/services by extending their reload cycle; this could by done by operating at a lower output level and buying electricity to meet their sales contracts.

[124] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the U.S. like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject imported products (or vice versa) when prices change.

domestic uranium and the imported uranium concentrates and LEU-HF from Russia and uranium concentrates from Uzbekistan is estimated to range from 4 to 6.[125] These estimates are based on unfettered access to the U.S. market and for sales made on a similar basis. The suspension agreements, the antidumping duty order, the Russian HEU Agreement, and the USEC Privatization Act, all of which restrict imports of the subject uranium, reduce these estimates. Producers, importers, and purchasers indicated that long-term contract prices, both market-related and fixed (the latter with or without a price escalator),[126] and spot purchase prices are typically negotiated and based on a number of factors, including consideration of various published spot prices at the time of negotiation. It is likely that market-related long-term contract prices are affected by spot prices at the time of delivery and to a lesser extent by the spot prices at the time the contract was negotiated.[127] Fixed-price contracts may also be affected by spot prices at the time of contract negotiations, but not spot prices at the time of delivery.[128] To account for the relationships between spot prices and long-term contract prices (both at the time long-term contracts are negotiated and at the time of delivery (the latter only for contracts with market-related price provisions)), the staff estimates that an elasticity of substitution between U.S. and subject imported uranium be reduced by half, for an adjusted range of 2 to 3 for uranium concentrates and LEU-HF, when comparing the impact of the subject imported uranium spot prices in the current period on U.S. producers' long-term contract prices negotiated in the current period and deliveries of uranium under long-term contracts with market-related prices.[129]

Parties opposed to revocation felt the elasticity of substitution should range from 5 to 7 or at least be considered to be at the upper end of the 4 to 6 range estimated by staff because of the importance of price in purchasing uranium. In addition, the parties opposed to revocation indicated that a high proportion of domestic and subject uranium was sold in the U.S. market on a long-term contract basis, such that the range of 4 to 6 or 5 to 7 should be used rather than the range of 2 to 3. The staff notes that, after price, reliability of supply and availability of supply ranked as the second and third most important purchase factors of U.S. electric utilities in buying uranium and uranium toll production services.[130] Consideration of all such factors led the staff to the estimate of 4 to 6. The staff agrees that long-term contracts predominate the way uranium and uranium toll-processing are purchased in the U.S. market,

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[125] Although there were no direct U.S. imports of uranium from Ukraine during 1997-99, it is estimated for purposes of discussion that the substitution elasticity between domestic and Ukranian uranium concentrates is 4 to 6. Purchaser questionnaire responses of U.S. electric utilities indicated that uranium concentrates are generally considered to be physically comparable from most sources of supply, but supply risk considerations and legality issues may differentiate some sources of concentrate supply.

[126] Market-related prices in long-term contracts usually involve a variety of formulations such that the price at the time of delivery under a long-term contract is based on but not necessarily equal to the specified reported spot price existing at the time of delivery.

[127] To the extent that market conditions are similar during the time that the contract was negotiated and at the time of delivery under the contract, spot prices may actually be quite similar in both periods and give the impression that spot prices in the initial period were the primary factor affecting prices at the time of delivery.

[128] All types of long-term contracts are also negotiated based on buyer and seller perceptions of future demand and supply and the buyer's perceptions of the reliability of individual suppliers.

[129] This adjustment acknowledges that any subject imported uranium that is sold in the United States on a spot basis may still impact domestic uranium sold on a long-term contract basis.

[130] Most U.S. electric utilities indicated in their purchaser questionnaire responses that they maintain a diversity of suppliers for their uranium products and toll production services to assure reliability of supply.

but spot contracts also play a role, particularly when uranium prices are low, and should also be included.[131]

The parties supporting revocation used the staff's estimated elasticity of substitution range of 2 to 3, but indicated that it should be lower (unspecified) because the majority of sales during 1997-99 and 2000-01 have already been contracted. The staff agrees that supplies already contracted do not compete, but this amount is different for each future year. It was the staff's understanding that such adjustments would be made from the base-line elasticities estimated by the staff.

Modeling the Potential Effects of Revoking the Antidumping Duty Order And Terminating the Suspended Antidumping Investigations

The COMPAS analysis uses a nonlinear partial equilibrium model of supply and demand that assumes that domestic and imported products are less than perfect substitutes. Competition in the U.S. market is characterized by measures of the sensitivity of buyers and sellers to price changes and under the assumption that the substitutability between products remains constant. Such models, also known as Armington models, are relatively standard in applied trade policy analysis, and are used extensively for the analysis of trade policy changes both in partial and general equilibrium.[132] Based on the discussion contained earlier in Part II of this report, the staff selects a range of estimates that represent price-supply, price-demand, and product-substitution relationships (i.e., supply elasticity, demand elasticity, and substitution elasticity) in the U.S. uranium market. The model uses these estimates with data on market shares usually from the most recent 1-year period (for which data are available), Commerce's estimated margins of dumping, transportation costs, and current tariffs to analyze the likely effect of resumed unfair pricing of subject imports on the U.S. domestic like product industry.

The U.S. uranium industry involves complex physical and commercial relationships among the products and toll-production services of the nuclear fuel cycle, a barrage of supply and demand estimates and forecasts that are frequently revised, and supplier production-cost estimates that are not readily available and are subject to sometimes wide variations among the consulting firms that estimate and report such proprietary data on a for-fee basis.[133] Such difficulties may frustrate efforts to model completely the impact on the domestic uranium industry from termination of the suspended antidumping

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[131] The use of spot-market pricing (in spot contracts and longer-term contracts) averaged about 15.3 percent of total uranium deliveries received by U.S. utilities during 1997-99. Following a general decline in uranium prices during this period, spot-market pricing accounted for 23.0 percent of deliveries in 1999. (*Uranium Industry Annual 1999*, EIA, DOE, May 2000, p. 22, table 14.)

[132] For a discussion of the use of Armington type models of this type for trade policy analysis, see Joseph Francois and H. Keith Hall (1997) "Partial Equilibrium Modeling", Chapter 5 of *Applied Methods for Trade Policy Analysis: A Handbook*, Joseph F. Francois and Kenneth A. Reinert, editors, Cambridge University Press, 1997. See also Armington (1969) "A Theory of Demand for Products Distinguished by Place of Production", *IMF Staff Papers*, vol. 16, pp. 159-178.

[133] As indicated earlier in Part II, uranium demand is frequently supplied through long-term contracts, but also by spot contracts; in addition, spot-market pricing is a factor in some long-term contracts. Uranium products and services along the fuel cycle increasingly substitute for each other, especially since U.S. electric utilities have increased their purchases of packaged products, such as natural UF_6 and EUP, during the last few years. On the other hand, de-conversion and de-enrichment transactions split up the packaged products into their constituent parts for resale. Uncertain availability of large inventories and excess production capacity, coupled with a relatively flat demand for uranium, have further complicated efforts of market participants to achieve a stable equilibrium.

investigations on uranium from Russia and Uzbekistan and revocation of the uranium antidumping duty order on Ukraine.

Since October 16, 1992, suspension agreements have controlled U.S. imports of uranium imported from Russia and Uzbekistan,[134] and since October 30,1993, an antidumping order on uranium from Ukraine has been in place. Commerce found that revocation of the antidumping duty suspension agreements on uranium from Russia and Uzbekistan would likely lead to continuation or recurrence of dumping at a weighted-average margin of 115.82 percent. Commerce also found that revocation of the antidumping duty order on uranium from Ukraine would likely lead to continuation or recurrence of dumping at a weighted-average margin of 129.29 percent.

Estimated effects of possible resumption of dumping are discussed below for Russia.[135] The results are based on actual market data for 1999.[136] The modeling results assumed that Russian LEU-HF, SWU, natural UF_6, and uranium concentrates would be the principal types of uranium exported to the United States. However, estimated effects on the domestic industry were based on only those uranium products and services imported from Russia subject to the Russian Suspension Agreement; prices and quantities of the Russian uranium and services imported under the HEU agreement and the USEC Privatization Act were not directly controlled by the Russian Suspension Agreement and, therefore, arguably would not be injurious as the result of revocation of the suspension agreement.[137] The overall elasticity of substitution range of 4 to 6 was reduced to a range of 0.8 to 3.9 after accounting for the fact

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[134] In addition, the Russian HEU Agreement and the USEC Privatization Act have controlled U.S. imports of uranium from Russia.

[135] No such effects were estimated for Ukraine and Uzbekistan due to a lack of any reported U.S. imports of uranium from Ukraine during any part of the period 1997-99, and the small U.S. import penetration level (0.4 percent) for uranium imports from Uzbekistan during 1999.

[136] Any model results involving possible revocation of the Russian Suspension Agreement for 2000 and 2001 may be similar to those for 1999 because estimated unfilled uranium requirements of U.S. electric utilities as of December 31, 1999, were equivalent to 12 million pounds U_3O_8, or 13 percent of total estimated uranium requirements of U.S. electric utilities during 2000-01 (*Uranium Industry Annual 1999*, May 2000, EIA, DOE, table 21, p. 26). Although unfilled U.S. demand for SWUs during 2000-01 is not available from official or public sources (telephone conversation with Doug Bonnar, EIA on July 5, 2000), it may be limited given the prevalence of multi-year contracts, which equaled about 94 percent of U.S. electric utilities total SWU requirements delivered in 1999.

[137] The staff estimated that U.S. imports of Russian uranium products and services subject to the Russian Suspension Agreement amounted to about *** million in 1999, based on questionnaire responses; U.S. imports of Russian uranium products and services imported under the HEU Agreement and the USEC Privatization Act amounted to about *** million. Based on Minatom's foreign producer questionnaire, *** percent of the total quantity of Russian SWUs exported to the United States in 1999 was subject to the Russian Suspension Agreement and the remainder was subject to the HEU Agreement. This ratio is close to the *** percent calculated from U.S. importer questionnaires. The *** percent quantity ratio was applied to the total value of U.S. imports of uranium from Russia in 1999, less the value of Russian uranium concentrates and natural UF_6 (subject to the Russian Suspension Agreement), to get the value of enrichment subject to the Russian Suspension Agreement. The quantity ratio was the best information available to the staff to estimate the value of imported Russian enrichment subject to the Russian Suspension Agreement, and provides only an approximate measure of this value. This ratio was also used by the economic consultant for parties in favor of revocation.

that a majority of the 1999 U.S. uranium market demand, which was already covered by multi-year supply contracts by the end of 1998, was subject to limited competition.[138] The resulting wide range reflects the absence of information about both the extent to which existing contracts are open origin and the willingness of suppliers to substitute Russian uranium/services for U.S. uranium/services in already negotiated contracts.

The estimated domestic price, output, and revenue effects of terminating the suspended antidumping investigation on uranium from Russia on the U.S. market are summarized in the following tabulation.[139] The model inputs and detailed results for each elasticity scenario are shown in table II-2 at the end of this section.

Year	Domestic price effects	Domestic output effects	Domestic revenue effects
1999	-0.1% – -1.6%	-0.7% – -11.9%	-0.8% – -13.0%

The model results assume that the Russian Suspension Agreement, which is a mixture of price and quantity controls,[140] provided the domestic industry a level of protection in 1999 from LTFV imports that would be comparable to the antidumping margin of 115.8 percent determined by Commerce in its sunset review. The above results do not explicitly take into account uranium contracts negotiated during 1999 for future delivery,[141] which amounted to about 44.1 million pounds U_3O_8. The staff did not have sufficient information to model in more detail or more extensively the future effects of possible revocation of the Russian Suspension Agreement.

The economic consultants for parties opposed to and in support of revocation/termination used significantly different approaches from each other in modeling the effects of possible termination of the suspended antidumping investigations on uranium from Russia and Uzbekistan and revocation of the uranium antidumping duty order on Ukraine. Parties opposed to revocation/termination used a uranium model that required detailed information about worldwide uncommitted demand and supply of the various uranium products and services, and very precise measurements of marginal cost for each producing entity in the world. Parties in favor of revocation/termination used the COMPAS model.

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[138] During 1999, 77.0 percent of the quantity of uranium delivered to U.S. electric utilities did not involve spot-market pricing, and 94.1 percent of enrichment service deliveries did not involve spot contracts (*Uranium Industry Annual 1999*, May 2000, EIA, DOE, tables 14 and 26, pp. 22 and 28). Based on questionnaire responses, ***. Using the value-added shares for each stage of the fuel cycle discussed at the beginning of Part II, the staff estimated that only 20.6 percent of deliveries of uranium products and services to U.S. electric utilities during 1999 were subject to competition. Applying this factor to the substitution elasticity range resulted in an estimate for the lower end of the adjusted range of 0.8; 3.9 was chosen as the upper end of the adjusted range and reflects less substitution among supply sources when contracts are already in place than when supplies have not already been contracted.

[139] Ranges of estimated effects are shown, corresponding to the various combinations of the endpoints of elasticity ranges discussed earlier. The tabulation shows percentage reductions in the domestic price, output, and revenue associated with the revocation of the suspension agreement with Russia.

[140] The Russian Suspension Agreement also allows U.S. uranium producers to import Russian uranium at a price that is effectively less than their price, as long as they match equally the quantity of such imports with their U.S.-produced uranium for sales in the U.S. market.

[141] The deliveries for this contracted uranium are expected to occur during 2000-09 (*Uranium Industry Annual 1999*, EIA, DOE, May 2000, table 18, p. 24).

Parties opposed to revocation/termination estimated that U.S. concentrators, the converter, and the enricher would lose total revenues due to possible revocation/termination amounting to $31.8 million in 2000 and increasing to $375.4 million in 2004, or a revenue loss of 3.0 percent in 2000 and 46.8 percent in 2004. During 2000-04, the estimated cumulative revenue loss would amount to about $1.2 billion or a revenue loss of almost 30 percent. On the other hand, parties in favor of revocation/termination estimated that total domestic uranium industry revenue losses would range from 2.0 to 4.6 percent as a result of possible revocation of the Russian Suspension Agreement and from 0.5 to 0.9 percent as a result of possible revocation of the Uzbekistan Suspension Agreement. The effects from revocation estimated by parties in favor of revocation/termination are based on data for 1999 and, according to these parties, would represent annual domestic effects for the next 2 to 5 years.

The parties opposed to and in support of revocation/termination conducted very comprehensive and thorough analyses of the domestic effects from possible revocation/termination. The results of the parties opposed to revocation/termination rely importantly on their estimates of worldwide uncommitted demand and supply of the various uranium products and services and very precise measurements of marginal costs for each producing entity in the world.[142] Both parties commented on each other's model efforts in their posthearing briefs.[143] The parties opposed to revocation/termination made several comments on the respondents model, including the following: (1) they asserted that the COMPAS model was inappropriate to estimate effects for the suspension agreements because the subject imports are restricted through a completely different mechanism than an antidumping duty order; (2) the use of consumption that has already been committed is outside the current competitive market; (3) the existing level of imports is controlled by the suspension agreements and antidumping duty order and, therefore, is not indicative of future imports; and (4) use of data in the Commission's prehearing report does not fully account for the increase in U.S. market share of Russian enrichment. The parties in support of revocation/termination made several comments on the Ad Hoc Committee's model, but most importantly alleged that the Committee used unconfirmed and/or conflicting estimates of uncommitted demand, supply, and marginal costs,[144] which were essential to the model's results. These parties did not criticize the methodology of the Ad Hoc Committee's uranium model.

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[142] Estimates of uncommitted enrichment demand and supply and of detailed marginal costs are not made by DOE, but are provided by private consultants, such as NAC, on a fee basis (telephone conversation with Doug Bonnar and Luther Smith, EIA, DOE, on July 5, 2000).

[143] These comments are found in app. A, pp. 46-62 in the posthearing brief of parties opposed to revocation/termination and in app. I in the posthearing brief of the parties in favor of revocation/termination.

[144] NAC, the private uranium consultant and witness for the domestic uranium industry, calculated marginal costs of U.S. concentrators using benefits they received from matched sales. It is not clear how the level of such benefits was derived. The parties in support of revocation/termination argued that the estimated marginal costs were too low. Based on sales prices reported for the U.S.-produced and imported Russian uranium concentrates, the matched sales benefits appear to be substantial.

Table II-2
Estimated effects during 1999 on the domestic uranium industry from possible revocation of the Russian Suspension Agreement

Inputs

Market Segments	LDP-CIF Value	Quantity	Subsidy Value	T & T	Margins: subsidy	Margins: dumping
U.S.	$546,099,780	0		0.0%	0.0%	0.0%
Russia--RSA	***	0		0.2%	0.0%	115.8%
Russia--HEU/PA	***	0		0.2%	0.0%	0.0%
All Other imp	***	0		0.3%	0.0%	0.0%
	$0	0		0.0%	0.0%	0.0%
	$0	0		0.0%	0.0%	0.0%
	$0	0		0.0%	0.0%	0.0%
	$0	0		0.0%	0.0%	0.0%
	$0	0		0.0%	0.0%	0.0%
	$0	0		0.0%	0.0%	0.0%

Growth Rates:	lo	hi
Demand	0.0%	0.0%
Supply growth:		
U.S.	0.0%	0.0%
Russia--RSA	0.0%	0.0%
Russia--HEU/PA	0.0%	0.0%
All Other imp	0.0%	0.0%
	0.0%	0.0%
	0.0%	0.0%
	0.0%	0.0%
	0.0%	0.0%
	0.0%	0.0%
	0.0%	0.0%

Elasticities:	lo	hi
Substitution	0.8	3.9
Demand	-0.1	-0.3
Supply elasticities :		
U.S.	5	10
Russia--RSA	5	10
Russia--HEU/PA	0.5	1
All Other imp	5	10
	0	0
	0	0

See end of table

Table II-2--Continued

Scenario #1:

Low Substitution (1), Low Demand (-0.1), and Low Supply

	Price	Quantity	Revenue	Quantity	Value
U.S.	-0.2%	-1.0%	-1.3%	0	$539,270,342
Russia--RSA	-48.5%	68.1%	-13.5%	0	$38,267,302
Russia--HEU/PA	-0.9%	-0.5%	-1.4%	0	$421,638,816
All Other imp	-0.2%	-1.0%	-1.3%	0	$971,492,802
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
Industry	ERR	ERR	-1.6%	0	$1,970,669,262
	consumer	producer	net welfare		
Welfare Effect	ERR	ERR	ERR		

Scenario #2:

Low Substitution (1), Low Demand (-0.1), and High Supply

	Price	Quantity	Revenue	Quantity	Value
U.S.	-0.1%	-1.1%	-1.2%	0	$539,540,135
Russia--RSA	-51.0%	74.7%	-14.3%	0	$37,912,657
Russia--HEU/PA	-0.7%	-0.7%	-1.3%	0	$421,998,904
All Other imp	-0.1%	-1.1%	-1.2%	0	$971,978,833
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
Industry	ERR	ERR	-1.5%	0	$1,971,430,529
	consumer	producer	net welfare		
Welfare Effect	ERR	ERR	ERR		

Scenario #3:

Low Substitution (1), High Demand (-0.3), and Low Supply

	Price	Quantity	Revenue	Quantity	Value
U.S.	-0.1%	-0.7%	-0.8%	0	$541,556,546
Russia--RSA	-48.5%	68.7%	-13.1%	0	$38,429,534
Russia--HEU/PA	-0.6%	-0.3%	-0.9%	0	$423,633,067
All Other imp	-0.1%	-0.7%	-0.8%	0	$975,611,387
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
Industry	ERR	ERR	-1.1%	0	$1,979,230,535
	consumer	producer	net welfare		
Welfare Effect	ERR	ERR	ERR		

Scenario #4:

Low Substitution (1), High Demand (-0.3), and High Supply

	Price	Quantity	Revenue	Quantity	Value
U.S.	-0.1%	-0.7%	-0.8%	0	$541,604,451
Russia--RSA	-50.9%	75.3%	-14.0%	0	$38,057,714
Russia--HEU/PA	-0.4%	-0.4%	-0.9%	0	$423,760,586
All Other imp	-0.1%	-0.7%	-0.8%	0	$975,697,688
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
Industry	ERR	ERR	-1.1%	0	$1,979,120,439
	consumer	producer	net welfare		
Welfare Effect	ERR	ERR	ERR		

See end of table.

Table II-2--Continued

Scenario #5:
High Substitution (4), Low Demand (-0.1), and Low Supply

	Price	Quantity	Revenue	Quantity	Value
U.S.	-1.6%	-7.9%	-9.4%	0	$495,012,184
Russia--RSA	-36.1%	395.9%	216.9%	0	$140,186,947
Russia--HEU/PA	-3.3%	-1.6%	-4.8%	0	$406,879,929
All Other imp	-1.6%	-7.9%	-9.4%	0	$891,761,954
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
Industry	ERR	ERR	-3.4%	0	$1,933,841,015
	consumer	**producer**	**net welfare**		
Welfare Effect	ERR	ERR	ERR		

Scenario #6:
High Substitution (4), Low Demand (-0.1), and High Supply

	Price	Quantity	Revenue	Quantity	Value
U.S.	-1.3%	-11.9%	-13.0%	0	$475,061,933
Russia--RSA	-43.2%	660.4%	332.0%	0	$191,138,497
Russia--HEU/PA	-3.5%	-3.5%	-6.9%	0	$397,943,461
All Other imp	-1.3%	-11.9%	-13.0%	0	$855,821,678
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
Industry	ERR	ERR	-4.1%	0	$1,919,965,569
	consumer	**producer**	**net welfare**		
Welfare Effect	ERR	ERR	ERR		

Scenario #7:
High Substitution (4), High Demand (-0.3), and Low Supply

	Price	Quantity	Revenue	Quantity	Value
U.S.	-1.5%	-7.1%	-8.4%	0	$500,068,845
Russia--RSA	-36.0%	400.2%	220.1%	0	$141,618,880
Russia--HEU/PA	-2.9%	-1.5%	-4.4%	0	$408,976,439
All Other imp	-1.5%	-7.1%	-8.4%	0	$900,871,503
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
Industry	ERR	ERR	-2.5%	0	$1,951,535,668
	consumer	**producer**	**net welfare**		
Welfare Effect	ERR	ERR	ERR		

Scenario #8:
High Substitution (4), High Demand (-0.3), and High Supply

	Price	Quantity	Revenue	Quantity	Value
U.S.	-1.2%	-11.0%	-12.0%	0	$480,515,070
Russia--RSA	-43.1%	668.4%	337.0%	0	$193,332,531
Russia--HEU/PA	-3.2%	-3.2%	-6.4%	0	$400,292,940
All Other imp	-1.2%	-11.0%	-12.0%	0	$865,645,475
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
	0.0%	0.0%	0.0%	0	$0
Industry	ERR	ERR	-3.1%	0	$1,939,786,016
	consumer	**producer**	**net welfare**		
Welfare Effect	ERR	ERR	ERR		

Source: Based on data submitted in response to Commission questionnaires and in the *Uranium Industry Annual 1999*, May 2000, EIA, DOE.

