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URANIUM ENRICHMENT

Process to Privatize the U.S. Enrichment Corporation Needs to Be Strengthened

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Congressional Recipients

The Energy Policy Act of 1992 created the United States Enrichment Corporation (USEC or the corporation), a wholly owned government corporation, to take over the Department of Energy's (DOE) uranium enrichment program. The act required USEC, which began providing enrichment services on July 1, 1993, to develop by July 1995 a plan to privatize the corporation. On June 30, 1995, USEC issued its privatization plan and formally notified the Congress of its intent to implement the plan. Implementation could result in the sale of USEC's stock in early 1996. If and when this sale takes place, it will represent the largest and most important privatization transaction involving the U.S. government since the government sold its equity interest in Conrail for over $1.6 billion through a public stock offering in 1987.

Under the act, before the plan can be implemented, (1) the Congress must have at least 60 days to review the plan, (2) the President must approve it, and (3) USEC must consult with the appropriate federal agencies and make several statutory findings. For example, USEC must determine that privatization will (1) result in a return to the United States at least equal to the net present value[1] of the corporation and (2) not result in control or ownership by a foreign corporation or government.

The act also requires the Comptroller General to report to the Congress on the extent to which (1) the revenues gained by the government under the plan would represent at least the net present value of the corporation and (2) the plan would result in any ongoing obligation or undue cost to the federal government. In this report, we evaluate the net present value of a privatized corporation. However, the act does not state whether the net present value is intended to be (1) the net present value of the expected cash flows for a privatized corporation or (2) the net present value of the expected cash flows for the corporation if it stays in the government. Therefore, in appendix II, we also develop an estimate of the net present value of USEC as a government corporation. Similarly, because the act does

[1]A net present value analysis, sometimes called a discounted cash flow, is one approach to estimating the value of a business by forecasting the business's cash flows and discounting these cash flows to their present value at an appropriate discount rate or cost of capital.

not define “ongoing obligation or undue cost,” this report will identify the government’s major costs and liabilities.[2]

Because the act required us to issue our report shortly after USEC gave its notice of intent to implement the plan, much of our report is based on data and assumptions that could change before the planned sale occurs next year. Also, we note that calculating the net present value of estimated future cash flows is only one method of determining the value of a company; therefore, the net present value numbers discussed in this report do not represent estimates of the corporation’s value. Because no specific transaction (i.e., stock sale, merger, or acquisition) has provided a basis for comparison with an estimate of the corporation’s net present value, we focused our review on the plan’s estimated sale price, the net present value analyses used in part to develop the price, and the process that will be used to review and approve the final sale. We plan to continue assisting the Congress as it reviews the privatization of USEC and considers the sale of other federal assets and programs.

Results in Brief

USEC’s privatization plan forecasts that the corporation’s stock could be sold for between $1.5 billion and $1.8 billion (less about $100 million in expected transaction fees).[3] The plan also assumes that the corporation will take with it up to $600 million out of its Treasury account. After privatization, USEC could annually pay taxes presently valued at up to $1.1 billion, although, as a private corporation, it could have options for minimizing taxes. Thus, the return to the U.S. Treasury from privatizing USEC could be between $1.7 billion and $2.2 billion.

We believe, however, that the net present value analysis on which the plan’s forecasted sale price is partly based, needs revision. For example, it does not reflect, among other things, current market conditions and recent administration decisions. Because the plan’s estimate of the corporation’s sale price depends, in part, on other analyses and expert judgment, we cannot determine what effect these needed adjustments would have on the plan’s forecasted sale price range. Furthermore, the plan’s analyses do not consider the value of excess inventory, which we estimate could be worth over $300 million. Valuation experts told us that the presence or absence

[2]In this report, the term “obligation” is not used as a federal budget term. Rather, the term “ongoing obligation” refers to liabilities associated with the uranium enrichment program. Some of these liabilities are well defined, while others, such as future cleanup costs, will depend upon future circumstances.

[3]USEC could also be merged with or acquired by another buyer or buyers. Depending on the offer, the return from this option could be higher or lower than from a public stock offering.

of excess inventory, within reason, would not significantly affect the market price. Therefore, the government may not be compensated for all of this inventory if it is included in the privatization transaction. However, the government could keep an interest in the inventory so that it could benefit from any future sales of USEC's excess inventory.

Although valuation analyses may provide a useful perspective for evaluating the privatization, many factors other than financial considerations could influence the government's final decision to sell or not to sell USEC. For example, federal decisionmakers need to consider the national security implications of the sale and decide, in light of the program's past problems, whether the government should be in the uranium enrichment business. Ultimately, deciding whether USEC should or should not be sold requires weighing many factors, and the decision should not rest solely on these analyses.

The privatization plan describes how the sale will be accomplished under the act's requirements and makes it clear that USEC and its board of directors will play the lead role in determining how and when key decisions will be made. USEC and the Department of the Treasury recognize that the Secretary of the Treasury plays a unique role in the privatization. Under the privatization plan and as further agreed in a subsequent letter, the Department will play an active role in the privatization and will concur in key decisions. However, we believe that because the sale of USEC has national security implications, involves billions of dollars, and may set a precedent for the contemplated sales of several other federal assets, careful scrutiny must be given to the privatization process.