PART III: CONDITION OF THE U.S. INDUSTRY

U.S. PRODUCERS' CAPACITY, PRODUCTION, CAPACITY UTILIZATION, SALES, INVENTORIES, AND EMPLOYMENT

U.S. Concentrate Producers

Because they are the farthest removed from the end product, the concentrate producers are generally more vulnerable to changes in the market than other segments of the industry. Fifteen producers were listed as producing concentrate in 1992; only five are producing today. Some, like Rio Algom, have survived and have even expanded their operations; others have merged or been absorbed by larger entities like COGEMA (which now owns Malapai and part of Pathfinder) and Cameco (which now owns Power Resources).[1] Others have dropped out altogether, the most recent being IMC Global and Uranium Resources. Most of the producers oppose the revocation of the antidumping duty order and the suspension agreements (several benefit directly from the matched-sales provisions). The exceptions are ***.

Data relating to U.S. concentrate producers' operations (table I-3) show a substantial drop in the scale of operations from the early 1990's and a continuing downward trend in production and sales.[2] The data, however, conceal a wide variation in individual performance. ***. The value of concentrate per pound, while still well below the levels of the early 1990's, showed some improvement in recent periods. The significantly higher unit values for exports than for U.S. sales in 1997-99 would suggest a U.S. market out of synch with the world market; however, ***, and these sales fulfilled long-term contracts at previously specified prices. Overall employment increased in 1997-99 in response to the ***. Underutilized capacity appears to be endemic to this segment of the industry.

U.S. Converter

The only uranium conversion facilities in the United States are owned and operated by ConverDyn in Metropolis, IL. ConverDyn functions basically as a toll producer, converting the utilities' concentrate into natural UF_6; however, like other producers trying to maintain equilibrium in today's uranium market, it has become a market player with ***. With separate equipment, it also produces other fluorine compounds, but natural UF_6 accounts for about *** percent of its overall sales.

Like overall U.S. concentrating operations, U.S. conversion operations have been reduced since the early 1990's and continue to decline (table I-4). The data show ***.

In addition to ConverDyn's production and inventories, USEC owns and maintains a large inventory of natural UF_6 that was transferred from DOE when USEC became fully privatized in 1998. Its current stocks amount to about *** kg U. In accordance with the USEC Privatization Act, however, USEC is committed to releasing its natural UF_6 assets in a manner that is not disruptive to the market and currently regulates the rate at which this material is sold.

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[1] The Commission did not receive a questionnaire response from Power Resources. Data provided by this company in connection with Inv. No. 731-TA-539-A (Final), Uranium from Kazakhstan, was used for these reviews. The data for January-March 1999 were annualized.

[2] The increase in U.S. sales from 1998 to 1999 is largely due to ***.

U.S. Enricher

Unlike many of the other producers, USEC has not adjusted to the new market conditions by consolidation or merger. Indeed, its enabling legislation protects it from takeover, and an opportunity to be purchased by Lockheed Martin Corp. and the Carlyle Group was rejected in mid-1998 before the full impact of the current market conditions were realized. To remain financially viable, however, it has cut back on operations and suspended research on a new production technology (AVLIS) that promised to provide savings in its use of electric power, which accounts for well over *** of its production costs. Given the existing market conditions and price for uranium, the company credits its obligations under the Russian HEU Agreement, combined with aggressive competition from European enrichers, as contributing most to its cutbacks in production and employment and to its deteriorating financial performance in recent periods (table I-5). USEC is opposed to the revocation of the antidumping duty order and suspension agreements.

For its enrichment services, USEC operates basically as a toll producer, enriching natural UF_6 owned by utilities and others worldwide and charging a fee for the SWUs it expends in the process. (USEC also provides the natural UF_6 at an additional charge). The SWUs that USEC is required to purchase under the Russian HEU Agreement have forced it to use correspondingly less of its enrichment capacity, resulting in higher unit production costs at the plants it operates.[3] One of the conditions of its full privatization in 1998 was that it keep its two plants operating until at least January 1, 2005,[4] and that it not lay off more than 500 workers in its first two fiscal years. USEC's sales from its purchases under the Russian HEU Agreement, shown below, were all to U.S. utilities and represented an increasing proportion of its overall sales from about *** percent in 1997 to about *** percent in 1999:

	1997	1998	1999
Quantity *(1,000 SWUs)*	***	***	***
(1,000 kg U)	***	***	***
Value *(1,000 dollars)*	***	***	***
Unit value *(per SWU)*	***	***	***

Through March 2000, Russia delivered to USEC about 2,400 metric tons of LEU-HF blended down from 81 metric tons of the total 500 metric tons of HEU encompassed by the Agreement. USEC plans to purchase and receive *** SWUs per year of this material through 2014. USEC reports that current SWU market prices are below optimum U.S. production costs and about *** percent lower than the price at which it purchases SWUs from Russia. Its price for the Russian SWU is fixed through 2001; however, ***.

To lower production costs USEC completed a voluntary reduction in force in 1998-99, and recently announced an additional layoff of approximately 850 employees (*** percent of its workforce) beginning in July 2000. Labor represents about *** percent of its total production costs. It also has taken over direct operation of its plants to save the costs of a contractor that had been operating the plants since USEC's inception, and it has recently taken steps to reduce its electric power costs by restructuring its long-term power contracts. More recently, in the aftermath of its reduced credit rating,

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[3] ***.

[4] This condition is pursuant to an agreement signed with the U.S. Department of Treasury at the time of privatization; however, an exception was made to the condition if USEC's long-term corporate credit rating should fall below investment grade. Standard & Poor revised its credit rating of USEC's long-term debt to below investment grade on February 4, 2000.

it announced that it will close its Ohio plant (known as the Portsmouth plant) in June 2001. The plant accounts for at least half of USEC's employment.

U.S. Fabricators

Unlike most U.S. producers of the other forms of uranium, which are primarily in the business of processing and trading in uranium, the fabricators are large, multi-product corporations in which the fabrication of uranium is only one among many operations. In this respect they have been better placed to meet the new exigencies of the market. The fabricators are also unlike most of the other uranium producers in ***, although a questionnaire response was not received from Westinghouse. In general they view themselves as part of a global market in which they are the least-cost producers and ***.

Data relating to the fabricators' U.S. production (table I-6) reflect only that part of fabrication that is included within the reviews' product scope, i.e., the conversion and pelletizing process.[5] Perhaps because of their position at the final stage of uranium processing, the fabricators appear to have been less adversely impacted by the market than other segments of the industry and have not merged or consolidated in response until recently. Earlier this year ABB's nuclear operations were purchased by Westinghouse. ***. At least through 1999, the overall scale of the fabricators' operations had not changed appreciably since the antidumping duty order and suspension agreements went into effect.

The U.S. Industry as a Whole

Simply aggregating the data of the different producers would result in counting the same uranium several times; however, certain employment and sales value data can be aggregated without such distortions and afford some meaningful representation of the industry as a whole. Such data are summarized in table I-2 and appendix table C-1. The total sales value represents an approximation of the total value of nuclear fuel produced in the United States, less the value of its encapsulation into fuel rods and the rods' assembly for actual use. This value dropped by more than 26 percent from 1997 to 1999. Concurrently, the average number of workers used to produce such fuel and the hours worked by them fell by about 10 percent. Overall wages declined less as a result of increased hourly compensation.

[5] Data provided by Westinghouse in connection with Inv. No. 731-TA-539-A (Final), Uranium from Kazakhstan, were used for these reviews. The data for January-March 1999 were annualized. Only 55 percent of sales value and employment data were used if the data also incorporated encapsulation and assembly.

FINANCIAL CONDITION OF THE U.S. INDUSTRY

Background

Financial data for the U.S. producers in the uranium industry are presented separately by each stage of the fuel cycle, as a consolidation of most of such data would not be representative due to the mix of reported coverages, the degree of export sales, and the nature of operations.[6] The reported financial data for each sector is as follows:

Concentrators–five producers provided data, all with fiscal year-ends of December 31.

Converter–the sole U.S. converter in operation, ConverDyn, provided data. The firm is owned equally by Allied Signal Energy Service and General Atomics Energy Services and has a fiscal year-end of December 31.

Enricher–the only U.S. enricher, USEC, reported data. USEC was privatized in 1998 and is a public company traded on the NYSE, with a fiscal year-end of June 30.

Fabricators–three of the four U.S. fabricators, ABB, GE, and Siemens, with fiscal year-ends of December 31 except September 30 for Siemens, provided financial data.

Operations of Concentrators

The results of the operations of the U.S. producers of uranium concentrates are presented in table III-1 and by firm in table III-2.[7] The uranium concentrates are produced by ISL, as by-products of phosphoric acid production, from the mining of various minerals, and from mine water. The products are milled and processed by the concentrators prior to shipment to the converter, who converts the uranium concentrates to natural uranium hexafluoride.

Sales quantities and values increased in 1998 from 1997, but declined in 1999, with the operating losses in aggregate declining in 1998 and increasing in 1999; however, all firms incurred operating losses in all periods. The operating loss margins exceeded 40 percent in 1997 and 1999. ***.

Operations of the Converter

The results of the operations of the U.S. converter, ConverDyn, are presented in table III-3. The firm converts uranium concentrates to natural uranium hexafluoride prior to enrichment. ConverDyn generally does not own the material, but charges a fee for the processing; therefore the revenue is basically for services and does not include the value of the feedstock product.

Total sales quantities and values ***.

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[6] For these reasons and as the financial data of the most dominant sector, USEC, is audited, no verification was conducted.

[7] Some producers, including ***, included the revenues and costs of both produced and purchased uranium concentrates.

Table III-1
Results of operations of U.S. concentrators in the production of uranium concentrates, fiscal years 1997-99

Item	Fiscal year		
	1997	1998	1999
	Quantity (*1,000 pounds U_3O_8*)		
Net sales	4,196	4,341	3,748
	Value (*$1,000*)		
Net sales	65,036	69,645	59,939
COGS	76,776	64,113	59,034
Gross profit	(11,740)	5,532	905
SG&A expenses	14,801	14,515	27,811
Operating income or (loss)	(26,541)	(8,983)	(26,906)
Interest expense	1,849	2,336	2,508
Other expense	10,575	48,352	70,193
Other income items	30,234	8,987	40,377
Net income or (loss)	(8,731)	(50,684)	(59,230)
Depreciation/amortization	19,495	32,187	37,753
Cash flow	10,764	(18,497)	(21,477)
	Ratio to net sales (*percent*)		
COGS	118.1	92.1	98.5
Gross profit	(18.1)	7.9	1.5
SG&A expenses	22.8	20.8	46.4
Operating income or (loss)	(40.8)	(12.9)	(44.9)
	Value (*per pound U_3O_8*)		
Net sales	$15.50	$16.04	$15.99
Cost of goods sold	18.30	14.77	15.75
Gross profit	(2.80)	1.27	0.24
SG&A expenses	3.53	3.34	7.42
Operating income or (loss)	(6.33)	(2.07)	(7.18)
	Number of firms reporting		
Operating losses	5	5	5
Data	5	5	5

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-2
Results of operations of U.S. concentrators (by firm) in the production of uranium concentrates, fiscal years 1997-99

* * * * * * *

Table III-3
Results of operations of ConverDyn in the production of natural uranium hexafluoride, fiscal years 1997-99

* * * * * * *

Operations of the Enricher

The results of operations of the only U.S. enricher, USEC, are presented in table III-4, which includes its overall operations, including sales of Russian product and some natural uranium. On July 28, 1998, the sale of USEC's common stock in connection with an initial public offering (the "IPO") was completed, resulting in net proceeds to the U.S. Government aggregating $3.1 billion, including $1.4 billion from the IPO and $1.7 billion from the exit dividend paid to the U.S.Treasury. The U.S. Government, the sole selling shareholder, sold its entire interest. USEC did not receive any proceeds from the IPO.[8] The financial data represent the overall operations of USEC and are consistent with the firm's filings with the Securities and Exchange Commission.

Substantially all of the company's revenue is derived from the sale of uranium enrichment services, with customers supplying the natural uranium feedstock to be enriched. USEC also derives a relatively small amount of revenue from sales of EUP. With respect to sales of EUP, the company supplies the natural uranium feedstock and enriches it for customers. The company has a significant inventory of natural uranium which it may sell to customers as natural uranium or in the form of EUP.[9]

In fiscal 1998, the company received 3,800 metric tons of natural uranium and 45 metric tons of LEU from DOE to satisfy certain obligations of DOE to the company. USEC cannot deliver such uranium for commercial use in the United States over less than a four-year period. In addition, as directed by the USEC Privatization Act, DOE transferred 7,000 metric tons of natural uranium to USEC in fiscal 1998 and will deliver 50 metric tons of HEU (representing 3.4 million SWU and 5,000 metric tons of natural uranium) to USEC over the period September 1998 to September 2003. The USEC Privatization Act places certain limits on the company's ability to deliver this material for commercial use in the United States.[10]

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[8] USEC's 10Q for the quarter ended March 31, 1999, p. 6.

[9] USEC's 10K for the year ended June 30, 1998, p. 3.

[10] Ibid, p. 5.

Table III-4
Results of operations of USEC in the enrichment of uranium hexafluoride, fiscal years 1997-99, and July-December 1999

Item	Fiscal year			July-Dec.
	1997	1998	1999	1999
	Quantity (*1,000's of SWU*)			
Net sales	***	***	***	***
	Value (*$1,000*)			
Net sales	1,577,800	1,421,200	1,528,600	678,500
COGS	1,162,300	1,062,100	1,182,000	563,800
Gross profit	415,500	359,100	346,600	114,700
Special charges	0	46,600	34,700	0
Project development[1]	141,500	136,700	106,400	4,000
SG&A expenses	31,800	34,700	40,300	23,400
Operating income or (loss)	242,200	141,100	165,200	87,300
Interest expense	0	0	32,500	18,300
Other expense	0	0	0	0
Other income items	7,900	5,200	16,800	5,700
Net income or (loss)	250,100	146,300	149,500	74,700
Depreciation/amortization	14,600	16,100	16,400	9,000
Cash flow	264,700	162,400	165,900	83,700
	Ratio to net sales (*percent*)			
COGS	73.7	74.7	77.3	83.1
Gross profit	26.3	25.3	22.7	16.9
SG&A expenses	2.0	2.4	2.6	4.0
Operating income or (loss)	15.4	9.9	10.8	12.9
	Value (*per SWU*)[2]			
Net sales	***	***	***	***
COGS	***	***	***	***
Gross profit	***	***	***	***
SG&A expenses	***	***	***	***
Operating income or (loss)	***	***	***	***

[1] R&D.
[2] Includes a relatively small amount of revenue from sales of enriched uranium product.
Note: Since USEC's fiscal year ends June 30, July-December interim data are presented.

Source: Compiled from data submitted in response to Commission questionnaires.

Russian HEU Agreement

USEC has been designated by the U.S. Government to act as its Executive Agent in connection with a government-to-government agreement between the United States and Russia relating to the acquisition of enriched uranium recovered from dismantled nuclear weapons from the former Soviet Union. In January 1994, USEC signed the Russian HEU Agreement with TENEX, Executive Agent for Russia. Under the Agreement, USEC expects to purchase up to approximately 92 million SWU[11] over a 20-year period according to a specified schedule.

USEC ordered 5.7 million SWU for delivery under the Russian HEU Agreement in calendar year 1999, of which 1.8 million SWU had been purchased as of June 30, 1999. SWU quantities and prices, subject to adjustment for U.S. inflation, have been established through calendar year 2001. Global market prices for SWU have declined below the price being paid for SWU under the Russian HEU Agreement. USEC has begun negotiations to align the Russian HEU Agreement with market pricing realities.[12]

SWU purchased from Russia represented 31 percent of the combined produced and purchased supply mix in fiscal 1999 compared with 38 percent purchased from Russia and DOE in fiscal 1998. In March 1999, Russia resumed deliveries after several months of suspended deliveries. The suspended schedule of 1998 calendar year deliveries to USEC was completed in June 1999, and USEC has agreed to a schedule of deliveries for the remainder of calendar year 1999. Purchases from Russia are expected to aggregate 5.7 million SWU in calendar 1999, of which 1.8 million SWU had been purchased as of June 30, 1999. Cost of sales has been, and will continue to be, affected by amounts paid to purchase SWU under the Russian HEU Agreement; since the volume of SWU purchases has increased, USEC has operated the plants at significantly lower production levels, resulting in higher unit production costs.[13]

USEC's Results of Operations

Revenue amounted to $1,528.6 million in fiscal 1999, an increase of $107.4 million (or 8 percent) from $1,421.2 million in fiscal 1998. Revenue from sales of SWU increased $94.6 million (7 percent) in fiscal 1999, reflecting the timing of customer nuclear reactor refueling orders, including sales to customer reactors returning to service following an extended outage, partly offset by lower SWU commitment levels of a domestic and a foreign customer. USEC provided enrichment services for 108 reactors in fiscal 1999, compared with 100 reactors in fiscal 1998. The average SWU price billed to customers in fiscal 1999 was about the same as in fiscal 1998.[14]

Operating income amounted to $165.2 million in fiscal 1999, an increase of $24.1 million (or 17 percent) compared with $141.1 million in fiscal 1998. Operating income was reduced by a special charge of $34.7 million in fiscal 1999 for the suspension of AVLIS technology and $46.6 million in fiscal 1998 for workforce reductions and privatization costs. Project development costs were $30.3 million lower and gross profit was $12.5 million lower in fiscal 1999.[15]

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[11] LEU-HF blended down from Russian HEU in the amount of 92 million SWU.

[12] USEC's 10K for the year ended June 30, 1999, p. 5.

[13] Ibid., p. 27.

[14] Ibid., p. 22.

[15] Ibid., p. 25.

Operating income amounted to $87.3 million in the first six months of fiscal 2000, an increase of $12.3 million (or 16 percent) compared with $75.0 million in the corresponding period in fiscal 1999. The increase reflects the reduction of $54.8 million in project development costs following the suspension of AVLIS development in June 1999, partially offset by a lower gross profit. SWU purchased from Russia represented 45 percent of the combined produced and purchased supply mix in the six months ended December 31, 1999, compared with 35 percent in the corresponding period in fiscal 1999.[16]

On June 21, 2000, USEC announced that it will cease uranium enrichment at its Portsmouth production plant in June 2001 in order to align its cost of production with lower market prices. Ceasing operations at the Portsmouth plant will result in special charges of $125 million in fiscal 2000.[17]

Operations of Fabricators

The fuel fabricators convert enriched uranium hexafloride into a stable solid form, usually uranium oxide, which is then further processed into finished fabricated fuel assemblies. The firms generally do not own the material; therefore the revenues are basically service fees. The results of operations of two U.S. fabricators, ABB and Siemens, which include the processing to uranium oxide (in scope) and the total fuel assembly cost (not in scope), *** are presented in table III-5 and by firm in table III-6. ***.

Capital Expenditures, R&D Expenses, and Investment in Productive Facilities

Capital expenditures, R&D expenses, and the original cost and book value of property, plant, and equipment used in the production of uranium products for each sector are shown in table III-7. The data are aggregated so there is no double-counting, but there is a mix of reported coverage and the type of operation.

Capital expenditures fluctuated over the period and vary by year among the sectors. R&D expenses[18] in the annual periods are dominated by USEC due to the nature of its operation. The original costs of the fixed assets are dominated by the concentrators, but the assets are depreciated or written down to relatively lower amounts than in the other sectors. USEC leases the gaseous diffusion plants from DOE, and the values are not included in the asset data.

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[16] USEC's 10Q for the quarter year ended December 31, 1999, p. 10.

[17] USEC's 8-K filed June 22, 2000, exhibit 99.1.

[18] ***.

Table III-5
Results of operations of U.S. fabricators in the production of uranium, fiscal years 1997-99

* * * * * * *

Table III-6
Results of operations of U.S. fabricators (by firm) in the production of uranium, fiscal years 1997-99

* * * * * * *

Table III-7
Value of assets, capital expenditures, and R&D expenses of U.S. producers of uranium products, fiscal years 1997-99 and July-December 1999

* * * * * * *

PART IV: U.S. IMPORTS AND THE FOREIGN INDUSTRIES

IMPORTS AND IMPORTERS' INVENTORIES

Overall imports of uranium have steadily increased since 1990 (table I-2 and appendix table C-1); however, the increase is mainly due to imports of enriched uranium hexafluoride (table I-5). Imports of the other forms of uranium increased from their levels in 1990-92, but generally declined in 1997-99 (tables I-3, 4, and 6). The exception is enriched uranium oxides, nitrates, and metals, but these data contain some of the most glaring irregularities for individual countries and the resultant distortions are obvious in the data for "all countries." In any case, imports of enriched uranium hexafluoride, including LEU blended down from Russian HEU, accounted for well over half the value of total imports in 1997-99. Official import statistics report quantities for the various forms of uranium in terms of gross weight, and conversion factors were used to convert the gross weights into the appropriate weights used for trade. No such considerations limit the compilation of values.

Russia's share of imports was large, but limited to enriched uranium hexafluoride and a relatively small quantity of concentrate. A direct comparison to the data for "all countries," however, should be avoided because of the different sources of these data, as noted in Part I. The bulk of U.S. imports from Russia, over *** percent by value in 1997-99, was the SWU component of Russia's exports of enriched uranium to USEC under the Russian HEU Agreement, as shown below:

	1997	1998	1999
GNSS imports *(1,000 dollars)*	***	***	***
USEC imports *(1,000 dollars)*	***	***	***
Total	***	***	***

The natural component of USEC's imports is not included in the data because it is effectively returned to Russian ownership, as explained in Part I, and has not been sold for consumption in the United States. As heretofore indicated, its sale in the United States is subject to the quota limitations of the USEC Privatization Act. The remainder of imports from Russia did not fill its matched sales quota in 1998-99.

In addition to the imports from Russia shown in tables I-2, 3, and 5, *** imported enriched uranium from *** in *** that was made from about *** kg U of Russian natural uranium, valued at about ***. As noted previously, even though for customs purposes the uranium was a product of ***, its natural component was subject to the quota limitations of the Russian Suspension Agreement, as per the agreement's "by-pass" provisions instituted in 1996.

*** also imported enriched uranium from *** in 1997-98 made from about *** kg U of Ukrainian natural uranium valued at about ***, which was not covered by the antidumping duty order. Otherwise, there have been no known imports from Ukraine, by-pass or otherwise, during the period of these reviews.

As a share of overall imports, imports from Uzbekistan have been relatively small and restricted to concentrate (tables I-2 and 3); however, the country has filled its production-based quota in recent periods. This quota also includes *** enriched uranium made from about *** kg U of Uzbek natural uranium, valued at ***, and imported by *** in 1997-99. For these imports and the others with respect to Russia and Ukraine, *** acted as the importer of record as a courtesy to the U.S. utilities that had earlier purchased and arranged for the delivery of the product.

The Russian and Uzbek Suspension Agreements effectively precluded the holding of these countries' uranium in the United States. In general, the suspension agreements require immediate

delivery to a customer upon importation, with an allowance of time for weighing and sampling requirements. Similarly, USEC's imports of enriched uranium under the Russian HEU Agreement are pre-committed to customers before leaving Russia and are used to meet its contractual obligations before its U.S. production is used. As noted previously, large inventories of the natural component of this uranium have been accumulating in the United States for some time, but the quantities that accumulated prior to 1999 were purchased by the U.S. Government and will be held from the market for 10 years, and what has accumulated since is subject to the quota limitations of the USEC Privatization Act.

THE SUBJECT COUNTRY INDUSTRIES

In addition to having limited U.S.-market access pursuant to the suspension agreements and the Russian HEU Agreement, Russian-, Ukrainian-, and Uzbek-origin uranium (along with uranium from other former republics of the USSR) is subject to Euratom sales quotas in Europe. These restrictions were imposed in the early 1990s in order to maintain diversity of supply. Currently, the Euratom Commission allows about 25 percent of utilities' annual uranium requirements to be fulfilled with CIS uranium. The 25 percent is defined in terms of actual usage, however, so that purchases and inventories could actually be higher.

Russia

Much of the uncertainty in today's uranium market stems from the Russian industry's lack of transparency. Considering concentration, conversion, enrichment, and fabrication capacity together with existing stocks of uranium, Russia is arguably the largest source of uranium in the world. All sources agree that Russia has vast reserves of unmined uranium and extensive capacity to produce all forms of uranium, including the processing of depleted uranium and the reprocessing of spent fuel. But the exact quantities are subject to much speculation. Even more uncertain are the quantities of its extensive inventories and stockpiles. This lack of transparency allows Russia bargaining and negotiating advantages that it would not realize otherwise, and the leverage extends well beyond the trade and economic issues attending these reviews. Uranium and other fissionable materials are at the forefront of national security concerns, major foreign policy issues, and pressing environmental and safety concerns worldwide.

Though holding proprietarily most of the details of its industry, Minatom has released to the Commission certain information that relates to its considerations in these reviews:

* * * * * * *

According to further details supplied by TENEX, Russia produces about *** pounds of concentrate per year (compared with about 4.9 million pounds in the United States) at a rated capacity of about *** pounds and a utilization rate of about *** percent. Its annual concentrate requirements include about *** pounds for domestic use and Russian-built reactors abroad, *** pounds for other exports, and about *** pounds for HEU blending. ***.

Russia's annual conversion capacity is about *** kg U, ***.

Russia's nameplate SWU capacity for enriched hexafluoride is *** annually. TENEX provided no actual production quantities, but of the capacity to be used in 2000, ***.

* * * * * * *

The key to evaluating the Russian uranium industry, and the largest unknown, is its current stocks and inventories of uranium. They are presumed to be substantial, but no data have been provided. Petitioners point to over 700 metric tons of HEU in Russia not committed to the blenddown under the Russian HEU Agreement, but counsel for the Russian parties states that it is highly unlikely that any of this material would be directed to the world market in the near future because of its strategic importance to Russian national security. Without precise knowledge of Russian uranium inventories, the extent to which its production capacity would or could be used to supply its domestic needs and the rest of the world market cannot be determined.

In addition to the stocks of uranium in Russia, the Commission must consider any stocks of Russian-made uranium in other countries of the former USSR, even though ownership has passed to the country. Commerce has yet to make a ruling on the "origin" of this material for purposes of the suspension agreements and duties. The only known stocks of such uranium are in Kazakhstan, including *** kg U of LEU and about *** kg U of enriched UO_2.[1] ***. According to data provided by the Kazakh government to GE, none of this material is directly usable by U.S. utilities and only *** percent can readily be processed to meet U.S. utilities' needs, mainly by raising its enrichment levels. Another *** percent is so contaminated with highly radioactive isotopes as to preclude its processing altogether. The remaining material is of an intermediate quality and may or may not be processable for domestic use pending test results for specific levels of contaminant isotopes. There are no known existing plans for the disposal of this material, and Kazakhstan projected that its current stock would remain unchanged through 2000. As with its stocks of LEU, Kazakhstan reported that about *** percent of its remaining enriched UO_2 can readily be reprocessed for U.S. use, and *** percent is beyond processing at all, at least in the United States. The degree to which the remaining material could be reprocessed in the United States for U.S. use is speculative at this time. Besides being ***.

Ukraine

Ukraine has not participated in these reviews, and all information herein was derived from public sources, chiefly *Uranium: 1997 Resources, Production and Demand*, published by the Nuclear Energy Agency, and *Uranium Production Plans and Developments in the Nuclear Fuel Industries of Ukraine*, published by The Uranium Institute for the Twenty-third Annual International Symposium 1998.

Ukraine has several unexploited uranium deposits, at least 2 operating mines, and a concentrate-processing facility at Zheltiye Vody capable of producing about 2.6 million pounds of concentrate per year. This capacity, however, may already have been doubled. All activities related to the nuclear fuel cycle are owned and operated by the state under the Ministry of Energy of Ukraine. A subsidiary organization, VostGOK, is responsible for mining and milling.

A relatively large percentage of Ukraine's electric power capacity, over 35 percent, is generated by nuclear fuel, and Ukraine plans to increase its natural uranium supply to meet 100 percent of its reactor requirements. Currently, its production facilities provide about half these requirements (or about 10 percent by value). Conversion, enrichment, and fabricating services are purchased from Russia, along with the remainder of its needs for concentrate. In an effort to become more self-sufficient, the Ukraine Government has announced a program for the establishment of a more complete fuel cycle in Ukraine, including fabrication facilities, by 2010.

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[1] The Government of Kazakhstan refused to participate in the data collection for these reviews. The data herein are excerpted from their participation in Inv. No. 731-TA-539-A, Uranium from Kazakhstan.

Uzbekistan

As indicated previously, Uzbekistan's uranium operations, under the direction of Navoi, are limited to mining and concentrate production, and it markets most, if not all, of its product through Nukem. After 1992, much of Uzbekistan's older capacity was re-configured for gold production, an irreversable conversion, and its remaining capacity was modernized as the country shifted from deep shaft and strip mining to ISL techniques. ***.

Uzbekistan has no home market for uranium products. It sells most of its uranium under long term contracts to utilities in ***. There are no inventories or stocks of Russian-made (or Ukrainian-made) uranium in Uzbekistan. Uzbekistan's production, capacity, sales, exports, and end-of-period inventories of uranium concentrate in recent periods are shown below:

* * * * * * *

PART V: PRICING AND RELATED DATA

FACTORS AFFECTING PRICING

The exchanging or swapping of uranium products in their various forms is a common practice in the uranium industry. Swaps are normally undertaken by industry participants, including concentrators, importers, converters, enrichers, traders, or utilities, to avoid transportation costs and to ensure that the product is available for a customer in a timely manner with contract-specified quantities. Swaps are undertaken for other reasons such as meeting unexpected excess demand requirements and optimizing inventories, or in changing the country of origin of the uranium products. By swapping material of one country origin for material of another country origin, the owner of government-restricted material may be able to secure other material that is not subject to restriction. None of the firms providing questionnaires indicated that swaps had a significant effect on prices during 1997-99.[1] Although swaps can be used to circumvent import restrictions, the U.S. Government does regulate swaps to some extent.

In addition to swaps, loans and leases of all forms of uranium products between different industry participants are also used in this industry. Loans are undertaken largely for some of the same reasons discussed for swaps, including the need to meet excess demand, and to optimize inventories. For example, owners of inventory often make loans in an effort to offset holding costs. Brokers and traders may take leases to cover deliveries or may lease uranium products if they have purchased them and are trying to reduce their carrying charges until they can sell the product, change the form of the material, or move the location of the material. Questionnaire responses indicate that loans did not have any significant effect on market prices during 1997-99.

Questionnaire responses indicated that inventories of uranium concentrates are usually held at converter locations, inventories of natural UF_6 are usually held at enricher locations, and inventories of LEU-HF are usually held at fabricator locations. The only major exception is ***.

Raw Material Costs and Tariff Rates

Uranium is the predominant single material input cost to produce the various uranium products along the fuel cycle. U.S. NTR *ad valorem* duty rates are zero for most HTS uranium import subheadings and 5 percent for the remainder.[2] Approximately 99 percent of the total value of U.S. uranium imports during 1997-99 were duty free.

Transportation Costs to the U.S. Market

Transportation charges for imports of uranium from the subject countries to the U.S. ports of entry, based on U.S. official import value data during January 1997-December 1999, averaged 0.2 percent of the U.S. customs value for total U.S. imports of uranium from Russia and 2.1 percent for imports from Uzbekistan.

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[1] ***, a U.S. importer of uranium, reported that swaps affect the prices and quantities of uranium products and services primarily through an improvement in the overall efficiency of the market place.

[2] The positive duty rates apply almost entirely to natural uranium products other than uranium ores, uranium concentrates, and natural uranium hexafluoride; the positive duty rates are not subject to staged reductions under a WTO agreement.

U.S. Inland Transportation Costs

U.S. inland transportation costs typically account for a very small percentage of the total delivered price of uranium products. All six responding U.S. concentrators reported that these costs amount to less than 1 percent of the price and are not an important consideration when competing for sales. Responding U.S. importers of uranium from the subject countries also reported that these costs are insignificant. Similarly, ***, reported that transportation costs are not significant. Uranium products are shipped primarily by truck.

Exchange Rates

Figures V-1 and V-2 show quarterly real and nominal exchange rate indices (the former are nominal exchange rates adjusted for relative rates of inflation)[3] between the U.S. dollar and currencies of Russia and Ukraine.[4] In addition, exchange rate data for the other major foreign suppliers of uranium to the United States–Australia, Canada, France, Germany, and the United Kingdom–are briefly discussed but not shown in figures.[5] The most recently available data allowed quarterly real exchange rates to be calculated during January 1997-December 1999 for Russia and January 1997-December 1997 for Ukraine. Quarterly real exchange rates were calculated during January 1997-December 1999 for Australia, Canada, France, Germany, and the United Kingdom.[6] The nominal and real values of exchange rates generally trended closely together for the currencies and periods shown. The Russian ruble, however, showed an increasing divergence between the nominal and real exchange rates from

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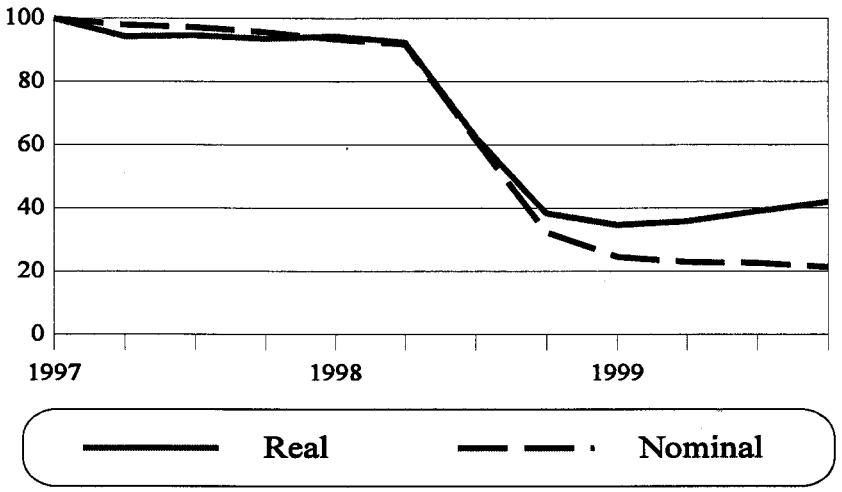
[3] The quarterly real and nominal exchange rate indices were calculated from nominal exchange rates and producer price indices reported by the IMF for each country. The exchange rate indices were based on exchange rates expressed in U.S. dollars per unit of the foreign currency, such that index numbers below 100 represent depreciation and numbers above 100 represent appreciation of the foreign currency vis-a-vis the U.S. dollar. See app. D for a discussion of the relationships among nominal exchange rates, real exchange rates, and producer prices, and the impact of changes in their values on prices of exports and imports. See also G. Benedick and P. Pogany, *Exchange Rates: Definitions and Applications*, USITC Office of Economics Working Paper No. 2000-01-A, January 2000 (available under the USITC internet site *usitc.gov/pub/reports/studies/*EC9911b.PDF).

[4] No official data on exchange rates and producer prices were readily available for Uzbekistan. The IMF indicated that such data for Uzbekistan were not reported in the *International Financial Statistics* because either the country would not allow the data to be published or the IMF determined that the data were otherwise not publishable (telephone conversation on April 27, 2000).

[5] The three subject countries accounted for 33.1 percent of the official total landed, duty-paid value of aggregate U.S. uranium imports during 1997-99, with Russia accounting for 31 percentage points. The other top five country suppliers together accounted for 54.8 percent of the official value of U.S. uranium imports during this period.

[6] The quarterly real exchange rate indices were calculated from nominal exchange rates, producer/wholesale price indices in the subject countries, and the producer price index in the United States. Producer selling prices of the subject product in each country are expected to follow the trend in that country's overall producer-price level; if subject product prices in the specified country do not follow the trend in the general price level, the calculated real exchange rate (which is based on this general price level) would over- or under-estimate the impact of the effect of the actual changes in domestic prices and exchange rates on U.S. dollar-denominated prices of exports of the subject product.

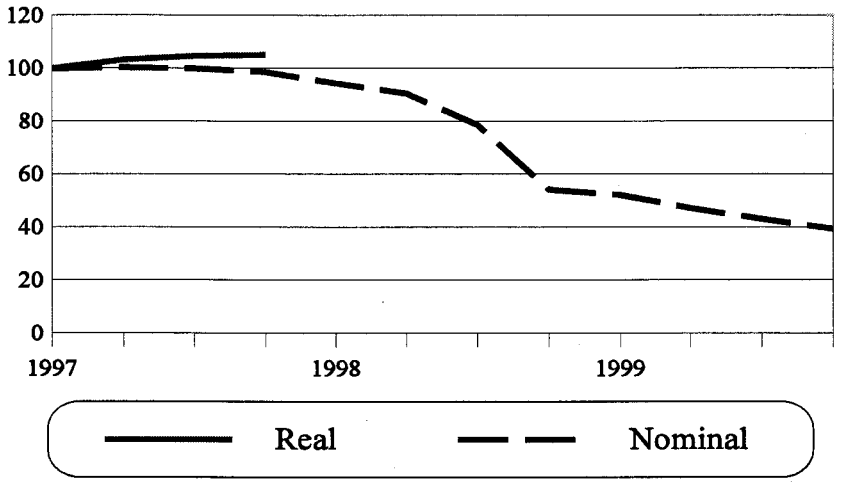
Figure V-1
Real and nominal exchange rate indexes of the Russian ruble, by quarters, January 1997-December 1999



Note: Index (January-March 1997=100) in U.S. dollars per Russian ruble.

Source: IMF, *International Financial Statistics*, June 2000.

Figure V-2
Real and nominal exchange rate indexes of the Ukranian hryvnia, by quarters, January 1997-December 1999



Note: Index (January-March 1997=100) in U.S. dollars per Ukranian hryvnia.

Source: IMF, *International Financial Statistics*, June 2000.

about the fourth quarter of 1998 through the fourth quarter of 1999. Significant inflation in Russia compared to deflation in the United States led to less currency depreciation in real terms compared to nominal terms for the Russian ruble during this period.[7]

Over the periods reported, real exchange rates of all but one of the specified currencies fluctuated but generally fell against the U.S. dollar, with declines in the Russian ruble and the Ukranian hryvnia (the latter in nominal terms) showing the greatest depreciation against the U.S. dollar, particularly during 1998.[8] The lone exception to falling currency values was the British pound, which appreciated in real terms against the U.S. dollar. As noted in appendix D, these currency depreciations tend to lower and the currency appreciation tends to raise the dollar price of the foreign countries' exports. The Russian ruble depreciated in real terms against the U.S. dollar by 58.0 percent on a quarterly basis during January 1997-December 1999.[9] The Australian dollar, Canadian dollar, French franc, and German mark depreciated in real terms against the U.S. dollar by 13.8 percent, 4.0 percent, 12.0 percent, and 11.9 percent, respectively, on a quarterly basis during January 1997-December 1999. The British pound appreciated in real terms against the U.S. dollar by 2.9 percent during January 1997-December 1999.

PRICING PRACTICES

Prices of natural uranium products and the conversion services are usually quoted on a delivered basis. Five U.S. concentrators, all three importers responding to this part of the questionnaire, and ConverDyn reported quoting delivered prices on all of their sales. However, USEC reported that it ***.

Discounts are not common in the uranium industry, rather prices are generally based on market conditions and costs.[10] Most sales of uranium are made on a multi-year contract basis. Based on questionnaire responses, contracts typically range in length from 3 to 5 years for uranium concentrates, 3 to 4 years for conversion services, 5-7 years for enrichment services, and typically 5 years, but can be as long as 10 years, for fabrication services. Negotiations for these contracts typically begin 1 to 2 years before the actual contract period. These contracts are seldom renegotiated during the years in which they are in effect. While terms vary, contracts typically fix both price terms and quantities during the contract

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[7] Central bank changes in the nominal exchange rates, as well as government changes in allowable bands of fluctuations around the official exchange rate, constitute devaluations when these actions reduce the exchange-rate value of the local currency. Depreciation occurs when market forces alone reduce the exchange-rate value of the local currency. Because devaluation and depreciation frequently occur simultaneously, the term depreciation is generally used.

[8] Mounting economic turmoil in Russia led the Russian Government in August 1998 to suspend its policies to control the ruble exchange rates. These events resulted in some capital flight from Russia, which, in turn, reportedly led to a weaker ruble exchange rate. Ukraine was similarly affected as that country is closely linked to the Russian economy with 45 percent of its imports shipped from Russia and 35 percent of its exports shipped to Russia. In addition, portfolio investors view both Russia and Ukraine as high-risk emerging economies, such that capital flight from Russia was accompanied by capital flight from Ukraine. (Telephone conversation with Zbyszko Tabernacki, country analyst with Plan Econ, on May 3, 2000).

[9] The Ukranian hryvnia appreciated in real terms against the U.S. dollar by 5.2 percent during 1997, the only period during which the real exchange rate for Ukraine could be calculated.

[10] Published prices are a significant factor in arriving at a price for typical long-term and short-term contracts. Price publications that report world prices of uranium concentrates, conversion services, and enrichment services include *Nuclear Market Review*, *Ux Weekly*, and *Nukem Weekly Report*.

period, but do not contain meet-or-release provisions or standard quantity requirements and do not require price premiums for sub-minimum shipments.

PRICE DATA

Quarterly selling price and quantity data were requested for sales of the following three uranium products produced in the United States and imported from the subject countries during 1997-99:

> *Product 1*–Uranium concentrates, commonly called yellowcake, which have not been converted or enriched,
>
> *Product 2*–Uranium hexafluoride in the natural state (natural UF_6),
>
> *Product 3*–Uranium hexafluoride (UF_6) enriched in the U^{235} isotope (LEU-HF).

Sales data were also requested for toll conversion of product 2 and toll enrichment of product 3; these toll conversion/enrichment services represent the typical manner in which products 2 and 3 are obtained by U.S. electric utilities. All of the selling price and toll-fee data were requested for sales to U.S. electric utilities.

Because of the importance of long-term contracts in this industry, separate price/toll-fee data were requested for three categories of transactions involving uranium and uranium toll processing (conversion and enrichment). Sales category 1 consists of a combination of spot sales and those long-term contract sales where the prices/toll fees are based on market prices/toll fees at the time of shipment, and the contracts do not specify a price/toll fee or cost-based floor, a price/toll-fee ceiling, or a discount from the market price/toll-fee. Sales category 2 consists of long-term contract sales where prices/toll fees are based on market prices/toll fees at the time of shipment but the contract specifies a price/toll fee or cost-based floor, a ceiling price/toll fee, a discount from market price/toll fee, or some combination of these. Sales category 3, which accounts for the bulk of uranium sales, consists of long-term contract sales where prices/toll fees are fixed or subject to escalator clauses specified in the contract. In addition to these requirements, questionnaire recipients were asked to report quarterly price and toll-fee data separately for each contract year in multi-year contracts and to show for each contract year the date(s) the contract(s) was/were negotiated, the period covered by the contract(s), and the total quantity of the contract(s).