For these reasons, it is important that the privatization process protect the American taxpayers' interests as fully as possible. This protection can best be ensured by placing in the lead role a government official whose position will not be affected by the privatization and whose mission will be clearly defined as protecting the taxpayers' interests. Moreover, because the privatization of a government corporation is a complex financial undertaking, safeguards may need to be implemented to protect the taxpayers if USEC is undervalued when sold.

Whether or not USEC is privatized, the U.S. government has ongoing obligations related to the uranium enrichment program and could pay $17.8 billion or more to clean up DOE's uranium enrichment plants and meet other requirements. Furthermore, since USEC was formed in

July 1993, it has, through normal business practices, created additional liabilities that could cost between $258 million and $540 million. The privatization plan assumes the enactment of proposed legislation requiring that most of USEC's liabilities remain with the government, and the plan's estimates are based on this assumption.

Background

In the 1940s and 1950s, the federal government built three large uranium enrichment plants for national defense purposes. In 1969, it began enriching uranium at these plants for the emerging commercial nuclear power industry. Until the mid-1970s, the U.S. government supplied nearly 100 percent of the free world's enrichment requirements. By the early 1980s, however, foreign competitors began eroding the program's market share, and DOE found it more and more difficult to recover costs in an increasingly competitive market.

The Energy Policy Act of 1992 (the act) restructured the uranium enrichment program to make it more competitive with foreign enterprises. The act created USEC and exempted it from many of the operating restrictions imposed on the former DOE program. For example, USEC does not derive its spending authority from annual appropriations and is exempt from some federal procurement requirements. Under the act, DOE leases the two operating enrichment plants to USEC at cost excluding depreciation and imputed interest. DOE also manages two long-term power purchase contracts that provide low-cost electricity for which USEC pays.[4] The act also required USEC to issue 100 percent of its common stock to the U.S. Treasury and required the Secretary of the Treasury to annually assess the value of the stock. In response to the Department of the Treasury's request that USEC provide an estimate of the value of the stock, the corporation engaged J.P. Morgan Securities, Inc. (Morgan).

At the end of fiscal year 1994, its first full year of operations, USEC reported gross revenues of about $1.4 billion and a net income of about $377 million after accruing funds to pay for waste disposal and other liabilities. It supplied about 88 percent of the domestic market and 40 percent of the world market, making USEC the world's largest supplier of enrichment services.

[4]Under the act, if the Secretary of Energy determined that a power contract executed by the Department prior to July 1, 1993, could not be transferred under the contract's terms, the Secretary could continue to receive power under the contract and resell such power to the corporation at cost. The Secretary made the determination that the two power contracts connected with the operating plants were not transferrable under their terms. The lease and a memorandum of agreement provide for the power received by the Department to be resold to the corporation at cost.

USEC's Privatization Plan

On June 30, 1995, USEC issued its privatization plan, which recommends that a "dual path" process be followed to help ensure the sale of the corporation in early 1996 by either (1) a public offering of its stock or (2) a merger with or an acquisition by a single buyer or group of buyers. According to the plan, USEC's preliminary assessment of the merger and acquisition market indicates that relatively few companies have both the strategic interest and the resources necessary for a transaction of this size. The final approach will depend upon which option is determined to better meet the act's requirements.

The plan, citing analyses performed by Morgan, USEC's financial adviser, projects that USEC's stock could be sold for $1.5 billion to $1.8 billion (less about $100 million in expected transaction fees).[5] The plan also projects that the government will retain $600 million to $800 million of the approximately $1.2 billion that USEC expects will be in its Treasury account at the time of privatization. (USEC's plan calls the amount to be left with the government an "exit dividend."[6] We note, however, that because USEC is a government corporation, these funds already belong to the government. In addition, USEC's plan assumes that $400 million to $600 million will be transferred out of the Treasury when USEC is sold. This cash must be subtracted from the sale price to determine the net proceeds to the government.) Furthermore, after privatization, USEC would be a taxable entity that might produce additional tax revenue to the government.

The privatization plan assumes that, to help realize these returns, the Congress will pass legislation that will, among other things, (1) assign to the government most of the known liabilities that USEC incurred as a government corporation, (2) transfer government contracts to a privatized USEC, and (3) ensure USEC's ability to dispose of low-level radioactive waste. The plan also assumes that new legislation will clarify USEC's ability to sell the natural uranium component of enriched uranium purchased under a 20-year contract with the Russians and that the Russian contract will continue to be implemented at current prices. This contract was signed in January 1994, after Russia agreed to sell the United States enriched uranium obtained from processing approximately 500 metric tons of bomb-grade uranium removed from Russian nuclear weapons.

[5]The plan did not predict the return from a merger and/or acquisition because this return would depend on the specific transaction.

[6]Under the act, until privatization the corporation shall pay as dividends to the U.S. Treasury all net revenues remaining at the end of each fiscal year not required for operating expenses or for deposit into a working capital account.

According to USEC, if all of the material is purchased at the prices currently specified in the contract, USEC will pay about $8 billion for Russian enrichment services and another $4 billion for the natural uranium contained in the enriched uranium purchased. After USEC takes title to the enriched uranium, the contract calls for prompt payment for the enrichment services upon delivery; however, payment to the Russians for the uranium component is made only when it is sold and/or used, or at the end of the contract. Because of existing trade restrictions, USEC cannot currently sell Russian natural uranium in the United States, and little, if any, market exists for it overseas. Moreover, according to USEC officials, it is not economically feasible to use the uranium in USEC's production processes. Since the Russians will not receive immediate payment for the natural uranium, they have threatened to terminate the contract.