Three U.S. concentrators,[11] ConverDyn, and USEC all provided the requested price information for domestic uranium and toll services. The usable price data reported by U.S. concentrators accounted for 42.5 percent of the total quantity of their total domestic sales of U.S.-produced concentrates during 1997-99. Data reported by ConverDyn and USEC accounted for 100 percent of the total quantity of their respective domestic sales of natural uranium conversion and enrichment services during 1997-99. In addition, the price data reported by USEC accounted for 100 percent of its domestic EUP sales during this period. GNSS, Nukem, and UG USA reported the requested price data for uranium concentrates imported from Russia and Uzbekistan; GNSS reported U.S. sales of natural UF_6 that had been book-

[11] *** provided usable price data for sales of uranium concentrates to U.S. electric utilities. These three U.S. concentrators accounted for almost *** percent of total U.S. uranium concentrate production during 1997-99. ***.

transferred as Russian origin;[12] and GNSS and USEC reported the requested price data for imported Russian enrichment services. The reported importers' selling price data accounted for 100 percent of the subject imported uranium concentrates and 90.0 percent of the total quantity of the subject imported LEU-HF during 1997-99.[13]

Trends in prices/toll fees and price/toll-fee comparisons between U.S.-produced and subject imported uranium and uranium toll services are discussed by type of uranium product/service in the following sections. These sections are followed by a discussion of fee information provided by the two responding uranium fabricators. Price/toll-fee trends and comparisons are based on weighted-average prices for each contract year,[14] which, in turn, are based on reported quarterly shipment data under these contracts during 1997-99. In addition, the price data are discussed by each sales category; the majority of the uranium products and toll services are sold under sales category 3.

TRENDS IN PRICES AND PRICE COMPARISONS OF URANIUM CONCENTRATES

Net delivered U.S. sales prices of U.S.-produced and imported Russian uranium concentrates (product 1) under sales category *** for shipments during 1997-99 are shown in table V-1, while, for the same shipment period, prices of domestic product 1 under sales category *** are shown in table V-2, prices of domestic product 1 under sales category *** are presented in table V-3, and prices of the imported Russian and Uzbek product 1 under sales category *** are shown in table V-4. The price and quantity data by contract year for domestic and subject imported product 1 under sales category *** are also shown in figure V-3. The limited selling price data reported for the domestic and imported Russian product 1 sold under sales category *** and the domestic product 1 sold under sales category *** were insufficient to derive definitive price trends for such sales.[15]

More complete selling price data were reported for quarterly sales of the domestic product 1 and of the imported Russian and Uzbek product 1 under sales category *** during 1997-99. Since product 1 data for sales category *** are based on long-term agreements negotiated in different years, prices associated with the reported quarterly shipments during 1997-99 are shown separately by the year that the contracts were agreed upon. However, even with these breakouts, trends in prices are difficult to determine. Quarterly movements in prices for sales under these categories are more likely to reflect contract terms than changes in market conditions. As an alternative to these data, an average price is shown for each contract year in the second-to-the-last row of tables V-3 and V-4. The prices are

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[12] This natural UF_6 represented the natural component of previous sales of Russian LEU-HF; none of this natural UF_6 was physically imported from Russia. The U.S. purchaser had paid only for the enrichment-service component of the Russian LEU-HF and had transferred its natural UF_6 to the seller (GNSS) of the Russian LEU-HF as compensation for the natural uranium component of the LEU-HF. The natural UF_6 originally held by the purchaser was not of Russian origin, but was book-transferred as having a Russian identity at the time of the exchange. (Telephone conversation with ***).

[13] No uranium in any form is believed to have been directly imported from Ukraine during this period, while only uranium concentrates are believed to have been directly imported from Uzbekistan.

[14] These weighted-average prices reflect changes in competition among the various contract years. Quarter-to-quarter price comparisons involving shipments contracted in a single year may vary according to differing contract sales volumes, contract lengths, and contract-based escalations, etc. The quarter-to-quarter price variations involving long-term contracts are based on market conditions both in the past and during the current period and, as such, may contain too much disturbance to be useful for price trends and price comparisons.

[15] The limited reported price data for uranium concentrates sold under sales categories *** showed that prices in the final periods were consistently lower than those reported in the initial periods.

Table V-1
Uranium concentrates: Net delivered selling prices and quantities of *spot sales and certain contract sales* to U.S. electric utilities of U.S.-produced product 1 and that imported from Russia, by quarters, 1997-99

* * * * * * *

Table V-2
Uranium concentrates: Net delivered selling prices and quantities of *restricted market-related contract sales* to U.S. electric utilities of U.S.-produced product 1, shipped by quarters, 1997-99, for contracts by the year negotiated, 1989-97

* * * * * * *

Table V-3
Uranium concentrates: Net delivered selling prices and quantities of *fixed or escalated-price contract sales* to U.S. electric utilities of U.S.-produced product 1, shipped by quarters, 1997-99, for contracts by the year negotiated, 1990-97

* * * * * * *

Table V-4
Uranium concentrates: Net delivered selling prices and quantities of *fixed or escalated -price contract sales* to U.S. electric utilities of U.S. imported product 1 from Russia and Uzbekistan, shipped by quarters, 1997-99, for contracts by the year negotiated, 1994-97

* * * * * * *

Figure V-3
Uranium concentrates: Weighted-average net delivered prices and total quantities of *fixed or escalated-price contract sales* to U.S. electric utilities of the domestic and imported Russian and Uzbek product 1, by contract years, 1990-97

* * * * * * *

weighted by the total quarterly shipments for 1997-99 corresponding to each contract year shown (last row of tables V-3 and V-4). The data are intended to show movements in average prices from one contract period to the next. Movements in total quantities by contract year should be viewed carefully because of differences in the timing of shipments of individual contracts in a single contract year and among the individual contract years.

The weighted-average price per pound of U_3O_8 of the U.S.-produced uranium concentrates sold under sales category *** initially rose from *** per pound based on 1990 contracts to *** per pound based on 1992 contracts, then fell to *** per pound based on 1995 contracts, before partially recovering to *** per pound based on 1996 contracts, and then ending at *** per pound based on 1997 contracts. Sales quantities varied considerably among contract years, from a low of *** pounds of U_3O_8 based on 1994 contracts to a high of *** pounds based on 1996 contracts. U.S. concentrators reported in their producer questionnaire responses that they generally required prices ranging from *** per pound to remain minimally profitable.

The weighted-average U.S. price per pound of U_3O_8 of the imported Russian uranium concentrates sold under sales category *** initially rose from *** per pound based on 1994 contracts to *** per pound based on 1995 contracts, and then continued to rise to *** per pound based on 1997 contracts. Sales quantities varied among contract years, from a low of *** pounds of U_3O_8 based on 1997 contracts, to a high of *** pounds based on 1995 contracts. The Russian uranium concentrates were sold under matched sales provisions, which effectively required the selling prices to be less than those of U.S. producers. The matched sales quota for Russia was not filled during 1997-99 reportedly because matched sales prices were too low for the Russian suppliers.[16]

The weighted-average U.S. price per pound of U_3O_8 of the imported Uzbek uranium concentrates sold under sales category *** fluctuated without a noticeable trend for the contract years reported. Selling prices initially fell from *** per pound based on 1994 contracts to *** per pound based on 1995 contracts, then rose to *** per pound based on 1996 contracts, before falling again to *** per pound based on 1997 contracts. Changes in sales quantities varied inversely to changes in prices among contract years, from a low of *** pounds of U_3O_8 based on 1994 contracts to a high of *** pounds based on 1997 contracts.

Selling price comparisons between the domestic and subject imported product 1 were possible only for transactions involving sales category *** and were based on weighted-average prices by contract year (table V-5). All three price comparisons between the domestic and imported Russian product 1, involving contracts negotiated during 1994, 1995, and 1997, showed the Russian product to be priced lower than the domestic product, with margins ranging from *** percent based on 1997 contracts to *** percent based on 1994 contracts.[17] Three of the four price comparisons between the domestic and imported Uzbek product 1, involving contracts negotiated during 1994, 1996, and 1997, showed the Uzbek product to be priced lower than the domestic product, with margins ranging from *** percent based on 1996 contracts to *** percent based on 1997 contracts. The fourth price comparison, involving contracts negotiated during 1995, showed the Uzbek product to be priced *** percent higher than the domestic product.

Table V-5
Uranium concentrates: Net delivered selling price comparisons between U.S.-produced product 1 and that imported from Russia and Uzbekistan and sold to U.S. electric utilities on a *fixed or escalated-price contract sales* basis, shipped by quarters, 1997-99, for contracts by the year negotiated, 1994-97

* * * * * * *

TRENDS IN TOLL-CONVERSION FEES AND PRICES FOR NATURAL URANIUM HEXAFLUORIDE

All of ConverDyn's transactions were reported for toll-production (conversion) of product 2 under sales categories *** and are shown in tables V-6 and V-7, respectively; toll-conversion and quantity data, by contract year, are also shown in figure V-4. GNSS reported sales of product 2 that carried a

[16] Posthearing brief of the Russian parties, p. 9 and app. B.

[17] Price comparisons between the domestic and imported Russian uranium concentrates should be viewed with caution because the Russian product 1 was sold under matched sales provisions of the Russian Suspension Agreement, which required the Russian product to be priced less than the domestic product.

Russian origin under sales categories ***, which are shown in tables V-8 and V-9, respectively. ConverDyn's reported sales are for only the conversion service, whereas GNSS' reported sales are for product 2, which includes both the natural uranium feed value and the conversion value. Although both types of transactions show a fee/price in dollars per kg of natural U, they represent different amounts of value added and, as a result, are not comparable. Average toll fees are discussed for each contract year for the conversion toll fees/product 2 prices under sales categories ***. The toll fees/prices are weighted by the total quarterly shipments during 1997-99 corresponding to each contract year shown. The data are intended to show movements in average toll fees/prices from one contract period to the next based on shipments during 1997-99. Movements in total quantities by contract year should be viewed carefully because of differences in the timing of shipments of individual contracts in a single contract year and among the individual contract years.

* * * * * * *

No toll-conversion fee or price comparisons were possible between the domestic and subject imported uranium product 2.

TRENDS IN TOLL-ENRICHMENT FEES AND PRICES FOR ENRICHED URANIUM HEXAFLUORIDE

Most of USEC's transactions of its domestic uranium production involved toll production (enrichment) of product 3 with limited sales under sales category *** and most sales under sales category ***; these data are shown in table V-10 for sales category *** and tables V-11(a) and V-11(b) for sales category ***. USEC also reported limited sales of its U.S.-produced EUP, all under sales category ***; these data are briefly discussed but not shown in a table.[18] In addition, USEC and GNSS reported their U.S. sales of imported Russian enrichment services,[19] all under sales category ***, which are shown in tables 12(a) and 12(b).[20] Toll fees and quantities for U.S. and Russian SWUs, which are shown in tables11(a) and 12(a), respectively, are also shown in figure V-5. Enrichment services are typically expressed in units of SWU, but can also be expressed in kgs of enriched U in product 3. The toll fee expressed in dollars per SWU represents a valid price, but the toll fee expressed in dollars per kg of enriched U does not represent the full value of the enriched U. Prices of EUP represent the full value of the enriched U.

Average toll fees are discussed for each contract year for the enrichment toll fees under sales category ***. The toll fees are weighted by the total quarterly shipments during 1997-99 corresponding to each contract year shown. The data are intended to show movements in average toll fees from one contract period to the next based on shipments during 1997-99. Movements in total quantities by contract year should be viewed carefully because of differences in the timing of shipments of individual contracts in a single contract year and among the individual contract years.

* * * * * * *

[18] USEC was not able to break out sales of its EUP by contract year, therefore quarter-to-quarter price changes are not very useful.

[19] ***.

[20] ***.

Table V-6
Natural uranium hexafluoride conversion services: Net delivered toll prices and quantities of *restricted market-related contract sales* to U.S. electric utilities of U.S. toll-converted product 2, shipped by quarters, 1997-99, for contracts by year negotiated, 1995-97

* * * * * * *

Table V-7
Natural uranium hexafluoride conversion services: Net delivered toll fees and quantities of *fixed or escalated-toll-fee contract sales* to U.S. electric utilities of U.S. toll-converted product 2, shipped by quarters, 1997-99, for contracts by the year negotiated, 1975-98

* * * * * * *

Table V-8
Natural uranium hexafluoride: Net delivered selling prices and quantities of *spot sales and certain contract sales* to U.S. electric utilities of product 2 that was the exchanged natural component from U.S. sales of LEU-HF imported from Russia, by quarters, 1997

* * * * * * *

Table V-9
Natural uranium hexafluoride: Net delivered selling prices and quantities of *fixed or escalated-price contract sales* to U.S. electric utilities of product 2 that was the exchanged natural component from U.S. sales of LEU-HF imported from Russia, shipped by quarters, 1997-99, for contracts by the year negotiated, 1994-97

* * * * * * *

Figure V-4
Natural uranium hexafluoride conversion services: Weighted-average net delivered toll fees and total quantities of *fixed or escalated-price contract sales* to U.S. electric utilities of U.S. toll-converted product 2, by contract years, 1975-98

* * * * * * *

Table V-10
Enriched uranium hexafluoride enrichment services: Net delivered selling toll fees and quantities of *spot sales and certain contract sales* to U.S. electric utilities of U.S. enrichment services producing product 3, measured in SWUs of enrichment and kilograms of enriched U, by quarters, 1997-99

* * * * * * *

Table V-11(a)
Enriched uranium hexafluoride enrichment services: Net delivered toll fees and quantities of *fixed or escalated toll-fee contract sales* to U.S. electric utilities of U.S. enrichment services producing product 3, measured in SWUs of enrichment, shipped by quarters, 1997-99, for contracts by the year negotiated, 1984-97

* * * * * * *

Table V-11(b)
Enriched uranium hexafluoride enrichment services: Net delivered toll fees and quantities of *fixed or escalated toll-fee contract sales* to U.S. electric utilities of U.S. enrichment services producing product 3, measured in kilograms of enriched U, shipped by quarters, 1997-99, for contracts by the year negotiated, 1984-97

* * * * * * *

Table V-12(a)
Enriched uranium hexafluoride enrichment services: Net delivered toll fees and quantities of *fixed or escalated-toll-fee contract sales* to U.S. electric utilities of imported Russian enrichment services producing product 3, measured in SWUs of enrichment, shipped by quarters, 1997-99, for contracts by the year negotiated, 1984-99

* * * * * * *

Table V-12(b)
Enriched uranium hexafluoride enrichment services: Net delivered toll fees and quantities of *fixed or escalated-toll-fee contract sales* to U.S. electric utilities of imported Russian enrichment services producing product 3, measured in kilograms of enriched U, shipped by quarters, 1997-99, for contracts by the year negotiated, 1984-99

* * * * * * *

Figure V-5
Enriched uranium hexafluoride enrichment services: Weighted-average net delivered toll fees and total quantities of *fixed or escalated-price contract sales* to U.S. electric utilities of the domestic and imported Russian enrichment services producing product 3, by contract years, 1984-99

* * * * * * *

TOLL-ENRICHMENT FEE COMPARISONS FOR ENRICHED URANIUM HEXAFLUORIDE[21]

Toll-enrichment fee comparisons between the domestic and subject imported product 3 were possible only for transactions involving sales category 3 and were based on weighted-average prices by contract year (table V-13).[22] Two of the five possible toll-fee comparisons between the domestic and imported Russian enrichment services for product 3, involving contracts negotiated during 1984 and 1994-97, showed the Russian enrichment service to be priced lower than the domestic enrichment service,

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[21] A total of *** units of SWU of imported Russian uranium enrichment services were reported sold at an average product assay of *** percent during 1997-99, while a total of *** units of domestic SWU were reported sold also at an average product assay of *** percent. These sales, for which price data were reported, involved sales of only enrichment services. In addition, the reported price data involved *** units of domestic SWU that were sold by USEC as EUP during 1997-99.

[22] No price comparisons between domestic and subject uranium were possible for EUP.

with margins of *** percent based on 1995 contracts and *** percent based on 1996 contracts. Two other toll-fee comparisons showed the Russian enrichment service to be priced higher than the domestic enrichment service, with margins of *** percent based on 1984 contracts and *** percent based on 1994 contracts. The final toll-fee comparison showed *** in toll fees between the Russian and domestic enrichment services, based on 1997 contracts.

Table V-13
Enriched uranium hexafluoride enrichment services: Net delivered toll-fee comparisons between U.S. enrichment services and those imported from Russia and sold to U.S. electric utilities on a *fixed or escalated-price contract sales* basis, measured in SWU's of enrichment, by contract years, 1984-97

* * * * * * *

FABRICATOR CONVERSION FEES

U.S. uranium fabricators were asked to estimate their annual unit costs to convert LEU-HF to LEU-DO and then to transform this low-enriched uranium product into pellets for use in their U.S.-produced fuel-rod assemblies during 1997-99. *** provided usable responses. During this period, conversion costs ranged from *** per kg of enriched U and pelletizing costs ranged from *** per kg of enriched U.

APPENDIX A

FEDERAL REGISTER NOTICES AND STATEMENT ON ADEQUACY

(1) The name and address of your firm or entity (including World Wide Web address if available) and name, telephone number, fax number, and E-mail address of the certifying official.

(2) A statement indicating whether your firm/entity is a U.S. producer of the Domestic Like Product, a U.S. union or worker group, a U.S. importer of the Subject Merchandise, a foreign producer or exporter of the Subject Merchandise, a U.S. or foreign trade or business association, or another interested party (including an explanation). If you are a union/worker group or trade/business association, identify the firms in which your workers are employed or which are members of your association.

(3) A statement indicating whether your firm/entity is willing to participate in this review by providing information requested by the Commission.

(4) A statement of the likely effects of the revocation of the antidumping duty order on the Domestic Industry in general and/or your firm/entity specifically. In your response, please discuss the various factors specified in section 752(a) of the Act (19 U.S.C. 1675a(a)) including the likely volume of subject imports, likely price effects of subject imports, and likely impact of imports of Subject Merchandise on the Domestic Industry.

(5) A list of all known and currently operating U.S. producers of the Domestic Like Product. Identify any known related parties and the nature of the relationship as defined in section 771(4)(B) of the Act (19 U.S.C. 1677(4)(B)).

(6) A list of all known and currently operating U.S. importers of the Subject Merchandise and producers of the Subject Merchandise in the Subject Country that currently export or have exported Subject Merchandise to the United States or other countries since 1991.

(7) If you are a U.S. producer of the Domestic Like Product, provide the following information on your firm's operations on that product during calendar year 1998 (report quantity data in metric tons of contained tungsten (MTW) and value data in thousands of U.S. dollars, f.o.b. plant). If you are a union/worker group or trade/business association, provide the information, on an aggregate basis, for the firms in which your workers are employed/ which are members of your association.

(a) Production (quantity) and, if known, an estimate of the percentage of total U.S. production of the Domestic Like Product accounted for by your firm's(s') production;

(b) The quantity and value of U.S. commercial shipments of the Domestic Like Product produced in your U.S. plant(s); and

(c) The quantity and value of U.S. internal consumption/company transfers of the Domestic Like Product produced in your U.S. plant(s).

(8) If you are a U.S. importer or a trade/business association of U.S. importers of the Subject Merchandise from the Subject Country, provide the following information on your firm's(s') operations on that product during calendar year 1998 (report quantity data in MTW and value data in thousands of U.S. dollars). If you are a trade/business association, provide the information, on an aggregate basis, for the firms which are members of your association.

(a) The quantity and value (landed, duty-paid but not including antidumping or countervailing duties) of U.S. imports and, if known, an estimate of the percentage of total U.S. imports of Subject Merchandise from the Subject Country accounted for by your firm's(s') imports;

(b) The quantity and value (f.o.b. U.S. port, including antidumping and/or countervailing duties) of U.S. commercial shipments of Subject Merchandise imported from the Subject Country; and

(c) The quantity and value (f.o.b. U.S. port, including antidumping and/or countervailing duties) of U.S. internal consumption/company transfers of Subject Merchandise imported from the Subject Country.

(9) If you are a producer, an exporter, or a trade/business association of producers or exporters of the Subject Merchandise in the Subject Country, provide the following information on your firm's(s') operations on that product during calendar year 1998 (report quantity data in MTW and value data in thousands of U.S. dollars, landed and duty-paid at the U.S. port but not including antidumping or countervailing duties). If you are a trade/business association, provide the information, on an aggregate basis, for the firms which are members of your association.

(a) Production (quantity) and, if known, an estimate of the percentage of total production of Subject Merchandise in the Subject Country accounted for by your firm's(s') production; and

(b) The quantity and value of your firm's(s') exports to the United States of Subject Merchandise and, if known, an estimate of the percentage of total exports to the United States of Subject Merchandise from the Subject Country accounted for by your firm's(s') exports.

(10) Identify significant changes, if any, in the supply and demand conditions or business cycle for the Domestic Like Product that have occurred in the United States or in the market for the Subject Merchandise in the Subject Country since the Order Date, and significant changes, if any, that are likely to occur within a reasonably foreseeable time. Supply conditions to consider include technology; production methods; development efforts; ability to increase production (including the shift of production facilities used for other products and the use, cost, or availability of major inputs into production); and factors related to the ability to shift supply among different national markets (including barriers to importation in foreign markets or changes in market demand abroad). Demand conditions to consider include end uses and applications; the existence and availability of substitute products; and the level of competition among the Domestic Like Product produced in the United States, Subject Merchandise produced in the Subject Country, and such merchandise from other countries.

(11) (OPTIONAL) A statement of whether you agree with the above definitions of the Domestic Like Product and Domestic Industry; if you disagree with either or both of these definitions, please explain why and provide alternative definitions.

Authority: This review is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.61 of the Commission's rules.

By order of the Commission.

Issued: July 27, 1999.

Donna R. Koehnke,

Secretary.

[FR Doc. 99-19753 Filed 7-30-99; 8:45 am]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

[Investigations Nos. 731-TA-539-B, C, E, and F (Review)]

Uranium From Kyrgyzstan, Russia, Ukraine, and Uzbekistan

AGENCY: United States International Trade Commission.

ACTION: Institution of five-year reviews concerning the antidumping duty order on uranium from Ukraine and suspended antidumping investigations on uranium from Kyrgyzstan, Russia, and Uzbekistan.

SUMMARY: The Commission hereby gives notice that it has instituted reviews pursuant to section 751(c) of the Tariff Act of 1930 (19 U.S.C. 1675(c)) (the Act) to determine whether revocation of the

antidumping duty order on uranium from Ukraine and termination of the suspended investigations on uranium from Kyrgyzstan, Russia, and Uzbekistan would be likely to lead to continuation or recurrence of material injury. Pursuant to section 751(c)(2) of the Act, interested parties are requested to respond to this notice by submitting the information specified below to the Commission;[1] to be assured of consideration, the deadline for responses is September 21, 1999. Comments on the adequacy of responses may be filed with the Commission by October 15, 1999.

For further information concerning the conduct of these reviews 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, D, E, and F (19 CFR part 207). Recent amendments to the Rules of Practice and Procedure pertinent to five-year reviews, including the text of subpart F of part 207, are published at 63 FR 30599, June 5, 1998, and may be downloaded from the Commission's World Wide Web site at http://www.usitc.gov/rules.htm.

EFFECTIVE DATE: August 2, 1999.

FOR FURTHER INFORMATION CONTACT: Mary Messer (202–205–3193), Elizabeth Haines (202–205–3200), or Vera Libeau (202–205–3176), 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. General information concerning the Commission may also be obtained by accessing its internet server (http://www.usitc.gov).

SUPPLEMENTARY INFORMATION:

Background

On October 16, 1992, the Department of Commerce suspended antidumping duty investigations on imports of uranium from Kyrgyzstan, Russia, Ukraine, and Uzbekistan (57 FR 49220, Oct. 30, 1992). On August 30, 1993, the Department of Commerce issued an antidumping duty order on imports of uranium from Ukraine (58 FR 45483). The Commission is conducting reviews to determine whether revocation of the order and termination of the suspended investigations would be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time. It will assess the adequacy of interested party responses to this notice of institution to determine whether to conduct full reviews or expedited reviews. The Commission's determinations in any expedited reviews will be based on the facts available, which may include information provided in response to this notice.

Definitions

The following definitions apply to these reviews:

(1) *Subject Merchandise* is the class or kind of merchandise that is within the scope of the five-year reviews, as defined by the Department of Commerce.

(2) The *Subject Countries* in these reviews are Kyrgyzstan, Russia, Ukraine, and Uzbekistan.

(3) The *Domestic Like Product* is the domestically produced product or products which are like, or in the absence of like, most similar in characteristics and uses with, the Subject Merchandise. In its original preliminary determination concerning the U.S.S.R. and in its original final determination concerning Ukraine, the Commission defined the Domestic Like Product as coextensive with the articles under investigation.[2] Certain Commissioners defined the Domestic Like Product differently in the final determination concerning Ukraine.

(4) The *Domestic Industry* is the U.S. producers as a whole of the Domestic Like Product, or those producers whose collective output of the Domestic Like Product constitutes a major proportion of the total domestic production of the product. In its original preliminary determination concerning the U.S.S.R., the Commission defined the Domestic Industry as producers of the product coextensive with the articles under investigation, including the U.S. Department of Energy's uranium enrichment operations. In its original final determination concerning Ukraine, the Commission defined the Domestic Industry as producers of uranium, including uranium concentrate producers, natural uranium hexafluoride converters, the U.S. Enrichment Corporation, and fuel fabricators. Certain Commissioners defined the Domestic Industry differently.

(5) The *Order Dates* are the dates that the antidumping duty order under review became effective and/or the investigations were suspended. In the reviews concerning the suspended investigations, the Order Date is October 16, 1992. In the review concerning the antidumping duty order, the Order Date is August 30, 1993.

(6) An *Importer* is any person or firm engaged, either directly or through a parent company or subsidiary, in importing the Subject Merchandise into the United States from a foreign manufacturer or through its selling agent.

Participation in the Reviews and Public Service List

Persons, including industrial users of the Subject Merchandise and, if the merchandise is sold at the retail level, representative consumer organizations wishing to participate in the reviews as parties must file an entry of appearance with the Secretary to the Commission, as provided in section 201.11(b)(4) of the Commission's rules, no later than 21 days after publication of this notice in the **Federal Register**. The Secretary will maintain a public service list containing the names and addresses of all persons, or their representatives, who are parties to the reviews.

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

Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI submitted in these reviews available to authorized applicants under the APO issued in the reviews, provided that the application is made no later than 21 days after publication of this notice in the **Federal Register**. Authorized applicants must represent interested parties, as defined in 19 U.S.C. § 1677(9), who are parties to the reviews. A separate service list will be maintained by the Secretary for those

[1] No response to this request for information is required if a currently valid Office of Management and Budget (OMB) number is not displayed; the OMB number is 3117–0016/USITC No. 99–5–033. Public reporting burden for the request is estimated to average 7 hours per response. Please send comments regarding the accuracy of this burden estimate to the Office of Investigations, U.S. International Trade Commission, 500 E Street, SW, Washington, DC 20436.

[2] The articles covered in the preliminary investigation concerning the U.S.S.R. and the final investigation concerning Ukraine included 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 U_{235} and its compounds; alloys, dispersions (including cermets), ceramic products, and mixtures containing uranium enriched in U_{235} or compounds of uranium enriched U_{235}. The articles covered in the final investigation concerning Ukraine also included low-enriched uranium and highly-enriched uranium.

parties authorized to receive BPI under the APO.

Certification

Pursuant to section 207.3 of the Commission's rules, any person submitting information to the Commission in connection with these reviews must certify that the information is accurate and complete to the best of the submitter's knowledge. In making the certification, the submitter will be deemed to consent, unless otherwise specified, for the Commission, its employees, and contract personnel to use the information provided in any other reviews or investigations of the same or comparable products which the Commission conducts under Title VII of the Act, or in internal audits and investigations relating to the programs and operations of the Commission pursuant to 5 U.S.C. Appendix 3.

Written Submissions

Pursuant to section 207.61 of the Commission's rules, each interested party response to this notice must provide the information specified below. The deadline for filing such responses is September 21, 1999. Pursuant to section 207.62(b) of the Commission's rules, eligible parties (as specified in Commission rule 207.62(b)(1)) may also file comments concerning the adequacy of responses to the notice of institution and whether the Commission should conduct expedited or full reviews. The deadline for filing such comments is October 15, 1999. All written submissions must conform with the provisions of sections 201.8 and 207.3 of the Commission's rules and any submissions that contain BPI must also conform with the requirements of sections 201.6 and 207.7 of the Commission's rules. The Commission's rules do not authorize filing of submissions with the Secretary by facsimile or electronic means. Also, in accordance with sections 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the reviews must be served on all other parties to the reviews (as identified by either the public or APO service list as appropriate), and a certificate of service must accompany the document (if you are not a party to the reviews you do not need to serve your response).

Inability To Provide Requested Information

Pursuant to section 207.61(c) of the Commission's rules, any interested party that cannot furnish the information requested by this notice in the requested form and manner shall notify the Commission at the earliest possible time, provide a full explanation of why it cannot provide the requested information, and indicate alternative forms in which it can provide equivalent information. If an interested party does not provide this notification (or the Commission finds the explanation provided in the notification inadequate) and fails to provide a complete response to this notice, the Commission may take an adverse inference against the party pursuant to section 776(b) of the Act in making its determinations in the reviews.

Information To Be Provided in Response to This Notice of Institution

If you are a domestic producer, union/worker group, or trade/business association; import/export Subject Merchandise from more than one Subject Country; or produce Subject Merchandise in more than one Subject Country, you may file a single response. If you do so, please ensure that your response to each question includes the information requested for each pertinent Subject Country. As used below, the term "firm" includes any related firms.

(1) The name and address of your firm or entity (including World Wide Web address if available) and name, telephone number, fax number, and E-mail address of the certifying official.

(2) A statement indicating whether your firm/entity is a U.S. producer of the Domestic Like Product, a U.S. union or worker group, a U.S. importer of the Subject Merchandise, a foreign producer or exporter of the Subject Merchandise, a U.S. or foreign trade or business association, or another interested party (including an explanation). If you are a union/worker group or trade/business association, identify the firms in which your workers are employed or which are members of your association.

(3) A statement indicating whether your firm/entity is willing to participate in these reviews by providing information requested by the Commission.

(4) A statement of the likely effects of the revocation of the antidumping duty order and the termination of the suspended investigations on the Domestic Industry in general and/or your firm/entity specifically. In your response, please discuss the various factors specified in section 752(a) of the Act (19 U.S.C. 1675a(a)) including the likely volume of subject imports, likely price effects of subject imports, and likely impact of imports of Subject Merchandise on the Domestic Industry.

(5) A list of all known and currently operating U.S. producers of the Domestic Like Product. Identify any known related parties and the nature of the relationship as defined in section 771(4)(B) of the Act (19 U.S.C. 1677(4)(B)).

(6) A list of all known and currently operating U.S. importers of the Subject Merchandise and producers of the Subject Merchandise in the Subject Countries that currently export or have exported Subject Merchandise to the United States or other countries since 1991.

(7) If you are a U.S. producer of the Domestic Like Product, provide the following information on your firm's operations on that product during calendar year 1998 (report quantity data in pounds and value data in thousands of U.S. dollars, f.o.b. plant). If you are a union/worker group or trade/business association, provide the information, on an aggregate basis, for the firms in which your workers are employed/which are members of your association.

(a) Production (quantity) and, if known, an estimate of the percentage of total U.S. production of the Domestic Like Product accounted for by your firm's(s') production;

(b) The quantity and value of U.S. commercial shipments of the Domestic Like Product produced in your U.S. plant(s); and

(c) The quantity and value of U.S. internal consumption/company transfers of the Domestic Like Product produced in your U.S. plant(s).

(8) If you are a U.S. importer or a trade/business association of U.S. importers of the Subject Merchandise from the Subject Countries, provide the following information on your firm's(s') operations on that product during calendar year 1998 (report quantity data in pounds and value data in thousands of U.S. dollars). If you are a trade/business association, provide the information, on an aggregate basis, for the firms which are members of your association.

(a) The quantity and value (landed, duty-paid but not including antidumping or countervailing duties) of U.S. imports and, if known, an estimate of the percentage of total U.S. imports of Subject Merchandise from the Subject Countries accounted for by your firm's(s') imports;

(b) The quantity and value (f.o.b. U.S. port, including antidumping and/or countervailing duties) of U.S. commercial shipments of Subject Merchandise imported from the Subject Countries; and

(c) The quantity and value (f.o.b. U.S. port, including antidumping and/or countervailing duties) of U.S. internal consumption/company transfers of

Subject Merchandise imported from the Subject Country.

(9) If you are a producer, an exporter, or a trade/business association of producers or exporters of the Subject Merchandise in the Subject Countries, provide the following information on your firm's(s') operations on that product during calendar year 1998 (report quantity data in pounds and value data in thousands of U.S. dollars, landed and duty-paid at the U.S. port but not including antidumping or countervailing duties). If you are a trade/business association, provide the information, on an aggregate basis, for the firms which are members of your association.

(a) Production (quantity) and, if known, an estimate of the percentage of total production of Subject Merchandise in the Subject Countries accounted for by your firm's(s') production; and

(b) The quantity and value of your firm's(s') exports to the United States of Subject Merchandise and, if known, an estimate of the percentage of total exports to the United States of Subject Merchandise from the Subject Countries accounted for by your firm's(s') exports.

(10) Identify significant changes, if any, in the supply and demand conditions or business cycle for the Domestic Like Product that have occurred in the United States or in the market for the Subject Merchandise in the Subject Countries since the Order Dates, and significant changes, if any, that are likely to occur within a reasonably foreseeable time. Supply conditions to consider include technology; production methods; development efforts; ability to increase production (including the shift of production facilities used for other products and the use, cost, or availability of major inputs into production); and factors related to the ability to shift supply among different national markets (including barriers to importation in foreign markets or changes in market demand abroad). Demand conditions to consider include end uses and applications; the existence and availability of substitute products; and the level of competition among the Domestic Like Product produced in the United States, Subject Merchandise produced in the Subject Countries, and such merchandise from other countries.

(11) (Optional) A statement of whether you agree with the above definitions of the Domestic Like Product and Domestic Industry; if you disagree with either or both of these definitions, please explain why and provide alternative definitions.

Authority: These reviews are being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.61 of the Commission's rules.

By order of the Commission.

Issued: July 27, 1999.

Donna R. Koehnke,

Secretary.

[FR Doc. 99-19760 Filed 7-30-99; 8:45 am]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

[Investigation No. TA-204-2]

Wheat Gluten: Monitoring Developments in the Domestic Industry

AGENCY: United States International Trade Commission.

ACTION: Institution and scheduling of an investigation under section 204(a) of the Trade Act of 1974 (19 U.S.C. 2254(a)) (the Act).

SUMMARY: The Commission instituted the investigation for the purpose of preparing the report to the President and the Congress required by section 204(a)(2) of the Trade Act of 1974 on the results of its monitoring of developments with respect to the domestic wheat gluten industry since the President imposed quantitative limitations on imports of wheat gluten [1] effective June 1, 1998.

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 206, subparts A and B (19 CFR part 206).

Background

Following receipt of a report from the Commission in March 1998 under section 202 of the Trade Act of 1974 (19 U.S.C. 2252) containing an affirmative determination and remedy recommendation, the President, on May 30, 1998, pursuant to section 203 of the Trade Act of 1974 (19 U.S.C. 2253), issued Proclamation 7103 (as amended by Proclamation 7202 of May 28, 1999), imposing import relief in the form of quantitative limitations on imports of wheat gluten for a period of 3 years and 1 day. Section 204(a)(1) of the Trade Act of 1974 (19 U.S.C. 2254(a)(1)) requires that the Commission, so long as any action under section 203 of the Trade Act remains in effect, monitor developments with respect to the domestic industry, including the progress and specific efforts made by workers and firms in the domestic industry to make a positive adjustment to import competition. Section 204(a)(2) requires that whenever the initial period of an action under section 203 of the Trade Act exceeds 3 years, the Commission shall submit a report on the results of the monitoring under section 204(a)(1) to the President and the Congress not later than the mid-point of the initial period of the relief, or by December 1, 1999, in this case. Section 204(a)(3) requires that the Commission hold a hearing in the course of preparing each such report.

EFFECTIVE DATE: July 27, 1999.

FOR FURTHER INFORMATION CONTACT: Joanna Bonarriva (202-708-4083), 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. General information concerning the Commission may also be obtained by accessing its internet server (http://www.usitc.gov).

SUPPLEMENTARY INFORMATION:

Participation in the investigation and 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 14 days after publication of this notice in the **Federal Register**. The Secretary will prepare a 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.

Public hearing.—As required by statute, the Commission has scheduled a hearing in connection with this investigation. The hearing will be held beginning at 9:30 a.m. on October 7, 1999 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 September 28, 1999. All persons desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 9:30 a.m. on October 1, 1999, at the U.S. International Trade Commission Building. Oral testimony

[1] Wheat gluten is classified in subheadings 1109.00.10 and 1109.00.90 of the Harmonized Tariff Schedule of the United States.

pursuant to section 207.64 of the Commission's rules.

Hearing

The Commission will hold a hearing in connection with the review beginning at 9:30 a.m. on April 4, 2000, 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 March 21, 2000. 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 March 28, 2000, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by sections 201.6(b)(2), 201.13(f), 207.24, and 207.66 of the Commission's rules. Parties must submit any request to present a portion of their hearing testimony *in camera* no later than 7 days prior to the date of the hearing.

Written Submissions

Each party to the review may submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of section 207.65 of the Commission's rules; the deadline for filing is March 24, 2000. Parties may also file written testimony in connection with their presentation at the hearing, as provided in section 207.24 of the Commission's rules, and posthearing briefs, which must conform with the provisions of section 207.67 of the Commission's rules. The deadline for filing posthearing briefs is April 13, 2000; witness testimony must be filed no later than three days before the hearing. In addition, any person who has not entered an appearance as a party to the review may submit a written statement of information pertinent to the subject of the review on or before April 13, 2000. On May 5, 2000, the Commission will make available to parties all information on which they have not had an opportunity to comment. Parties may submit final comments on this information on or before May 9, 2000, but such final comments must not contain new factual information and must otherwise comply with section 207.68 of the Commission's rules. All written submissions must conform with the provisions of section 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of sections 201.6, 207.3, and 207.7 of the Commission's rules. The Commission's rules do not authorize filing of submissions with the Secretary by facsimile or electronic means.

In accordance with sections 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the review must be served on all other parties to the review (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 review is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.62 of the Commission's rules.

Issued: November 9, 1999.

By order of the Commission.

Donna R. Koehnke,

Secretary.

[FR Doc. 99-29735 Filed 11-12-99; 8:45 am]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 731-TA-497 (Review) and Investigation No. 731-TA-539-B (Review)]

Tungsten Ore Concentrates From China and Uranium From Kyrgyzstan

AGENCY: United States International Trade Commission.

ACTION: Termination of five-year reviews.

SUMMARY: The subject five-year reviews were initiated in August 1999 to determine whether revocation of the existing antidumping duty order/termination of the existing suspension agreement would be likely to lead to continuation or recurrence of dumping and of material injury to a domestic industry. On November 3, 1999, the Department of Commerce published notice that it was revoking the order on tungsten ore concentrates and terminating the suspended investigation on uranium "because no domestic party responded to the sunset review notice of initiation by the applicable deadline" (64 FR 59737). Accordingly, pursuant to section 207.69 of the Commission's Rules of Practice and Procedure (19 CFR 207.69), the subject reviews are terminated.

EFFECTIVE DATE: November 3, 1999.

FOR FURTHER INFORMATION CONTACT: Vera Libeau (202-205-3176), Office of Investigations, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202-205-1810. 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. General information concerning the Commission may also be obtained by accessing its internet server (http://www.usitc.gov).

Authority: These reviews are being terminated under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.69 of the Commission's rules (19 CFR 207.69).

Issued: November 4, 1999.

By order of the Commission.

Donna R. Koehnke,

Secretary.

[FR Doc. 99-29734 Filed 11-12-99; 8:45 am]

BILLING CODE 7020-02-P

DEPARTMENT OF JUSTICE

[AAG/A Order No. 179-99]

Privacy Act of 1974; Notice of the Removal of Systems of Records

Pursuant to the provisions of the Privacy Act of 1974 (5 U.S.C. 552a), the Drug Enforcement Administration (DEA), Department of Justice, is deleting existing Privacy Act Notices for nine (9) Systems of Records previously established by DEA.

DEA is deleting the System Notice for the "Medical Records, JUSTICE/DEA-009," the "Drug Enforcement Administration Accounting System (DEAAS II), JUSTICE/DEA-016," "Drug Enforcement Administration Applicant Investigations (DAI), JUSTICE/DEA-018," "Clerical, Technical Professional Program (CTAP), JUSTICE/DEA-023," and the "Employee Profile System (DEPS), JUSTICE/DEA-027," which were last published in the **Federal Register** on December 11, 1987 (52 FR 47200). It has been determined that these Systems of Records are covered by existing Office of Personnel Management government wide system notices or Department of Justice system notices.

The "Medical Records" records still exist and are covered by the Office of Personnel Management System Notice, "Employee Medical File System Records, OPM/GOVT-10." The "Drug Enforcement Administration Accounting System (DEAAS II)" records still exist and are covered by the Department of Justice System Notice, Accounting Systems for the Department of Justice, JUSTICE/JMD-007." The "Drug Enforcement Administration

Issued: November 10, 1999.

Donna R. Koehnke,

Secretary.

[FR Doc. 99-29959 Filed 11-16-99; 8:45 am]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

[Investigations Nos. 731-TA-539-C, E, and F (Review)]

Uranium From Russia, Ukraine, and Uzbekistan

AGENCY: United States International Trade Commission.

ACTION: Notice of Commission determinations to conduct full five-year reviews concerning the antidumping duty order and suspended investigations on uranium from Russia, Ukraine, and Uzbekistan.

SUMMARY: The Commission hereby gives notice that it will proceed with full reviews pursuant to section 751(c)(5) of the Tariff Act of 1930 (19 U.S.C. 1675(c)(5)) to determine whether revocation of the antidumping duty order on uranium from Ukraine and termination of the suspension agreements on uranium from Russia and Uzbekistan would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission has determined to exercise its authority to extend the review period by up to 90 days pursuant to 19 U.S.C. 1675(c)(5)(B); a schedule for the reviews will be established and announced at a later date.

For further information concerning the conduct of these reviews 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, D, E, and F (19 CFR part 207). Recent amendments to the Rules of Practice and Procedure pertinent to five-year reviews, including the text of subpart F of part 207, are published at 63 FR 30599, June 5, 1998, and may be downloaded from the Commission's World Wide Web site at http://www.usitc.gov/rules.htm.

EFFECTIVE DATE: November 4, 1999.

FOR FURTHER INFORMATION CONTACT: Vera Libeau (202-205-3176), 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. General information concerning the Commission may also be obtained by accessing its internet server (http://www.usitc.gov).

SUPPLEMENTARY INFORMATION: On November 4, 1999, the Commission determined that it should proceed to full reviews in the subject five-year reviews pursuant to section 751(c)(5) of the Act.

The Commission found that the domestic interested party group responses to its notice of institution (64 FR 41965, August 2, 1999) were adequate with respect to each review, and that the respondent interested party group responses were adequate with respect to Russia and Uzbekistan but inadequate with respect to Ukraine. The Commission also found that other circumstances warranted conducting a full review with respect to Ukraine. A record of the Commissioners' votes, the Commission's statement on adequacy, and any individual Commissioner's statements will be available from the Office of the Secretary and at the Commission's web site.