A number of solutions have been suggested. For example, the administration announced in early July 1995 that USEC had agreed, in a joint protocol with its Russian counterpart, to pursue steps that would eventually allow Russia to receive full and simultaneous payment for both natural uranium and enrichment services under the contract. These steps include pursuing administrative and legislative actions that would allow the introduction into the U.S. market of uranium purchased under the Russian contract.[7] Another approach is proposed in Senate legislation, S. 755, which provides for a delayed and restricted entry of the uranium into the U.S. market. (For more information on the Russian contract, see app. I.)

Determining the Value of USEC

In developing its privatization plan, USEC relied on Morgan to determine the value of the corporation if it were privatized. According to an April 1995 presentation to USEC's board of directors, Morgan employed three valuation methodologies, one of which analyzed the net present value of projected cash flows, to estimate the value of USEC as a private corporation and forecast the proceeds resulting from a public sale. After considering the results of these analyses, Morgan used its judgment of investors' perceptions and management's credibility to project that the sale price of USEC's common stock would be in the range of $1.5 billion to $1.8 billion, less transaction fees of about $100 million. (See app. II for a more detailed explanation.)

[7]The protocol also provides for a $100 million advance payment to facilitate the dismantlement of Ukrainian nuclear weapons. Earlier, USEC had provided the Russians with a $60 million advance payment.

We did not independently value USEC as either a private or a government corporation. Rather, as we describe in the following section, we evaluated Morgan's model of a private USEC. In addition, as we describe in appendix II, we adjusted Morgan's net present value analysis to reflect our view of the activities of a government corporation. Because Morgan's analysis is subject to significant business, economic, and competitive uncertainties, our results are subject to the same uncertainties.

Needed Revisions to Morgan's Net Present Value Analysis of a Private USEC

At this time, no specific transaction (i.e., stock sale, merger, or acquisition) has provided a benchmark for evaluating estimates of the net present value of the corporation; therefore, we focused our review on the plan's estimated sale price. In an April 1995 report provided to USEC's board of directors, Morgan calculated a range of net present values for USEC under two scenarios—one that used only the existing enrichment plants and the other that assumed a plant using the atomic vapor laser isotope separation (AVLIS) process would be built.[8] We believe, however, that Morgan's net present value analysis needs revision because it (1) assumes that the current price of the Russian enriched uranium to be purchased by USEC under the long-term contract will not change, (2) may include more working capital than USEC will actually need, and (3) does not reflect, among other things, current market conditions and the administration's current estimate of the amount of cash USEC will take with it if it is privatized. Also, Morgan's analysis does not consider the value of USEC's excess inventory, which we estimate could be worth over $300 million. Furthermore, DOE may transfer additional uranium inventory to the corporation before it is privatized; this inventory could be worth up to $400 million. (See app. II for a more detailed explanation.)

Finally, we note that any estimate of earnings from uranium enrichment operations is subject to major uncertainties because of the inherent difficulty in determining the amount and the selling price of uranium enrichment services. Important and unforeseen market developments, such as a change in existing trade restrictions, could cause significant changes in the estimates. Also, if USEC is sold, its final value will be determined by the merger and/or acquisition purchaser(s) or the market for the initial public stock offering at the time of privatization.

[8]AVLIS is a new uranium enrichment technology that uses lasers to enrich uranium. DOE developed the technology and transferred it to USEC in an April 1995 memorandum of agreement. Over the next several years, USEC may decide to build the world's first AVLIS plant.

Expected Impact on the U.S. Treasury

The total impact on the U.S. Treasury of privatization will depend on the proceeds from the sale, projected by Morgan to be between $1.5 billion and $1.8 billion (less transaction fees), plus any additional tax revenues that a private USEC may pay in the future to the government, less the cash that USEC will take with it from its Treasury account when it is sold.

Although future tax payments may increase the returns to the U.S. Treasury under the privatization scenario, the Treasury's cash will be reduced by the $400 million to $600 million that USEC will take with it when it is privatized. Thus, as shown in table 1, the total increase to the Treasury from privatizing USEC could be between $1.7 billion and $2.2 billion.

Table 1: Impact on the U.S. Treasury of Privatizing USEC

Dollars in billions

	Case A	Case B
Sale proceeds	$1.8	$1.5
Less transaction fees	0.1	0.1
Subtotal	1.7	1.4
Less cash from the Treasury	0.6	0.4
Subtotal	1.1	1.0
Plus possible future tax revenues	1.1	0.7
Total	**$2.2**	**$1.7**

Using the government's borrowing rate as the discount rate, we developed two estimates of the net present value of the taxes that a privatized USEC could pay to the Treasury. Under case A, which applies the maximum effective corporate federal tax rate of 35 percent to all of USEC's projected earnings under the existing plants scenario, USEC's taxes could be as high as $1.1 billion. Under case B, which applies an average effective federal tax rate of 20 percent to USEC's earnings under the AVLIS scenario for the period from 1996 to 2008—the same period that Morgan used in its analysis of future taxes—USEC's taxes would be $700 million. (According to Morgan officials, estimating taxes beyond 2008 is difficult because of potential changes in tax policy and other uncertainties.) However, projecting USEC's future taxes is very uncertain, and USEC's payments could be much lower than estimated in either case. For example, if the corporation were to merge with or be acquired by a private firm, rather than be sold through a stock offering, its taxes could be much lower, depending on the tax position of the acquiring company.[9]