Authority: These reviews are being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.62 of the Commission's rules.

By order of the Commission.

Issued: November 10, 1999.

Donna R. Koehnke,

Secretary.

[FR Doc. 99-29958 Filed 11-16-99; 8:45 am]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

Sunshine Act Meeting

AGENCY HOLDING THE MEETING: United States International Trade Commission.

TIME AND DATE: November 19, 1999 at 11 a.m.

PLACE: Room 101, 500 E Street S.W. Washington, DC 20436, Telephone: (202) 205-2000.

STATUS: Open to the public.

MATTERS TO BE CONSIDERED:

1. Agenda for future meeting: none
2. Minutes
3. Ratification List
4. Inv. No. 731-TA-811 (Final)(DRAMs of One Megabit and Above from Taiwan)—briefing and vote. (The Commission will transmit its determination to the Secretary of Commerce on December 2, 1999.)
5. Outstanding action jackets: none

In accordance with Commission policy, subject matter listed above, not disposed of at the scheduled meeting, may be carried over to the agenda of the following meeting.

By order of the Commission.

Issued: November 12, 1999.

Donna R. Koehnke,

Secretary.

[FR Doc. 99-30176 Filed 11-15-99; 3:39 pm]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

Privacy Act of 1974; Establishment of New Systems of Records, Revision of Existing Systems of Records

AGENCY: International Trade Commission.

ACTION: Request for comments on proposed establishment of new Privacy Act systems of records and revision of existing systems of records.

SUMMARY: Pursuant to 5 U.S.C. 552a(e)(4) of the Privacy Act of 1974, the U.S. International Trade Commission (Commission) proposes to (1) revise the existing system of records entitled "Office of Inspector General Investigative Files (General)" to amend retention and disposal procedures; (2) revise the existing system of records entitled "Office of Inspector General Investigative Files (Criminal)" to amend retention and disposal procedures; (3) revise the existing system of records entitled "Security Records" to clarify the purpose; (4) revise the existing system of records entitled "Parking Records" to include information about mass transit subsidy applications; and (5) establish a new system of records entitled "Computer Access Records."

DATES: Comments must be received no later than December 27, 1999. The proposed addition and revisions to the Commission's systems of records will become effective on that date unless otherwise published in the **Federal Register**.

ADDRESSES: Written comments should be directed to the Secretary, U.S. International Trade Commission, 500 E Street, SW, Washington, DC 20436.

FOR FURTHER INFORMATION CONTACT: Tina Potuto, Esq., Office of the General Counsel, U.S. International Trade Commission, tel. 202-205-3116. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810.

SUPPLEMENTARY INFORMATION: This notice proposes revision of the system

CALFED Bay-Delta Program (Program), is being carried out under the policy direction of CALFED. The Program is exploring and developing a long-term solution for a cooperative planning process that will determine the most appropriate strategy and actions necessary to improve water quality, restore health to the Bay-Delta ecosystem, provide for a variety of beneficial uses, and minimize Bay-Delta system vulnerability. A group of citizen advisors representing California's agricultural, environmental, urban, business, fishing, and other interests who have a stake in finding long-term solutions for the problems affecting the Bay-Delta system has been chartered under the Federal Advisory Committee Act (FACA) as the Bay-Delta Advisory Council (BDAC) to advise CALFED on the program mission, problems to be addressed, and objectives for the Program. BDAC provides a forum to help ensure public participation, and will review reports and other materials prepared by CALFED staff. BDAC has established a subcommittee called the Ecosystem Roundtable to provide input on annual workplans to implement ecosystem restoration projects and programs.

Minutes of the meeting will be maintained by the program, Suite 1155, 1416 Ninth Street, Sacramento, CA 95814, and will be available for public inspection during regular business hours, Monday through Friday within 30 days following the meeting.

Dated: January 18, 2000.

Lester A. Snow,

Regional Director, Mid-Pacific Region.

[FR Doc. 00–1594 Filed 1–21–00; 8:45am]

BILLING CODE 4310–94–M

INTERNATIONAL TRADE COMMISSION

Investigations Nos. 731–TA–539–C, E and F (Review); Uranium From Russia, Ukraine and Uzbekistan

AGENCY: United States International Trade Commission.

ACTION: Scheduling of full five-year reviews concerning the antidumping duty order on uranium from Ukraine and the suspended investigations on uranium from Russia and Uzbekistan.

SUMMARY: The Commission hereby gives notice of the scheduling of full reviews pursuant to section 751(c)(5) of the Tariff Act of 1930 (19 U.S.C. § 1675(c)(5)) (the Act) to determine whether revocation of the antidumping duty order on uranium from Ukraine and the termination of the suspended investigations on uranium from Russia and Uzbekistan would be likely to lead to continuation or recurrence of material injury. For further information concerning the conduct of these reviews 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, D, E, and F (19 CFR part 207). Recent amendments to the Rules of Practice and Procedure pertinent to five-year reviews, including the text of subpart F of part 207, are published at 63 FR 30599, June 5, 1998, and may be downloaded from the Commission's World Wide Web site at http://www.usitc.gov/rules.htm.

EFFECTIVE DATE: January 14, 2000.

FOR FURTHER INFORMATION CONTACT: Larry Reavis (202–205–3185), 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. General information concerning the Commission may also be obtained by accessing its internet server (http://www.usitc.gov).

SUPPLEMENTARY INFORMATION:

Background

On November 4, 1999, the Commission determined that responses to its notice of institution of the subject five-year reviews were such that full reviews pursuant to section 751(c)(5) of the Act should proceed (64 FR 62691, November 17, 1999). A record of the Commissioners' votes, the Commission's statement on adequacy, and any individual Commissioner's statements will be available from the Office of the Secretary and at the Commission's web site.

Participation in the reviews and public service list—Persons, including industrial users of the subject merchandise and, if the merchandise is sold at the retail level, representative consumer organizations, wishing to participate in these reviews as parties must file an entry of appearance with the Secretary to the Commission, as provided in section 201.11 of the Commission's rules, by 45 days after publication of this notice. A party that filed a notice of appearance following publication of the Commission's notice of institution of the reviews need not file an additional notice of appearance. The Secretary will maintain a public service list containing the names and addresses of all persons, or their representatives, who are parties to the reviews.

Limited disclosure of business proprietary information (BPI) under an administrative protective order (APO) and BPI service list.—Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in these reviews available to authorized applicants under the APO issued in the reviews, provided that the application is made by 45 days after publication of this notice. Authorized applicants must represent interested parties, as defined by 19 U.S.C. § 1677(9), who are parties to the reviews. A party granted access to BPI following publication of the Commission's notice of institution of the reviews need not reapply for such access. 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 the reviews will be placed in the nonpublic record on May 8, 2000, and a public version will be issued thereafter, pursuant to section 207.64 of the Commission's rules.

Hearing.—The Commission will hold a hearing in connection with the review beginning at 9:30 a.m. on May 25, 2000, 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 May 15, 2000. 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 May 19, 2000, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by sections 201.6(b)(2), 201.13(f), 207.24, and 207.66 of the Commission's rules. Parties must submit any request to present a portion of their hearing testimony *in camera* no later than 7 days prior to the date of the hearing.

Written submissions.—Each party to the reviews may submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of section 207.65 of the Commission's rules; the deadline for filing is May 17, 2000. Parties may also file written testimony in connection with their presentation at the hearing, as provided

in section 207.24 of the Commission's rules, and posthearing briefs, which must conform with the provisions of section 207.67 of the Commission's rules. The deadline for filing posthearing briefs is June 5, 2000; witness testimony must be filed no later than three days before the hearing. In addition, any person who has not entered an appearance as a party to the review may submit a written statement of information pertinent to the subject of the review on or before June 5, 2000. On June 28, 2000, the Commission will make available to parties all information on which they have not had an opportunity to comment. Parties may submit final comments on this information on or before June 30, 2000, but such final comments must not contain new factual information and must otherwise comply with section 207.68 of the Commission's rules. All written submissions must conform with the provisions of section 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of sections 201.6, 207.3, and 207.7 of the Commission's rules. The Commission's rules do not authorize filing of submissions with the Secretary by facsimile or electronic means.

In accordance with sections 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the reviews must be served on all other parties to the reviews (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: These reviews are being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.62 of the Commission's rules.

By order of the Commission.

Issued: January 14, 2000.

Donna R. Koehnke,

Secretary.

[FR Doc. 00–1636 Filed 1–21–00; 8:45 am]

BILLING CODE 7020–02–P

DEPARTMENT OF JUSTICE

Notice of Lodging of Consent Decree Pursuant to the Comprehensive Environmental Response Compensation and Liability Act and the Solid Waste Disposal Act

Notice is hereby given that a proposed consent decree in the action entitled *United States* v. *Ambroid Company, Inc.*, Civil Action No. 97–11377–JLT, was lodged on January 13, 2000, with the United States District Court for the District of Massachusetts. The proposed consent decree resolves the claims of the United States against J. Frank Strauss and Robert M. Kuzara in a complaint filed against these parties, and several others, pursuant to Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9607. In the complaint, which was filed on June 17, 1997, the United States sought the recovery of past unreimbursed response costs incurred by the United States in connection with a drum removal action performed at the Yankee Chemical Superfund Site, located at 600 West Water Street, in Taunton, Massachusetts (the "Site"). The settlement also resolves the claims of the United States against Bank Hapoalim, B.M., a third-party defendant in the action. Pursuant to the proposed settlement, the Settling Defendants will reimburse the EPA Hazardous Substance Superfund in the amount of $50,000. The United States has provided a covenant not to sue under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607, as well as pursuant to Section 7003 of the Solid Waste Disposal Act, 42 U.S.C. § 6973, with respect to the site.

The Department of Justice will receive, for a period of thirty (30) days from the date of this publication, comments relating to the proposed consent decree. Any comments should be addressed to the Assistant Attorney General for the Environment and Natural Resources Division, Department of Justice, Washington, D.C. 20530, and should refer to *United States* v. *Amoroid Company, Inc.*, DOJ Ref. Number 90–11–3–1747. Commenters may request an opportunity for a public meeting in the affected area, in accordance with Section 7003(d) of the Solid Waste Disposal Act, 42 U.S.C. § 6973(d).

The proposed consent decree may be examined at EPA Region 1, located at One Congress Street, Suite 1100, Boston, MA 02114 (contact Peter DeCambre, 617–918–1890). A copy of the proposed consent decree may be obtained by mail from the Department of Justice Consent Decree Library, P.O. Box 7611, Washington, D.C. 20044. In requesting a copy, please refer to the referenced case and enclose a check in the amount of $7.25 (25 cents per page reproduction costs).

Joel M. Gross,

Section Chief, Environmental Enforcement Section, Environment and Natural Resources Division.

[FR Doc. 00–1645 Filed 1–21–00; 8:45 am]

BILLING CODE 4410–15–M

DEPARTMENT OF JUSTICE

Notice of Lodging of Consent Decree Pursuant to the Oil Pollution Act of 1990

Notice is hereby given that a proposed consent decree in the action entitled *United States* v. *Amity Products Carriers, Inc.*, Civil Action No. 00–11–P–H, was lodged on January 7, 2000, with the United States District Court for the District of Maine. The proposed consent decree resolves the claims of the United States under Section 1002(b)(2)(A) of the Oil Pollution Act of 1990 ("OPA"), 33 U.S.C. § 2702(b)(2)(A), against Amity Products Carriers, Inc. ("Settling Defendant"), in connection with the oil spill that occurred, on September 27, 1996, as a result of the collision of the Tank Vessel *Julie N* with the Million Dollar Bridge spanning the Fore River from Portland to South Portland, Maine, which resulted in the discharge of oil into the Fore River. The proposed consent decree also resolves the claims of the United States against Maritime Overseas Corporation, OSG Ship Management, Inc., as well as the officers, directors, and employees of those companies, as well as of the Settling Defendant, to the extent that their liability arises from actions taken in their official capacities as officers, directors, and employees of these corporations. The proposed settlement resolves the claims filed in a complaint on January 7, 2000. The complaint alleges, pursuant to Section 1002(b)(2)(A) of OPA, 33 U.S.C. § 2702(b)(2)(A), that Settling Defendant, the owner of the *Julie N* at the time of the spill, is liable for damages for injury to, destruction of, loss of, or loss of use of, natural resources, including the reasonable costs of assessing the damage. The proposed consent decree also resolves the claims of the State of Maine set forth in a similar complaint filed on January 7, 2000. *See State of Maine* v. *Amity Products Carriers, Inc.*, Civil Action No. 00–12–P–H.

Pursuant to the proposed consent decree, the Settling Defendant will make a payment of $1 million to the *Julie N* Oil Spill Restoration Account, which shall be used by Federal and State natural resource trustees to plan,

Dated: February 25, 2000.

Robert S. LaRussa,

Assistant Secretary for Import Administration.

[FR Doc. 00–5211 Filed 3–2–00; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–437–601]

Tapered Roller Bearings and Parts Thereof, Finished and Unfinished, From Hungary: Extension of Time Limit for Preliminary Results of Antidumping Duty Administrative Review

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

EFFECTIVE DATE: March 3, 2000.

FOR FURTHER INFORMATION CONTACT: Elfi Blum at (202) 482–0197, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Ave, NW, Washington, DC 20230.

Time Limits

Statutory Time Limits

Section 751(a)(3)(A) of the Tariff Act of 1930, as amended (the Act), requires the Department to make a preliminary determination within 245 days after the last day of the anniversary month of an order/finding for which a review is requested and a final determination within 120 days after the date on which the preliminary determination is published. However, if it is not practicable to complete the review within these time periods, section 751(a)(3)(A) of the Act allows the Department to extend the time limit for the preliminary determination to a maximum of 365 days and for the final determination to 180 days (or 300 days if the Department does not extend the time limit for the preliminary determination) from the date of publication of the preliminary determination.

Background

On July 29, 1999, the Department published a notice of initiation of administrative review of the antidumping duty order on tapered roller bearings and parts thereof, finished or unfinished, from Hungary, covering the period June 1, 1998 through May 31, 1999 (64 FR 41075). The preliminary results are currently due no later than February 29, 2000.

Extension of Time Limit for Preliminary Results of Review

We determine that it is not practicable to complete the preliminary results of this review within the original time limit. Therefore the Department is extending the time limit for completion of the preliminary results until no later than June 28, 2000. *See* Decision Memorandum from Edward C. Yang to Joseph A. Spetrini, dated February 25, 2000, which is on file in the Central Records Unit, Room B–099 of the main Commerce building. We intend to issue the final results no later than 120 days after the publication of the preliminary results notice.

This extension is in accordance with section 751(a)(3)(A) of the Act.

Dated: February 25, 2000.

Joseph A. Spetrini,

Deputy Assistant Secretary, AD/CVD Enforcement Group III.

[FR Doc. 00–5214 Filed 3–2–00; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–823–802]

Uranium From Ukraine; Final Results of Expedited Sunset Review of Antidumping Duty Order

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

ACTION: Notice of Final Results of Expedited Sunset Review: Uranium from Ukraine.

SUMMARY: On August 2, 1999, the Department of Commerce ("the Department") initiated a sunset review of the antidumping duty order on uranium from Ukraine (64 FR 41915) pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"). On the basis of a notice of intent to participate and adequate substantive comments filed on behalf of domestic interested parties and inadequate response (in this case, no response) from respondent interested parties, the Department determined to conduct an expedited review. As a result of this review, the Department finds that revocation of the antidumping duty order would likely lead to continuation or recurrence of dumping at the levels indicated in the Final Results of Review section of this notice.

FOR FURTHER INFORMATION CONTACT: Kathryn B. McCormick or Melissa G. Skinner, Office of Policy for Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW, Washington, DC 20230; telephone: (202) 482–1930 or (202) 482–1560, respectively.

EFFECTIVE DATE: March 3, 2000.

Statute and Regulations

This review is being conducted pursuant to sections 751(c) and 752 of the Act. The Department's procedures for the conduct of sunset reviews are set forth in *Procedures for Conducting Five-year ("Sunset") Reviews of Antidumping and Countervailing Duty Orders*, 63 FR 13516 (March 20, 1998) ("*Sunset Regulations*"), and in CFR part 351 (1999) in general. Guidance on methodological or analytical issues relevant to the Department's conduct of sunset reviews is set forth in the Department's Policy Bulletin 98.3—*Policies Regarding the Conduct of Five-year ("Sunset") Reviews of Antidumping and Countervailing Duty Orders; Policy Bulletin*, 63 FR 18871 (April 16, 1998) ("*Sunset Policy Bulletin*").

Background

On August 2, 1999, the Department initiated a sunset review of the antidumping duty order on uranium from Ukraine (64 FR 41915), pursuant to section 751(c) of the Act. The Department received Notices of Intent to Participate on behalf of domestic interested parties, the Ad Hoc Committee of Domestic Uranium Producers ("the Ad Hoc Committee"), including Rio Algom Mining Corporation ("Rio Algom") and Uranium Resources Inc. ("URI"),[1] USEC, Inc. and its subsidiary, the United States Enrichment Corporation (collectively, "USEC"), and Paper, Allied-Industrial, Chemical and Energy Workers International Union, AFL–CIO ("PACE"), within the applicable deadline (August 17, 1999) specified in section 351.218(d)(1)(i) of the *Sunset Regulations*. On August 27, 1999, we received a notice of intent to participate on behalf of the Ad Hoc Utilities Group ("AHUG").[2] The Ad Hoc Committee claimed interested-party status under section 771(9)(C) of the Act, as the only

[1] The Ad Hoc Committee included Cotter corporation in its Notice of Intent to Participate; however, Cotter Corporation was not included in the Ad Hoc Committee's substantive response of September 1, 1999.

[2] AHUG consists of Ameren UE, Baltimore Gas and Electric Co., Carolina Power and Light Co., Commonwealth Edison Co., Consumers Energy, Duke Power Co., Entergy Services, Inc., FirstEnergy Nuclear Operating Co., Florida Power and Light Co., Northern States Power Co., PECO Energy Co., Southern Nuclear Operating Co., Texas Utilities Electric Co., and Virginia Power.

U.S. producers of a domestic like product; AHUG claimed interested-party status as industrial users of uranium; [3] PACE claimed interested-party status as a union representing workers of two domestic gaseous diffusion plants that produce uranium products.

The Ad Hoc Committee claims that it was the original petitioner in the underlying antidumping investigation (*see* September 1, 1999, Substantive Response of the Ad Hoc Committee at 1). AHUG did not submit a summary of its past participation in the proceeding.

On September 1, 1999, we received complete substantive responses from the above domestic interested parties and industrial users, with the exception of USEC and PACE,[4] within the 30-day deadline specified in the *Sunset Regulations* under section 351.218(d)(3)(i). On September 2, 1999, we received a request for an extension to file rebuttal comments from AHUG.[5] Pursuant to 19 CFR 351.302(b)(1999), the Department extended the deadline for all participants eligible to file rebuttal comments until September 13, 1999.[6] Without a substantive response from respondent interested parties, the Department, pursuant to 19 CFR 351.218(e)(1)(ii)(C), determined to conduct an expedited, 120-day review of this order.

In accordance with section 751(c)(5)(C)(v) of the Act, the Department may treat a review as extraordinarily complicated if it is a review of a transition order (*i.e.*, an order in effect on January 1, 1995). This review concerns a transition order within the meaning of section 751(c)(6)(C)(ii) of the Act. Accordingly, on December 3, 1999, the Department determined that the sunset review of this order is extraordinarily complicated, and extended the time limit for completion of the final results of this review until not later than February 28, 2000, in accordance with section 751(c)(5)(B) of the Act.[7]

Scope of Review

The merchandise subject to this antidumping duty order includes Ukrainian 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 U^{235} and its compounds; alloys, dispersions (including cermets), ceramic products and mixtures containing uranium enriched in U^{235} or compounds or uranium enriched in U^{235}. Low enriched uranium ("LEU") is included within the scope of the order; highly enriched uranium ("HEU") is not. LEU is uranium enriched in U^{235} to a level of up to 20 percent, while HEU is uranium enriched in U^{235} to a level of 20 percent or more. The uranium subject to this order 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, 2844.20.00.10, 2844.20.00.20, 2844:20.00.30, and 2844.20.00.50 of the Harmonized Tariff Schedule of the United States ("HTSUS").[8] Although the above HTSUS subheadings are provided for convenience and customs purposes, the written description remains dispositive.

The Department clarified, in the scope of the order, that: "milling" or "conversion" performed in a third country does not change the country of origin for the purposes of this order. Milling consists of processing uranium ore into uranium concentrate. Conversion consists of transforming uranium concentrate into natural uranium hexafluoride (UF_6). Since milling or conversion does not change the country of origin, uranium ore or concentrate of Ukrainian origin that is subsequently milled and/or converted in a third country will still be considered of Ukrainian origin and subject to antidumping duties (58 FR 45483, August 30, 1993).

Analysis of Comments Received

All issues raised in the case and rebuttal briefs by parties to this sunset review are addressed in the "Issues and Decision Memorandum" ("Decision Memo") from Jeffrey A. May, Director, Office of Policy, Import Administration, to Robert S. La Russa, Assistant Secretary for Import Administration, dated February 28, 2000, which is hereby adopted and incorporated by reference into this notice. The issues discussed in the attached Decision Memo include the likelihood of continuation or recurrence of dumping and the magnitude of the margin likely to prevail were the order revoked. Parties can find a complete discussion of all issues raised in this review and the corresponding recommendations in this public memorandum which is on file in the Central Records Unit, room B–099, of the main Commerce building.

In addition, a complete version of the Decision Memo can be accessed directly on the Web at www.ita.doc.gov/import_admin/records/frn/, under the heading "Ukraine." The paper copy and electronic version of the Decision Memo are identical in content.

Final Results of Review

We determine that revocation of the antidumping duty order on uranium from Ukraine would be likely to lead to continuation or recurrence of dumping at the following percentage weighted-average margin:

Manufacturer/exporters	Margin (percent)
All Ukrainian manufacturers/exporters	129.29

This five-year ("sunset") review and notice are in accordance with sections 751(c), 752, and 777(i)(1) of the Act.

Dated: February 28, 2000.

Joseph A. Spetrini,

Acting Assistant Secretary for Import Administration.

[FR Doc. 00–5210 Filed 3–2–00; 8:45 am]

BILLING CODE 3510–DS–P

[3] The Department notes that, although industrial users are allowed to participate in sunset reviews, they are not considered "interested parties" as defined in the statute and regulations. *See* sections 771(9) and 777(h) of the Act, and 19 CFR 351.32.

[4] *See* September 9, 1999, Letter to the Secretary from Philip H. Potter withdrawing PACE from participation in the sunset reviews of uranium from Russia, Uzbekistan, and Ukraine.

[5] *See* September 2, 1999, *Request for an Extension to File Rebuttal Comments in the Sunset Reviews of Uranium from Russia, Uzbekistan, and Ukraine* from Nancy A. Fischer, Shaw Pittman, to Jeffrey A. May, Office of Policy.

[6] *See* September 3, 1999, Letter from Jeffrey A. May, Director, Office of Policy to Nancy A. Fischer, Shaw Pittman.

[7] *See Extension of Time Limit for Final Results of Five-Year Reviews*, 64 FR 67847 (December 3, 1999).

[8] *See Preliminary Determination of Sales at Less Than Fair Value: Uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine and Uzbekistan; and Preliminary Determination of Sales at Not Less Than Fair Value: Uranium from Armenia, Azerbaijan, Byelarus, Georgia, Moldova and Turkmenistan*, 57 FR 23380, 23381 (June 3, 1992).

balanced plan which addresses all of the resource problems. This effort, the CALFED Bay-Delta Program (Program), is being carried out under the policy direction of CALFED. The Program is exploring and developing a long-term solution for a cooperative planning process that will determine the most appropriate strategy and actions necessary to improve water quality, restore health to the Bay-Delta ecosystem, provide for a variety of beneficial uses, and minimize Bay-Delta system vulnerability. A group of citizen advisors representing California's agricultural, environmental, urban, business, fishing, and other interests who have a stake in finding long-term solutions for the problems affecting the Bay-Delta system has been chartered under the Federal Advisory Committee Act (FACA). The BDAC provides advice to CALFED on the program mission, problems to be addressed, and objectives for the Program. BDAC provides a forum to help ensure public participation, and will review reports and other materials prepared by CALFED staff.

Minutes of the meeting will be maintained by the Program, Suite 1155, 1416 Ninth Street, Sacramento, CA 95814, and will be available for public inspection during regular business hours, Monday through Friday within 30 days following the meeting.

Dated: March 16, 2000.

Lester A. Snow,

Regional Director, Mid-Pacific Region.

[FR Doc. 00–7054 Filed 3–21–00; 8:45 am]

BILLING CODE 4310–94–M

INTERNATIONAL TRADE COMMISSION

Investigation No. 731–1TA–856 (Final)

Ammonium Nitrate from Russia

AGENCY: International Trade Commission.

ACTION: Revised schedule for the subject investigation.

EFFECTIVE DATE: March 15, 2000.

FOR FURTHER INFORMATION CONTACT: Karen Taylor (202–708–4101), 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. General information concerning the Commission may also be obtained by accessing its internet server (*http://www.usitc.gov*).

SUPPLEMENTARY INFORMATION: On January 7, 2000, the Commission established a schedule for the conduct of the final phase of the subject investigation (65 FR 2643. January 18, 2000). On March 1, 2000, the Commission published a notice in the **Federal Register** revising this schedule (65 FR 11080). This revised schedule provided for a public hearing to be held on May 24, 2000.

The Commission now is revising the date of the hearing to May 25, 2000; the hearing will be held at the U.S. International Trade Commission Building at 9:30 a.m. No other scheduled dates relative to this investigation are being revised.

For further information concerning this investigation see the Commission's notice cited above and 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).

Authority: This investigation is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.21 of the Commission's rules.

Issued: March 15, 2000.

By order of the Commission.

Donna R. Koehnke,

Secretary.

[FR Doc. 00–7078 Filed 3–21–00; 8:45 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 731–TA–539–C, E and F (Review)]

Uranium from Russia, Ukraine and Uzbekistan

AGENCY: United States International Trade Commission.

ACTION: Revised schedule for the subject 5-year reviews.

EFFECTIVE DATE: March 15, 2000.

FOR FURTHER INFORMATION CONTACT: Larry Reavis (202–205–3185), 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. General information concerning the Commission may also be obtained by accessing its internet server (http://www.usitc.gov).

SUPPLEMENTARY INFORMATION: On January 14, 2000, the Commission established a schedule for the conduct of the subject 5-year reviews (**Federal Register** 65 FR 3737, January 24, 2000). The Commission has determined to exercise its authority to extend the review period by up to 90 days pursuant to 19 U.S.C. 1675(c)(5)(B), and is hereby revising its schedule.

The Commission's new schedule for the reviews is as follows: requests to appear at the hearing must be filed with the Secretary to the Commission not later than June 2, 2000; the prehearing conference will be held at the U.S. International Trade Commission Building at 9:30 a.m. on June 7, 2000; the prehearing staff report will be placed in the nonpublic record on May 25, 2000; the deadline for filing prehearing briefs is June 5, 2000; the hearing will be held at the U.S. International Trade Commission Building at 9:30 a.m. on June 13, 2000; the deadline for filing posthearing briefs is June 22, 2000; the Commission will make its final release of information on July 14, 2000; and final party comments are due on July 18.

For further information concerning the reviews see the Commission's notice cited above and 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).

Authority: These reviews are being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.21 of the Commission's rules.

By order of the Commission.

Issued: March 15, 2000.

Donna R. Koehnke,

Secretary.

[FR Doc. 00–7077 Filed 3–21–00; 8:45 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

Security Procedures for Persons Delivering/Picking Up Packages and Documents

AGENCY: United States International Trade Commission.

ACTION: Security Procedures—Persons Delivering/Picking Up Packages and Documents.

www.ita.doc.gov/import-admin/records/frn/. The paper copy and electronic version of the Decision Memo are identical in content.

Continuation of Suspension of Liquidation

In accordance with section 735(c)(1)(A) of the Act, we are directing the U.S. Customs Service ("Customs") to suspend liquidation of all imports of the subject merchandise from South Korea that are entered, or withdrawn from warehouse, for consumption on or after the date of publication of this notice in the **Federal Register**. Customs shall require a cash deposit or the posting of a bond equal to the weighted-average amount by which the NV exceeds the EP and CEP as indicated in the chart below. These suspension of liquidation instructions will remain in effect until further notice.

Article VI.5 of the General Agreement on Tariffs and Trade (GATT 1994) provides that "[n]o product * * * shall be subject to both antidumping and countervailing duties to compensate for the same situation of dumping or export subsidization." This provision is implemented in section 772(c)(1)(C) of the Tariff Act. Since antidumping duties cannot be assessed on the portion of the margin attributed to export subsidies there is no reason to require a cash deposit or bond for that amount. The Department has determined in its concurrent countervailing duty investigation for structural steel beams from Korea that the product under investigation benefitted from export subsidies. Normally, where the product under investigation is also subject to a concurrent countervailing duty investigation, we instruct the Customs Service to require a cash deposit or posting of a bond equal to the weighted-average amount by which the NV exceeds the EP, as indicated below, minus the amount determined to constitute an export subsidy. *See, e.g. Notice of Antidumping Duty Order: Stainless Steel Wire Rod From Italy*, 63 FR 49327 (September 15, 1998). Accordingly, for cash deposit purposes we are subtracting from Kangwon's cash deposit rate that portion of the rate attributable to the export subsidies found in the countervailing duty investigation involving Kangwon(*i.e.*, 0.09 percent). We have made the same adjustment to the "All Others" cash deposit rate by subtracting the rate attributable to export subsidies found in the countervailing duty investigation of Kangwon.

We will instruct the Customs Service to require a cash deposit or the posting of a bond for each entry equal to the weighted-average amount by which the NV exceeds the EP or CEP, adjusting for the export subsidy rate, as indicated below. These suspension-of-liquidation instructions will remain in effect until further notice. The weighted-average dumping margins are as follows:

[In percent]

Exporter/manufacturer	Weighted-average margin	Bonding/cash deposit rate
Inchon	25.51	25.51
Kangwon	49.73	49.64
All others	37.72	37.67

The rate for all other producers and exporters applies to all entries of the subject merchandise except for entries from exporters that are identified individually above.

ITC Notification

In accordance with section 735(d) of the Act, we have notified the International Trade Commission ("ITC") of our determination. As our final determination is affirmative, the ITC will, within 45 days, determine 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, the proceeding will be terminated and all securities posted will be refunded or canceled. If the ITC determines that such injury does exist, the Department will issue an antidumping duty order.

This determination is issued and published in accordance with sections 735(d) and 777(i)(1) of the Act.

Dated: June 26, 2000.

Troy H. Cribb,

Acting Assistant Secretary for Import Administration.

APPENDIX

List of Comments and Issues in the Decision Memo

I. Issues Specific to Inchon Iron & Steel Co., Ltd.

A. Cost of Production/Constructed Value Issues
- Comment 1: Applicant of Major Input Rule
- Comment 2: Application of Major Input Rule to Other Affiliated-Party Transactions
- Comment 3: Description
- Comment 4: Overhead
- Comment 5: SG&A Expenses
- Comment 6: R&D Expenses
- Comment 7: Interest Expense (Securities)
- Comment 8: Interest Expense (Sales-Related Activities)
- Comment 9: Loan Guarantees
- Comment 10: Affiliated-Party Services for an Input

B. Sales and General Issues
- Comment 11: Sales Price and Adjustments for U.S. Channel 3
- Comment 12: Billing Adjustments for U.S. Channel 2 sales
- Comment 13: U.S. Movement Expenses
- Comment 14: Recalculation of Home Market and U.S. Indirect Selling Expenses
- Comment 15: Home Market Sales to an Affiliated Customer
- Comment 16: Fees to a Home Market Customer
- Comment 17: Home Market Inland Freight
- Comment 18: Application of Total Adverse Facts Available
- Comment 19: Packing Expenses for U.S. Sales
- Comment 20: Clarification of Home Market and U.S. Verification Reports

II. Issues Specific to Kangwon Industries Ltd.

A. Sales and General Issues
- Comment 21: Commissions
- Comment 22: Duty Drawback
- Comment 23: Home Market Freight
- Comment 24: Corrections to Kangwon's Response
- Comment 25: Over- and Under-Reporting of Home Market Sales

B. Cost of Production/Constructed Value Issues
- Comment 26: Gain on Exemption of Debt
- Comment 27: G&A Expenses

III. Issues Applicable to Both Respondents
- Comment 28: EP vs. CEP Sales
- Comment 29: Cash Deposit Rate/Successorship
- Comment 30: Home Market Sales of ASTM-Grade Merchandise
- Comment 31: Banking Negotiation Fees

[FR Doc. 00-16952 Filed 7-3-00; 8:45 am]
BILLING CODE 3510-DS-M

DEPARTMENT OF COMMERCE

International Trade Administration

[A-821-802]

Uranium From Russia; Final Results of Full Sunset Review of Suspended Antidumping Duty Investigation

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

ACTION: Notice of final results of full sunset review: Uranium from Russia.

SUMMARY: On February 28, 2000, the Department of Commerce ("the Department") published a notice of preliminary results of the full sunset review of the antidumping duty suspension agreement on uranium from Russia (65 FR 10473) pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"). We provided interested parties an opportunity to comment on our preliminary results. We received comments from both domestic and respondent interested parties. As a result of this review, the Department finds that revocation of the antidumping duty suspension agreement would likely lead to continuation or recurrence of dumping at the levels indicated in the Final Results of Review section of this notice.

EFFECTIVE DATE: July 5, 2000.

FOR FURTHER INFORMATION CONTACT: Kathryn B. McCormick or James Maeder, Office of Policy for Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone: (202) 482–1930 or (202) 482–3330, respectively.

SUPPLEMENTARY INFORMATION:

Statute and Regulations

This review was conducted pursuant to sections 751(c) and 752 of the Act. The Department's procedures for the conduct of sunset reviews are set forth in *Procedures for Conducting Five-year ("Sunset") Reviews of Antidumping and Countervailing Duty Orders*, 63 FR 13516 (March 20, 1998) (*Sunset Regulations*) and in CFR Part 351 (1999) in general. Guidance on methodological or analytical issues relevant to the Department's conduct of sunset reviews is set forth in the Department's Policy Bulletin 98.3—*Policies Regarding the Conduct of Five-year ("Sunset") Reviews of Antidumping and Countervailing Duty Orders; Policy Bulletin*, 63 FR 18871 (April 16, 1998) (*"Sunset Policy Bulletin"*).

Background

On February 28, 2000, the Department of Commerce ("the Department") published in the **Federal Register** a notice of preliminary results of the full sunset review of the suspended antidumping duty investigation on uranium from Russia (65 FR 10473) pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"). In our preliminary results, we found that termination of the agreement suspending the antidumping duty investigation would likely result in continuation or recurrence of dumping at a weighted-average margin of 115.82 percent for all producers/exporters of uranium from Russia.

On March 15, 2000, we received a request from the Ministry of the Russian Federation for Atomic Energy ("Minatom"), AO Technsnabexport ("Tenex"), and Globe Nuclear Services and Supply GNSS, Limited ("GNSS") (collectively, "respondent interested parties") for an extension of time for filing rebuttal comments to case briefs until April 17, 2000. The Department agreed to extend the deadline to April 17, 2000.[1]

On March 29, 2000, the Ad Hoc Committee of Domestic Uranium Producers (the "Ad Hoc Committee"), including Rio Algom Mining Corporation ("Rio Algom") and Uranium Resources Inc. ("URI"), and USEC, Inc., and its subsidiary, United States Enrichment Corporation (together, "USEC"), each requested a hearing in this review.

On April 10, 2000, we received a case brief on behalf of the Ad Hoc Committee and USEC. We also received a case brief on behalf of the Ad Hoc Utilities Group ("AHUG"),[2] and respondent interested parties.

On April 14, 2000, the Ad Hoc Committee formally withdrew its March 29, 2000, request for a hearing in this review. On April 18, 2000, within the deadline specified in 19 CFR 351.309(d), the Department received rebuttal comments from the Ad Hoc Committee, USEC, AHUG, and respondent interested parties. In its rebuttal, USEC also withdrew its March 29, 2000, request for a hearing. Therefore, the Department canceled the public hearing. We have addressed the comments received below.

Scope of Review

According to the June 3, 1992, preliminary determination, the suspended investigation encompassed one class or kind of merchandise.[3] The merchandise included 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 compound; uranium enriched in U^{235} and its compounds; alloys dispersions (including cermets), ceramic products and mixtures containing uranium enriched in U^{235} or compounds or uranium enriched in U^{235}; and any other forms of uranium within the same class or kind. The uranium subject to these investigations was 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, 2844.20.00.10, 2844.20.00.20, 2844.20.00.30, and 2844.20.00.50 of the Harmonized Tariff Schedule of the United States ("HTSUS").[4] In addition, the Department preliminarily determined that highly-enriched uranium ("HEU") is not within the scope of the investigation.

On October 30, 1992, the Department issued a suspension of the antidumping duty investigation of uranium from Russia and an amendment of the preliminary determination.[5] The notice amended the scope of the investigation to include HEU.[6] The merchandise covered by the agreement suspending the antidumping investigation on uranium from the Russian Federation included 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 compound; uranium enriched in U^{235} and its compounds; alloys dispersions (including cermets), ceramic products and mixtures containing uranium enriched in U^{235} or compounds or uranium enriched in U^{235}; and any other forms of uranium within the same class or kind.

In addition, Section III of the suspension agreement provides that uranium ore from Russia that is milled into U_3O_8 and/or converted into UF_6 in

[1] *See* Letter from Jeffrey A. May, Director, Office of Policy, to Mark D. Herlach, Sutherland, Asbill & Brennan, granting an extension for time for filing rebuttal comments to the case briefs.

[2] AHUG consists of industrial users Ameren UE, Baltimore Gas and Electric Co., Carolina Power and Light Co., Commonwealth Edison Co., Consumers Energy, Duke Power Co., Entergy Services, Ins., FirstEnergy Nuclear Operating Co., Florida Power and Light Co., Northern States Power Co., PECO Energy Co., Southern Nuclear Operating Co., Texas Utilities Electric Co., and Virginia Power.

[3] The Department based its analysis of the comments on class or kind submitted during the proceeding and determined that the product under investigation constitutes a single class or kind of merchandise. The Department based its analysis on the "Diversified" criteria (*see Diversified Products Corp.* v. *United States*, 6 CIT 1555 (1983)) and case precedent) (57 FR 23380, 23382, June 3, 1992).

[4] *See Preliminary Determination of Sales at Less Than Fair Value: Uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine and Uzbekistan; and Preliminary Determination of Sales at Not Less Than Fair Value: Uranium from Armenia, Azerbaijan, Byelarus, Georgia, Moldova and Turkmenistan*, 57 FR 23380, 23381 (June 3, 1992).

[5] *See Antidumping; Uranium from Kazakhstan, Kyrgyszstan, Russia, Tajikistan, Ukraine, and Uzbekistan; Suspension of Investigations and Amendment of Preliminary Determinations*, 57 FR 49220 (October 30, 1992).

[6] Id. at 49235.

another country prior to direct and/or indirect importation into the United States is considered uranium from Russia and is subject to the terms of the Russian agreement, regardless of any subsequent modification or blending.[7] Uranium enriched in U^{235} in another country prior to direct and/or indirect importation into the United States is not considered uranium from the Russian Federation and is not subject to the terms of the Russian agreement.

Under the terms of suspension agreement HEU is within the scope of this investigation, and HEU is covered by this Russian suspension agreement. (HEU means uranium enriched to 20 percent or greater in the isotope uranium-235.) Imports of uranium ores and concentrates, natural uranium compounds, and all other forms of enriched uranium were classifiable under HTSUS subheadings 2612.10.00, 2844.10.20, 2844.20.00, respectively. Imports of natural uranium metal and forms of natural uranium other than compounds were classifiable under HTSUS subheadings 2844.10.10 and 2844.10.50. *Id.*

In addition, Section M.1 of the Russian suspension agreement in no way prevents the Russian Federation from selling directly or indirectly any or all of the HEU in existence at the time of the signing of the agreement and/or LEU produced in Russia from HEU to the Department of Energy ("DOE"), its governmental successor, its contractors, assigns, or U.S. private parties acting in association with DOE or the USEC and in a manner not inconsistent with the Agreement between the United States of America and the Russian Federation concerning the disposition of HEU resulting from the dismantlement of nuclear weapons in Russia.

There were three amendments to the Agreement suspending the antidumping duty investigation on Russian uranium. In particular, the second amendment to the Russian suspension agreement, on November 4, 1996, permitted, among other things, the sale in the United States of Russian low-enriched uranium ("LEU") derived from HEU and included within the scope of the suspension agreement Russian uranium which has been enriched in a third country prior to importation into the United States.[8] According to the amendment, these modifications would remain in effect until October 3, 1998.[9]

[7] *Id.* at 49235.

[8] *See Amendments to the Agreement Suspending the Antidumping Investigation on Uranium from the Russian Federation*, 61 FR 56665 (November 4, 1996).

[9] *Id.* 61 FR at 56667.

On August 6, 1999, USEC, Inc. and its subsidiary, United States Enrichment Corporation (collectively, "USEC") requested that the Department issue a scope ruling to clarify that enriched uranium located in Kazakstan at the time of the dissolution of the Soviet Union is within the scope of the Russian suspension agreement. Respondent interested parties filed an opposition to the scope request on August 27, 1999. That scope request is pending before the Department at this time.

Analysis of Comments Received

All issues raised in the case and rebuttal briefs by parties to this sunset review are addressed in the "Issues and Decision Memorandum" ("Decision Memo") from Jeffrey A. May, Director, Office of Policy, Import Administration, to Troy H. Cribb, Acting Assistant Secretary for Import Administration, dated June 27, 2000, which is hereby adopted by this notice. The issues discussed in the attached Decision Memo include the likelihood of continuation or recurrence of dumping and the magnitude of the margin likely to prevail were the suspension investigation terminated. Parties can find a complete discussion of all issues raised in this review and the corresponding recommendations in this public memorandum which is on file in B–099.

In addition, a complete version of the Decision Memo can be accessed directly on the Web at www.ita.doc.gov/import_admin/records/frn/, under the heading "Russia." The paper copy and electronic version of the memo are identical in content.

Final Results of Review

We determine that revocation of the antidumping duty suspension agreement on uranium from Russia would be likely to lead to continuation or recurrence of dumping at the following percentage weighted-average margin:

Manufacturer/exporters	Margin (percent)
All Russian manufacturers/exporters	115.82

This notice serves as the only reminder to parties subject to administrative protective order ("APO") of their responsibility concerning the disposition of proprietary information disclosed under APO in accordance with 19 CFR 351.305 of the Department's regulations. Timely notification of return/destruction of APO material or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

This five-year ("sunset") review and notice are in accordance with sections 751(c), 752, and 777(i)(1) of the Act.

Dated: June 27, 2000.

Troy H. Cribb,

Acting Assistant Secretary for Import Administration.

[FR Doc. 00–16948 Filed 7–3–00; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–844–802]

Uranium From Uzbekistan; Final Results of Full Sunset Review of Suspended Antidumping Duty Investigation

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

ACTION: Notice of final results of full sunset review: Uranium from Uzbekistan.

SUMMARY: On February 28, 2000, the Department of Commerce ("the Department") published a notice of preliminary results of the full sunset review of the antidumping duty suspension agreement on uranium from Uzbekistan (65 FR 10471) pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"). We provided interested parties an opportunity to comment on our preliminary results. We received comments from both domestic and respondent interested parties. As a result of this review, the Department finds that revocation of the antidumping duty suspension agreement would likely lead to continuation or recurrence of dumping at the levels indicated in the Final Results of Review section of this notice.