The Privatization Process

The process used to privatize USEC may lay the groundwork for future federal privatizations. Therefore, it is important that the process followed for privatizing USEC protect the American taxpayers' interests as fully as possible. In addition, the privatization of USEC carries with it important national security interests that must be addressed. Furthermore, it is a complex financial undertaking that may result in large future profits. For these reasons, the privatization process should be highly scrutinized and the taxpayers' financial interests protected. These goals can be accomplished by designating the Department of the Treasury as the lead agency in the privatization process. Moreover, safeguards will need to be considered to ensure that the taxpayers' interests are protected if, because of the complexity of the privatization effort, the corporation is undervalued when sold.

Under the act, the Secretary of the Treasury and USEC are assigned different roles in the privatization. The Secretary is designated to hold the stock of the corporation for the United States; the stock cannot be sold except to carry out the purposes of privatization. The act also makes it clear that the role of the Secretary as sole shareholder does not impinge on the management responsibilities of the corporation—all of the rights and duties pertaining to the corporation's management remain vested in the corporation's board of directors. Furthermore, the act makes the corporation responsible for preparing a strategic plan for transferring the ownership of the corporation to private investors and revising the plan, as needed. In addition, the act specifies that, subject to the necessary congressional review and presidential approval, the plan can be

[9]To discount tax estimates under each scenario—existing plants and AVLIS—we used the government's cost of borrowing. We assumed a tax rate of 35 percent for the existing plants case and of 20 percent—the alternative minimum rate—for the AVLIS case because, under this scenario, USEC would have more options for reducing taxes. The narrow range, as shown in table 1, should not be interpreted to suggest that the actual tax payments to the Treasury will be nearly $1 billion. In fact, the actual payments could be substantially higher or lower. Furthermore, in this instance using the lower discount rate (rather than the higher private-sector rate) increases the government's return under privatization.

implemented if the corporation, in consultation with the appropriate federal agencies, makes certain statutory findings.[10]

The corporation's board of directors submitted the privatization plan to the Congress and the President on June 30, 1995. The board recommended that USEC follow a dual path to privatization by simultaneously pursuing an initial public stock offering and a negotiated sale, selecting the approach that better meets the act's statutory requirements. The board unanimously recommended that the President approve the plan and direct USEC, in consultation with the appropriate federal agencies, to act to fulfill all statutory requirements necessary for implementing the plan.

Given USEC's statutory authority and the Treasury's shareholder responsibilities, the plan provides that USEC will consult on a regular basis with the Department of the Treasury and other appropriate federal agencies. After completing the plan, USEC and the Treasury acted to formalize their understanding of the unique role of the Secretary as the sole shareholder in the privatization process. According to corporation officials, the consummation of a public stock offering requires that the Secretary of the Treasury, as the sole shareholder, execute the underwriting agreement by which the price is set for the sale. Similarly, according to USEC, under state law the Secretary must approve any acquisition of USEC in a negotiated transaction.[11]

Because the Secretary of the Treasury is the sole shareholder of the corporation, the corporation's president and chief executive officer sent a letter to the Under Secretary of the Treasury for Domestic Finance specifying that the corporation will take certain key actions only with the concurrence of the Department of the Treasury. These actions include (1) deciding whether to finalize a public stock offering or merger and/or acquisition, (2) concurring on the terms contained in the underwriting agreement concerning a public stock offering, and (3) concurring on the terms contained in the sale agreement concerning a merger and/or

[10]Specifically, the corporation must determine, in consultation with the appropriate federal agencies, that privatization will "(1) result in a return to the United States at least equal to the net present value of the Corporation; (2) not result in the Corporation being owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; (3) not be inimical to the health and safety of the public or the common defense and security; and (4) provide reasonable assurance that adequate enrichment capacity will remain available to meet the domestic electric utility industry." 42 U.S.C. 2297d-1.

[11]The plan noted that USEC should be privatized as a state-chartered corporation. Currently, USEC's charter exists under federal law and can be changed only by an act of Congress. The proposed administration bill would provide USEC with the authority to establish a state-chartered corporation and to transfer USEC's business into it in order to implement privatization.

acquisition.[12] The letter was written with the concurrence of USEC's directors.

Although the corporation recognizes the unique role of the Treasury in the privatization process, the corporation, not the Treasury, still maintains the lead role in the privatization effort. Moreover, the act requires the corporation, not the Treasury, to make the definitive statutory findings that will allow the privatization plan to be implemented. The plan anticipates that these statutory findings will be made by December 1995, several months after the congressional review period has passed and the President's approval is expected.

We believe that to fully protect the American taxpayers, the Treasury, not USEC and its board, should be in charge of the privatization process. Not only is the Secretary of the Treasury the sole shareholder but also, more importantly, the Treasury's fundamental mission is to establish appropriate government financial policy. Furthermore, Treasury officials, unlike USEC's managers and its board, will not be affected by the privatization. While we do not find fault with the manner in which USEC is fulfilling its statutory role, the Treasury can better ensure that the highest degree of impartiality is brought to the privatization process.