EFFECTIVE DATE: July 5, 2000.

FOR FURTHER INFORMATION CONTACT: Kathryn B. McCormick or James Maeder, Office of Policy for Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone: (202) 482–1930 or (202) 482–3330, respectively.

SUPPLEMENTARY INFORMATION:

Statute and Regulations

This review was conducted pursuant to sections 751(c) and 752 of the Act. The Department's procedures for the

conduct of sunset reviews are set forth in *Procedures for Conducting Five-year ("Sunset") Reviews of Antidumping and Countervailing Duty Orders,* 63 FR 13516 (March 20, 1998) ("Sunset Regulations") and in CFR part 351 (1999) in general. Guidance on methodological or analytical issues relevant to the Department's conduct of sunset reviews is set forth in the Department's Policy Bulletin 98.3—*Policies Regarding the Conduct of Five-year ("Sunset") Reviews of Antidumping and Countervailing Duty Orders; Policy Bulletin*63 FR 18871 (April 16, 1998) ("*Sunset Policy Bulletin*").

Background

On February 28, 2000, the Department of Commerce ("the Department") published in the **Federal Register** a notice of preliminary results of the full sunset review of the antidumping duty investigation on uranium from Uzbekistan (65 FR 10471) pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"). In our preliminary results, we found that termination of the agreement suspending the antidumping duty investigation would likely result in continuation or recurrence of dumping at a weighted-average margin of 115.82 percent for all producers/exporters from Uzbekistan.

On March 24, 2000, we received a request from Navoi Mining and Metallurgical Combinat ("Navoi") and the Government of Uzbekistan ("GOU") (together, "respondent interested parties") for an extension of time for filing rebuttal comments to case briefs until April 18, 2000. The Department agreed to extend the deadline to April 18, 2000.[1]

On March 29, 2000, the Ad Hoc Committee of Domestic Uranium Producers (the "Ad Hoc Committee"), requested a hearing in this review. On April 14, 2000, the Ad Hoc Committee formally withdrew its March 29, 2000, request for a hearing in this review; therefore, the Department canceled the public hearing.

On April 10, 2000, we received case briefs on behalf of the Ad Hoc Committee, the Ad Hoc Utilities Group ("AHUG"),[2] and respondent interested parties. On April 18, 2000, within the deadline specified in 19 CFR 351.309(d), the Department received rebuttal comments from the Ad Hoc Committee and respondent interested parties.

Scope of Review

According to the June 3, 1992, preliminary determination the suspended investigation included 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 compound; uranium enriched in U^{235} and its compounds; alloys dispersions (including cermets), ceramic products and mixtures containing uranium enriched in U^{235} or compounds or uranium enriched in U^{235}; and any other forms of uranium within the same class or kind. The uranium subject to these investigations was 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, 2844.20.00.10, 2844.20.00.20, 2844.20.00.30, and 2844.20.00.50 of the Harmonized Tariff Schedule of the United States ("HTSUS").[3] In addition, the Department preliminarily determined that highly-enriched uranium ("HEU") was not covered within the scope of the investigation, and that the subject merchandise constituted a single class or kind of merchandise.

On October 30, 1992, the Department issued a suspension of the antidumping duty investigation of uranium from Uzbekistan and an amendment of the preliminary determination.[4] The notice amended the scope of the investigation to include HEU.[5] The suspension agreement provided that uranium ore from Uzbekistan that is milled into U3O8 and/or converted into UF6 in another country prior to direct and/or indirect importation into the United States is considered uranium from Uzbekistan and is subject to the terms of the Agreement.[6] Further, uranium enriched in U^{235} in another country prior to direct and/or indirect importation into the United States was not considered uranium from Uzbekistan and was not subject to the terms of the suspension agreement.[7] In this suspension agreement, imports of uranium ores and concentrates, natural uranium compounds, and all forms of enriched uranium are classifiable under HTSUS subheadings 2612.10.00, 2844.10.20, 2844.20.00, respectively. Imports of natural uranium metal and forms of natural uranium other than compounds were classifiable under HTSUS subheadings 2844.10.10 and 2844.44.10.50.

On October 13, 1995, the Department issued an amendment to the suspension agreement on uranium from Uzbekistan. Among other things, this amendment modifies the agreement to include Uzbek uranium enriched in a third country prior to importation into the United States.

Analysis of Comments Received

All issues raised in the case and rebuttal briefs by parties to this sunset review are addressed in the "Issues and Decision Memorandum" ("Decision Memo") from Jeffrey A. May, Director, Office of Policy, Import Administration, to Troy H. Cribb, Acting Assistant Secretary for Import Administration, dated June 27, 2000, which is hereby adopted by this notice. The issues discussed in the attached Decision Memo include the likelihood of continuation or recurrence of dumping and the magnitude of the margin likely to prevail were the suspension investigation terminated. Parties can find a complete discussion of all issues raised in this review and the corresponding recommendations in this public memorandum which is on file in B–099.

In addition, a complete version of the Decision Memo can be accessed directly on the Web at www.ita.doc.gov/import admin/records/frn/, under the heading "Uzbekistan." The paper copy and electronic version of the memo are identical in content.

Final Results of Review

We determine that revocation of the antidumping duty suspension agreement on uranium from Uzbekistan would be likely to lead to continuation or recurrence of dumping at the following percentage weighted-average margin:

[1] *See* April 4, 2000, Letter from Jeffrey A. May, Director, Office of Policy, to Carolyn B. Lamm, granting an extension for time for filing rebuttal comments to the case briefs.

[2] AHUG consists of U.S. industrial users Ameren UE, Baltimore Gas and Electric Co., Carolina Power and Light Co., Commonwealth Edison Co., Consumers Energy, Duke Power Co., Entergy Services, Ins., FirstEnergy Nuclear Operating Co., Florida Power and Light Co., Northern States Power Co., PECO Energy Co., Southern Nuclear Operating Co., Texas Utilities Electric Co., and Virginia Power.

[3] *See Preliminary Determination of Sales at Less Than Fair Value: Uranium from Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine and Uzbekistan; and Preliminary Determination of Sales at Not Less Than Fair Value: Uranium from Armenia, Azerbaijan, Byelarus, Georgia, Moldova and Turkmenistan,* 57 FR 23381, 23382 (June 3, 1992).

[4] *See Antidumping; Uranium from Kazakhstan, Kyrgyszstan, Russia, Tajikistan, Ukraine, and Uzbekistan; Suspension of Investigations and Amendment of Preliminary Determinations,* 57 FR 49220 (October 30, 1992).

[5] *Id.* at 49221.

[6] *Id.* at 49255.

[7] *Id.*

Producers/Exporters	Margin percent
All Uzbek Producer/Exporters	115.82

This notice serves as the only reminder to parties subject to administrative protective order ("APO") of their responsibility concerning the disposition of proprietary information disclosed under APO in accordance with 19 CFR 351.305 of the Department's regulations. Timely notification of return/destruction of APO material or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

This five-year ("sunset") review and notice are in accordance with sections 751(c), 752, and 777(i)(1) of the Act.

Dated: June 27, 2000.

Troy H. Cribb,

Acting Assistant Secretary for Import Administration.

[FR Doc. 00–16949 Filed 7–5–00; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

Quarterly Update to Annual Listing of Foreign Government Subsidies on Articles of Cheese Subject to an In-Quota Rate of Duty

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

ACTION: Publication of quarterly update to annual listing of foreign government subsidies on articles of cheese subject to an in-quota rate of duty.

SUMMARY: The Department of Commerce, in consultation with the Secretary of Agriculture, has prepared its quarterly update to the annual list of foreign government subsidies on articles of cheese subject to an in-quota rate of duty during the period January 1, 2000 through March 31, 2000. We are publishing the current listing of those subsidies that we have determined exist.

EFFECTIVE DATE: July 5, 2000.

FOR FURTHER INFORMATION CONTACT: Tipten Troidl or Russell Morris, Office of AD/CVD Enforcement VI, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Ave., NW., Washington, DC 20230, telephone: (202) 482–2786.

SUPPLEMENTARY INFORMATION: Section 702(a) of the Trade Agreements Act of 1979 (as amended) ("the Act") requires the Department of Commerce ("the Department") to determine, in consultation with the Secretary of Agriculture, whether any foreign government is providing a subsidy with respect to any article of cheese subject to an in-quota rate of duty, as defined in section 702(g)(b)(4) of the Act, and to publish an annual list and quarterly updates of the type and amount of those subsidies. We hereby provide the Department's quarterly update of subsidies on cheeses that were imported during the period January 1, 2000 through March 31, 2000.

The Department has developed, in consultation with the Secretary of Agriculture, information on subsidies (as defined in section 702(g)(b)(2) of the Act) being provided either directly or indirectly by foreign governments on articles of cheese subject to an in-quota rate of duty. The appendix to this notice lists the country, the subsidy program or programs, and the gross and net amounts of each subsidy for which information is currently available.

The Department will incorporate additional programs which are found to constitute subsidies, and additional information on the subsidy programs listed, as the information is developed.

The Department encourages any person having information on foreign government subsidy programs which benefit articles of cheese subject to an in-quota rate of duty to submit such information in writing to the Assistant Secretary for Import Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230.

This determination and notice are in accordance with section 702(a) of the Act.

Dated: June 27, 2000.

Troy H. Cribb,

Acting Assistant Secretary for Import Administration.

APPENDIX.—SUBSIDY PROGRAMS ON CHEESE SUBJECT TO AN IN-QUOTA RATE OF DUTY

Country	Program(s)	Gross [1] Subsidy ($/lb)	Net [2] Subsidy ($/lb)
Austria	European Union Restitution Payments	$0.17	$0.17
Belgium	EU Restitution Payments	0.06	0.06
Canada	Export Assistance on Certain Types of Cheese	0.24	0.24
Denmark	EU Restitution Payments	0.11	0.11
Finland	EU Restitution Payments	0.23	0.23
France	EU Restitution Payments	0.13	0.13
Germany	EU Restitution Payments	0.17	0.17
Greece	EU Restitution Payments	0.00	0.00
Ireland	EU Restitution Payments	0.14	0.14
Italy	EU Restitution Payments	0.13	0.13
Luxembourg	EU Restitution Payments	0.07	0.07
Netherlands	EU Restitution Payments	0.10	0.10
Norway	Indirect (Milk) Subsidy	0.31	0.31
	Consumer Subsidy	0.14	0.14
Total		0.45	0.45
Portugal	EU Restitution Payments	0.10	0.10
Spain	EU Restitution Payments	0.09	0.09
Switzerland	Deficiency Payments	0.12	0.12
U.K.	EU Restitution Payments	0.11	0.11

[1] Defined in 19 U.S.C. 1677(5).
[2] Defined in 19 U.S.C. 1677(6).

APPENDIX B

WITNESSES AT THE COMMISSION'S HEARING

CALENDAR OF PUBLIC HEARING

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

Subject: Uranium from Russia, Ukraine, and Uzbekistan

Invs. Nos.: 731-TA-539-C, E, and F (Review)

Date and Time: June 13, 2000 - 9:30 a.m.

Sessions were held in connection with these investigations in the Main Hearing Room, 500 E Street, SW, Washington, DC.

OPENING REMARKS

In Support of Continuation (**Valerie A. Slater**, Akin, Gump, Strauss, Hauer & Feld, L.L.P.)
In Support of Revocation (**Carolyn B. Lamm**, White & Case and **Mark D. Herlach**, Sutherland Asbill & Brennan LLP)

In Support of the Continuation of the Orders:

Akin, Gump, Strauss, Hauer & Feld, L.L.P.
Washington, D.C.
on behalf of

Ad Hoc Committee of Domestic Uranium Producers

R. Mark Stout, Vice President, Land and Marketing,
Rio Algom Mining Corporation

James Clark, President, Everest Exploration, Incorporated

Richard Ziegler, Executive Vice President, Cotter Corporation

Mark Pelizza, Vice President of Health, Safety, and Environmental Affairs,
Uranium Resources, Incorporated

Jay M. McMurray, Consultant, McMurray Geological Consulting, Incorporated

Sandra Anadiotis, Director of Finance and Contract Administration

-MORE-

In Support of the Continuation of the Orders-Cont'd:

Scott Lumadue, Regional Marketing Director, ConverDyn

Daniel W. Klett, Principal, Capital Trade, Incorporated

Danny Michael Collier, Senior Vice President, NAC International

Valerie A. Slater)
)--OF COUNSEL
Stephen J. Claeys)

Steptoe & Johnson LLP
Washington, D.C.
on behalf of

USEC Incorporated
United States Enrichment Corporation

Philip Sewell, Vice President, Corporate Development and International Trade

Sue Speight, Director, North American Sales

Mari-Angeles Major-Sosias, Uranium Market Analyst

Richard O. Cunningham)
)--OF COUNSEL
Eric C. Emerson)

Philip H. Potter
Washington, D.C.
on behalf of

Paper, Allied-Industrial, Chemical & Energy Workers International Union, AFL-CIO, CLC ("PACE")

Philip H. Potter–OF COUNSEL

In Support of the Revocation of the Orders:

Embassy of the Republic of Uzbekistan, Washington, D.C.

Honorable Sodyq Safaev, Ambassador Extraordinary and Plenipotentiary

Embassy of the Russian Federation, Washington, D.C.

Vladimir N. Prokhorov, Second Secretary of the Economic Section and Legal Expert

Sutherland Asbill & Brennan LLP
Washington, D.C.
on behalf of

Ministry of the Russian Federation for Atomic Energy
AO Techsnabexport
Globe Nuclear Services and Supply GNSS, Limited

Alexander G. Chernov, President, GNSS

David S. Schramm, Vice President, Marketing, GNSS

Andrew R. Wechsler, Managing Director, LECG/Navigant Consulting, Incorporated

Brian C. Becker, Senior Managing Economist, LECG/Navigant Consulting, Incorporated

Mark D. Herlach)
Mary Patricia Michel)--OF COUNSEL
Joanna N. Adams)

White & Case LLP
Washington, D.C.
on behalf of

Republic of Uzbekistan

Julian J. Steyn, President, Energy Resources International, Incorporated

Dustin J. Garrow, President, ZB Marketing, L.L.C.

In Support of the Revocation of the Orders-Cont'd:

Timothy Y. McGraw, Director of CIS Affairs, Nukem, Incorporated

Andrew R. Wechsler, Managing Director, LECG/Navigant Consulting, Incorporated

Brian C. Becker, Senior Managing Economist, LECG/Navigant Consulting, Incorporated

Carolyn B. Lamm)
Christina C. Benson)--OF COUNSEL
Adams C. Lee)

Shaw Pittman
Washington, D.C.
on behalf of

Ad Hoc Utilities Group

David Culp, Manager, Nuclear Fuel Management, Duke Power Company

James Nevling, Fuel Buyer, Commonwealth Edison Company

Camille Abboud, Principal Fuel Consultant, Northern States Power Company

Charles Blanton, Fuel Procurement Specialist, Virginia Power

Thomas Bordine, Director, Nuclear Fuel Supply, Consumers Energy Company

Bruce Colt, General Attorney, Northern States Power Company

Stephan E. Becker)
Nancy A. Fischer)--OF COUNSEL
Sanjay J. Mullick)

CLOSING REMARKS

In Support of Continuation (**Richard O. Cunningham**, Steptoe & Johnson LLP)
In Support of Revocation (**Carolyn B. Lamm**, White & Case and
Mark D. Herlach, Sutherland Asbill & Brennan LLP)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
Uranium: Summary data concerning the U.S. market, 1997-99

(Value=1,000 dollars, period changes=percent, except where noted)

Item	Reported data			Period changes		
	1997	1998	1999	1997-99	1997-98	1998-99
Total U.S. sales value:						
Amount	2,642,242	2,749,775	2,633,740	-0.3	4.1	-4.2
Producers' share (1)	59.9	55.3	44.7	-15.2	-4.6	-10.6
Importers' share (1):						
Russia	***	***	***	***	***	***
Ukraine	0.0	0.0	0.0	0.0	0.0	0.0
Uzbekistan	***	***	***	***	***	***
Subtotal	***	***	***	***	***	***
Other sources	***	***	***	***	***	***
Total imports	40.1	44.7	55.3	15.2	4.6	10.6
Value of U.S. imports from:						
Russia	***	***	***	***	***	***
Ukraine	0	0	0	0.0	0.0	0.0
Uzbekistan	***	***	***	***	***	***
Subtotal	***	***	***	***	***	***
Other sources	***	***	***	***	***	***
Total imports	1,059,150	1,229,376	1,455,725	37.4	16.1	18.4
U.S. producers':						
U.S. sales	842,699	876,694	546,833	-35.1	4.0	-37.6
Exports	740,393	643,705	631,182	-14.8	-13.1	-1.9
Total sales	1,583,092	1,520,399	1,178,015	-25.6	-4.0	-22.5
Production workers	5,952	5,806	5,347	-10.2	-2.5	-7.9
Hours worked (1,000s)	12,469	12,153	11,221	-10.0	-2.5	-7.7
Wages paid ($1,000s)	314,822	323,692	307,580	-2.3	2.8	-5.0
Hourly wages	$25.25	$26.64	$27.41	8.6	5.5	2.9

(1) "Reported data" are in percent and "period changes" are in percentage points.

Note.--U.S. producers' data combines data reported by concentrators, converters, enrichers, and fabricators.

Source: Compiled from data submitted in response to Commission questionnaires and from official statistics of Commerce.

APPENDIX D

THE RELATIONSHIPS AMONG NOMINAL EXCHANGE RATES, REAL EXCHANGE RATES, AND PRODUCER PRICE TRENDS, AND THE IMPACT OF CHANGES IN THEIR VALUES ON PRICES OF EXPORTS AND IMPORTS

An exchange rate is the price of one currency in terms of another currency. Hence, an exchange-rate index is a price index. The exchange rate indices discussed in this report were based on exchange rates expressed in U.S. dollars per unit of the foreign currency (i.e., price of the foreign currency). An exchange-rate index number below 100 indicates that the foreign currency has depreciated (become cheaper) vis-a-vis the U.S. dollar; e.g., it requires fewer U.S. dollars to buy one unit of the foreign currency compared to the number of U.S. dollars required during the base period,[1] which has an index number of 100. On the other hand, an exchange-rate index number above 100 indicates that the foreign currency has appreciated (become more expensive) vis-a-vis the U.S. dollar; e.g., it requires more U.S. dollars to buy one unit of the foreign currency.[2] For instance, depreciation of the Russian ruble makes *Russian exports **less** **expensive** in U.S. dollars and Russian imports **more** **expensive** in rubles*. On the other hand, appreciation of the Russian ruble makes *Russian exports **more** **expensive** in U.S. dollars* and *Russian imports **less** **expensive** in rubles*.

The producer or wholesale price indices measure inflation or deflation at the producer selling price level in each subject country and in the United States. Adjusting nominal exchange rates by relative inflation or deflation in the subject country vis-a-vis the United States yields a real exchange rate, which accounts for relative changes in prices in the subject country as well as changes in nominal exchange rates.[3] As a result, the *nominal* exchange rate in each period has a counterpart *real* exchange rate for that period. Indexes of the two counterpart exchange rates may actually show opposing changes in the value of the currency, with one index representing the *nominal* value of the currency and the other the *real* value of the currency. For instance, the *nominal* exchange rate index may indicate that depreciation of the currency *in nominal terms* had occurred in a particular period but, because of sometimes large differences in inflation/deflation between countries, the counterpart *real* exchange rate index may actually indicate that appreciation of the currency *in real terms* had occurred in that period. In such an instance, changes in the nominal exchange rate would show an opposite (and incorrect) impact on export and import prices than that indicated by changes in the real exchange rate.

In considering real exchange rates it is important to understand the relationship between relative price changes and nominal exchange rates *at a given point in time*. Relatively *more inflation* in the subject country vis-a-vis the United States will ***undercut** nominal depreciation* of the subject country's currency vis-a-vis the United States, but will ***reinforce** nominal appreciation* of the subject country's currency.[4] Relatively *less inflation*, on the other hand, will ***reinforce** nominal depreciation* of the subject country's currency and ***undercut** nominal appreciation* of the subject country's exchange rate.[5] The first part of the initial relationship is seen most frequently and was vividly shown with the Russian ruble in

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[1] Depreciation of a currency also indicates that more of that currency is required to buy one U.S. dollar.

[2] Appreciation of a currency also indicates that less of that currency is required to buy one U.S. dollar.

[3] The real exchange rate is a better indicator (than the nominal exchange rate) of the impact of exchange rates on export and import prices.

[4] When looking at the impact of relative inflation rates on the nominal exchange rate *over time*, however, relatively more inflation in the subject country will tend *over time* to depreciate its nominal currency value as foreign demand shifts away from its products toward lower-priced products from other countries. The shift in demand away from the subject country's products will reduce demand for its currency and, thereby, put downward pressure on the exchange rate (price of the currency).

[5] When looking at the impact of relative inflation rates on the nominal exchange rate *over time*, however, relatively less inflation in the subject country will tend *over time* to appreciate its nominal currency value as foreign demand increases for its products and away from higher-priced products from other countries. The shift in demand toward the subject country's products will increase demand for its currency and, thereby, put upward pressure on the exchange rate (price of the currency).

these investigations. During January 1997-December 1999, the Russian ruble depreciated on a quarterly basis by 78.5 percent in nominal terms against the U.S. dollar, but inflation in Russia compared to deflation in the United States during this period (94.6 percent inflation versus 0.3 percent deflation) led the ruble to depreciate by 58.0 percent in real terms against the U.S. dollar. (While nominal depreciation of the ruble tended to make Russian exports less expensive in dollars, the inflation in Russia compared to deflation in the United States acted to raise the dollar-converted prices of its exports. The net effect, as indicated by the real exchange rate, was less of a decrease in the dollar prices of Russian exports compared to that suggested by the nominal depreciation of the ruble.)