Thus, we believe that to protect the American taxpayers' interests as fully as possible, the Treasury should be in charge of the privatization and make the necessary statutory findings in consultation with the corporation. While the corporation would play a key role in the privatization, the Treasury would take the lead. In so doing, the Treasury would make the key decisions about when and how to sell the corporation. It might also consider other sales strategies, such as selling portions of the corporation's stock at intervals if it is determined that the market could not absorb such a large stock offering at one time. Such a phased, or "tranche," sale is allowed under the act but would raise questions about how the corporation would be managed while it had both government and private owners.

We also believe that safeguards should be established to ensure the taxpayers' share in any large profits that may accrue to the corporation within a reasonable time after privatization. Large profits may accrue, for example, from using the AVLIS technology or from selling excess inventory. We are aware of at least two mechanisms that have been used to ensure

[12]According to USEC officials, although the letter only highlighted key actions, concurrence would be sought throughout the process.

that a government shares in the profits resulting from its past investments. First, a "clawback" provision in a sales agreement gives the seller the right to share in the gains (or excess profits) made after the initial sale, thereby protecting the seller from an understated valuation. In Great Britain, such provisions were incorporated in government property sale agreements and could require payments to the government for up to 10 years after the sale.

Second, to help accomplish the same objective, warrants issued to the government might be attached to the final sale agreement. Warrants represent options to purchase stock for a specified time and price. These instruments were used to give the government a share in Chrysler's future profits in return for the risks the government incurred in offering guaranteed loans as part of the Chrysler "bailout." Similarly, warrants could be used to try to ensure a future return to the government from any large profits that might accrue from a privatized USEC's development of the AVLIS technology or from the sale of excess inventory.

The Government's Ongoing Obligations and Costs

The government will pay billions of dollars for ongoing obligations whether or not USEC is privatized. The privatization plan also assumes that liabilities of between $258 million and $540 million, incurred by USEC since it began operations in July 1993, will remain with the government after USEC is privatized. Under the act, DOE generally retains responsibility for liabilities resulting from its enrichment operations before they were transferred to USEC on July 1, 1993. These "preexisting" liabilities, which DOE must pay regardless of whether USEC is privatized, were further clarified, initially by a July 1993 lease agreement between USEC and DOE, and later by a December 1994 memorandum of agreement between USEC and DOE. Many of these preexisting liabilities are undefined, but they could eventually cost the government $17.8 billion or more, depending on, among other things, how, when, and to what degree the aging enrichment plants are cleaned up.[13]

In addition, DOE retains certain responsibilities associated with the enrichment program's activities after July 1, 1993. For example, under the provisions of an April 1995 memorandum of agreement, DOE retains some liabilities associated with the AVLIS research and development facilities at

[13]The act established a fund to pay for the cost of decontaminating and decommissioning the three enrichment plants. The fund is supported by required payments from domestic utilities and by government appropriations. However, a recent audit of the fund found that funding levels may be inadequate to address DOE's multibillion-dollar cleanup liability. Furthermore, a recent court decision has the potential to affect utilities' annual payments into the fund. Yankee Atomic Electric Co. v. United States, No. 94-555C, filed June 22, 1995 (Cl. Ct. 1995).

the Lawrence Livermore National Laboratory. DOE has not yet quantified these liabilities. DOE also manages the plants under a lease with USEC and continues to receive power under two favorable electricity supply contracts. DOE resells that power to USEC at cost. (The benefits of these contracts are included in the projected cash flows we and Morgan used; hence, their value is considered in the net present value analyses.)

Furthermore, since July 1993, USEC has incurred liabilities that could cost between $258 million and $540 million. As long as USEC remains a government corporation, its costs and liabilities are the government's responsibility, although the act generally requires USEC to pay all of its costs without additional federal assistance. Nevertheless, it is not clear how these costs and liabilities would be apportioned between the government and USEC if USEC were privatized without new legislation specifically defining the responsibility for these costs and liabilities. According to USEC officials, legislation is needed to define these liabilities and thereby achieve the maximum return to taxpayers and ensure the corporation's viability. The officials believe that without a clear delineation of the government's costs and liabilities, private investors considering the purchase of USEC's stock would assume the worst and lower the price paid for USEC.

The plan's valuation analyses assume that the Congress will pass legislation that will require the government to retain responsibility for the liabilities that USEC incurs before it is privatized. Currently, the Congress is considering several bills that would facilitate the privatization of USEC by clarifying certain issues, such as how enrichment contracts would be transferred, how the proceeds from the sale would be counted towards reducing the federal deficit,[14] and how USEC's liabilities would be assigned. For example, on April 5, 1995, the House passed H.R. 1215, the Tax Fairness and Deficit Reduction Act of 1995. Title III of that bill, the USEC Privatization Act, would assign to the government the liabilities incurred by USEC from the time it took over the DOE program (July 1993) up to the date of privatization.[15] On the Senate side, the Committee on Energy and Natural Resources is also considering a bill (S. 755) to privatize the

[14]Current budget law does not allow the proceeds from asset sales to be offset against spending. (The amount of cash going with USEC, however, would count as an outlay.) However, all versions of the USEC privatization legislation would change the treatment of the proceeds from the privatization so they can be counted as an offset. Furthermore, the joint budget resolution passed on June 26, 1995, recommends that "the asset sale scoring prohibition should be repealed and consideration should be given to replacing it with a methodology that takes into account the long-term budgetary impact of asset sales."

[15]Recently, H.R. 1923, which contains similar language, was introduced.

corporation. However, this bill would not change the language in the act requiring the corporation to be responsible for any judgment resulting from its operations after July 1993.[16]

In addition, the corporation has provided the Congress with the administration's proposed bill on privatization. Under this proposal, the costs associated with the operation of the enrichment program up to the date of privatization would remain with the government except for those liabilities identified in a memorandum of agreement between the corporation and the Office of Management and Budget, to be entered into before privatization. According to USEC officials, the Senate Committee on Energy and Natural Resources may consider the administration's bill when it marks up S. 755.

Table 2, which was prepared from the best available estimates, generally summarizes, in 1995 dollars, the government's preexisting liabilities associated with the enrichment program and the liabilities the government would retain under H.R. 1215 and the administration's bill. USEC's privatization plan assumes that most of the government corporation's liabilities will remain with the government.

[16]USEC officials believe that the best interpretation of the act makes the federal government responsible for the liabilities incurred by the corporation during the transition period. DOE disagrees. The legislation passed by the House and the administration's bill would clarify how these liabilities would be allocated.

Table 2: The Government's Estimated Ongoing Obligations Associated With the Uranium Enrichment Program

1995 dollars in millions

Cost category	Government's preexisting liabilities as of July 1, 1993	USEC's preprivatization liabilities that could remain with the government under various legislative proposals
Cleanup:		
Decontamination and decommissioning	$12,000-26,000[a]	0
Remedial action	3,200[b]	0
Tails disposal	1,330[c]	258[d]
Waste management	521[e]	14 or 0[f]
Nuclear and occupational safety	115-135[g]	0
Postretirement and employee benefits	620[h]	44 or 0[i]
Power contracts		
Postretirement	31	3 or 0[j]
Shutdown costs	15	6 or 0[k]
Unamortized debts	0	70-80 or 0[l]
AVLIS	Unknown[m]	0
Other potential liabilities		
Lawsuits	Unknown[n]	Unknown[o]
Contingencies	0	135 or 0[p]
Other	Unknown[q]	Unknown[q]
Total	**$17,832-$31,852**	**$258-$540**

Note: Privatization is assumed to take place at the beginning of 1996.

[a]The government's preexisting liability for decontaminating and decommissioning the plants is based on a contractor's September 1991 study, which identified a range of potential costs of $11.25 billion to $24.25 billion ($12 billion to $26 billion in 1995 dollars) to remove radioactive and hazardous materials and decontaminate the facility buildings of the three plants.

[b]The expected cost of remedial actions for existing contamination—cleaning up the soil and water surrounding the facilities—is $3.0 billion in 1992 dollars ($3.2 billion in 1995 dollars) for the three plants, according to a contractor's September 1991 draft study.

[c]According to its most recent study, DOE estimates that disposing of its 560,000-metric-ton inventory of depleted uranium generated before July l, 1993, could cost $1.33 billion in 1995 dollars. However, a DOE official told us that this estimate was low and that final disposition costs for the depleted uranium would probably be much higher.

[d]USEC estimates on the basis of its generation of depleted uranium from July 1, 1993, to December 31, 1995, that the final disposition costs could amount to $258 million.

[e]As of July 1995, DOE estimates that its substantial ongoing liability for the cost of treating and disposing of low-level radioactive, hazardous, and mixed waste generated from enrichment operations at the two operating plants, primarily before July 1993, could cost about $521 million.

[f]For low-level radioactive, hazardous, and mixed waste generated from its operations between July 1, 1993, and December 31, 1995, USEC has identified a liability of $14 million in disposition costs, according to a projected waste inventory. According to USEC officials, under the memorandum of agreement that, according to the administration's bill, is to be entered into before privatization, USEC more than likely would take responsibility for the liabilities it incurred as a government corporation.

[g]Under the terms of the lease, DOE agreed to reimburse USEC for the costs of bringing the enrichment plants into compliance with DOE's internal safety requirements and the Nuclear Regulatory Commission's certification standards. According to USEC's and DOE's estimates, respectively, these costs could run from $80 million to over $100 million. DOE also agreed to pay $35 million to bring facilities into compliance with existing Occupational Safety and Health Administration requirements.

[h]DOE's existing liability of $614 million in 1993 dollars ($620 million in 1995 dollars) represents actuarial estimates of obligations for pension and postretirement health and life insurance benefits for (1) contractor employees at the two active plants who retired before July 1, 1993, and (2) active employees for their years of service accumulated before July 1, 1993.

[i]USEC estimates on the basis of actuarial studies for contractor benefits accrued from July 1, 1993, to a privatization date of December 31, 1995, that pension and postretirement benefits for contractor employees could cost a total of $41 million. USEC estimates, on the basis of the years of service accumulated between July 1, 1993, and December 31, 1995, that an additional $3 million in severance benefits could be owed to contractor employees. According to USEC officials, under the memorandum of agreement to be entered into before privatization, specified in the administration's bill, USEC would more than likely take responsibility for the liabilities it incurred as a government corporation.

[j]According to DOE, it has paid its share ($16 million) of the cost for postretirement health and life insurance benefits for employees of one of the two power companies holding agreements with the government. However, benefits for the other company's employees are still unpaid. Postretirement benefit costs for this company's employees are based on actuarial estimates made for the power company. The actuary estimated that the government would owe about $34 million up to January 31, 1996. USEC estimates that the outstanding liability for the time it is a government corporation will be about $3 million. Discussions with DOE, the actuary, and USEC indicate that DOE's outstanding liability for the period before July 1, 1993, is expected to be about $31 million, including accrued interest. According to USEC officials, under the memorandum of agreement to be entered into before privatization, specified in the administration's bill, USEC would more than likely take responsibility for the liabilities it incurred as a government corporation.

[k]Although agreements have been in effect with each of the two power companies since 1955, only one of the power agreements included a clause obligating the government for its pro rata share of the plant's shutdown and cleanup costs since 1955. The other power company added such a clause effective as of October 1992. (This power company is expected to incur higher lifetime shutdown costs because it has two power plants.) Thus, for this power company, DOE is obligated only for its pro rata share represented by the period from October 1992 until July 1, 1993, when USEC was established. USEC expects that power plant shutdown and cleanup costs attributable to the time that it is a government corporation will be about $10 million ($6 million in 1995 dollars) when these costs actually become due at some future date. According to USEC officials, under the memorandum of agreement to be entered into before privatization, specified in the administration's bill, USEC would more than likely take responsibility for this liability that it incurred as a government corporation.

[l]According to DOE, USEC may contend that the responsibility for projects undertaken before privatization, such as the $80 million upgrade to meet the Clean Air Act's requirements, would remain with the government. However, USEC has stated that it will continue to pay down the debt through its power payments after privatization. Moreover, it has stated that, should it decide to terminate a power contract, it will be financially liable for any remaining unamortized debt to the extent that the debt is not mitigated by the power company.

[m]According to the terms of an April 1995 memorandum of agreement, DOE retains certain liabilities associated with AVLIS, such as some cleanup costs. DOE has not calculated these costs.

[n]DOE continues to be responsible for actions that it took while managing the enrichment program. Several filed claims have not been fully resolved.

[o]Under the act and proposed bills, judgments from lawsuits filed against USEC before the date of privatization would be a direct liability of the government. To date, no lawsuits have been settled or have resulted in a monetary award.

[p]According to USEC, under the terms of reimbursement agreements entered into to support the 1994 contract to purchase enriched uranium from the Russians, DOE is potentially liable to USEC for up to $160 million in advance payments until the payments are offset by deliveries made under the contract. Some deliveries have been made, and USEC estimates the contingent liability currently at $135 million.

[q]A number of other potential liabilities, such as those associated with the enrichment contracts and Price-Anderson indemnification, cannot be defined at this time. (See app. IV for a more complete discussion of these potential liabilities.)

For more information on the government's costs and ongoing obligations associated with the enrichment program, see appendix IV.

Conclusions

At this point, there are no defined revenues associated with the sale of USEC that can be compared with estimates of the net present value of the corporation; therefore, we focused our review on the plan's estimated sale price and the process that will be followed to privatize USEC. USEC's privatization plan states that a public sale of the corporation's stock would probably return between $1.5 billion and $1.8 billion to the government before estimated transaction fees are considered. This range was derived by Morgan after it conducted various analyses, including net present value calculations of several possible USEC cash flow scenarios. After future taxes and the cash USEC expects to take with it from the Treasury are considered, the total return to the Treasury from privatizing USEC could be between $1.7 billion and $2.2 billion.

However, we believe that Morgan's net present value analysis on which the plan's expected sale price is partly based needs revision for several reasons. For example, the analysis needs to be updated to reflect current market conditions and recent administration decisions. Because Morgan relied, in part, on other analyses and its expert judgment in determining the plan's estimated sale price, we cannot estimate the effect that these needed adjustments would have on the range of sale prices forecasted in the plan. In addition, Morgan's analysis does not consider the excess uranium inventory owned by USEC. If the privatization process will not provide a fair return for this inventory, DOE could retain an interest in the inventory until it is sold.

We believe that Morgan's analysis should be revised to reflect needed updates and adjustments so that the Congress and key officials in the executive branch who are involved in making decisions about USEC's privatization will have the best available information. We also recognize that federal decisionmakers will not evaluate USEC's privatization on the basis of financial considerations alone; rather they will also consider other factors, including the national security implications of the sale and the desirability, given the program's past problems, of the government's staying in the uranium enrichment business.

Because USEC's privatization may set a precedent for future privatizations, it needs to be accomplished in a manner that will set the standard for assuring federal taxpayers that their interests will be protected in such sales. Moreover, because of the national security implications and the financial complexity of the sale, scrutiny should be given to the process. While we do not find fault with USEC's performance, we believe that, to fully ensure the integrity of the process, the Secretary of the Treasury, not USEC's board of directors, should have the lead role.

According to our estimates, the government could eventually pay $17.8 billion or more in costs associated with the former DOE program whether or not USEC is privatized. In addition, some of the proposed bills the Congress is considering to facilitate the privatization would have the government retain all or most of the liabilities that USEC has incurred since it began operating. These liabilities could total between $258 million and $540 million, depending on unknowns and contingencies. If the government does not retain responsibility for these liabilities, USEC's sale price could decrease.

Recommendation to the Congress

To ensure that the taxpayers' interests are fully protected throughout the privatization process, we recommend that the Congress, as it considers proposed legislation affecting USEC's privatization, require the President to approve the final sale agreement. To assist the President, we recommend that the Congress require the Secretary of the Treasury to lead the privatization process and, in so doing, make the necessary statutory findings. The Secretary should also take responsibility for determining the sale price, obtaining, if necessary, the advice of investment bankers or other valuation experts. In determining the sale price, the Secretary should

(1) consider the total impact of the Russian contract on the price and (2) incorporate needed updates, such as the administration's final decision on how much cash USEC should retain when it is privatized. The Secretary should also consider (1) ways to obtain value for USEC's excess inventory and (2) the use of a clawback mechanism or warrants in the sale agreement to protect the government from the possibility of an undervalued sale.

Agency Comments and Our Evaluation

We provided a draft of this report to USEC, the Department of the Treasury, and the Office of Management and Budget for comments. We also provided portions of the report discussing costs and liabilities to DOE for comment. DOE stated overall that the parts of the report it commented on were fair, complete, and accurate, and it provided specific technical comments that we incorporated throughout the report. USEC and Treasury provided written comments that are reproduced in appendixes VI and VII. A summary of our response to these comments follows.

USEC and Treasury[17] generally support the need for the Department of the Treasury's active participation in and oversight of USEC's privatization. Consequently, USEC says that our recommendation deserves further consideration, and Treasury does not object to the enactment of legislation that would give the Department the lead role in the privatization. However, Treasury indicated that the report should not give the incorrect impression that the Department has not undertaken a prominent role in the process to date. In addition, USEC and Treasury support a continuing evaluation of privatization issues, which could include considering the use of warrants to ensure against windfall profits at the taxpayers' expense.

As discussed in our report, we recognize that under the privatization plan and a subsequent letter, the Department of the Treasury will play an active role in the privatization and will concur in key decisions. However, under current law, USEC's managers and board of directors have assumed the lead role in the process and will make the statutory findings required for privatization. The plan anticipates that these statutory findings will be made several months after the congressional review period has passed and the President's approval is expected. We believe that to fully protect the taxpayers, the Department, not USEC, should be in charge of the privatization process and should make the necessary statutory findings in

[17]Treasury's letter contained comments it obtained from the Office of Management and Budget, the National Economic Council, and the Council of Economic Advisors.

consultation with the corporation. As Treasury notes in its comments, its fundamental mission is to establish appropriate government financial policy. Moreover, Treasury officials, unlike USEC's managers or board, will not be affected by the privatization.

According to USEC and Treasury, our analysis of the value of USEC as a private corporation is flawed because future taxes are understated. As we point out in our report, projecting USEC's future taxes is very uncertain and there is no one correct way to estimate the amount of these taxes. We further note that USEC provided no estimate of taxes in its privatization plan and, in fact, indicated that the payment of any taxes by the private entity is not certain. However, we believe it reasonable to assume that some taxes will be paid by a privatized USEC, and we wanted to recognize that probability in our analysis. Therefore, for both of the cases we developed to project a privatized USEC's future taxes, we initially used the same methodology that Morgan used in its April 1995 presentation to USEC's board of directors. However, in response to Treasury's and USEC's comments, we extended our projection for one of the cases to include the taxes to be paid on revenues earned by the corporation throughout its expected operating life.

USEC also commented that our analysis is flawed because it grossly understates the costs that USEC would incur if it remained in the government. We disagree and believe our estimate to be reasonable, although we recognize that the long-term cost and revenue projections for any scenario for USEC are subject to many uncertainties. However, in response to USEC's and Treasury's concern about the implications of comparing these numbers with Morgan's analysis of a privatized USEC's value, we moved our analysis of a government corporation's value to appendix II.

Furthermore, we note that for our government corporation scenario, we started with the same cost estimates that Morgan used in its April 1995 net present value analysis of an "existing plants" or non-AVLIS scenario, which was used, in part, to develop the privatization plan's valuation estimates. This net present value analysis incorporated cost projections provided by USEC's management plus tens of millions of dollars in additional costs that Morgan believed were needed to better reflect the true cost of maintaining the aging enrichment plants. Our model for a government corporation contains projections reflecting pessimistic assumptions that increase Morgan's cost estimates by hundreds of millions of dollars. Therefore, we believe that the costs included in our government corporation scenario are reasonable when compared with the projections Morgan used to develop the valuation estimates included in the privatization plan.

Treasury also criticized our report for not reaching any preliminary conclusions about the privatization and implying that the net present value of the revenues from a government corporation would be greater than the return to the Treasury from a privatized USEC. Treasury also suggested that because our net present value estimates are based on the cash flow model developed by Morgan, they may be based on assumptions that may not be appropriate for calculations required under the act. In conclusion, Treasury noted that our report appears incomplete and that a fuller analysis and clearer explanation of our work is needed. Treasury also made several specific points, including the following:

- In our report, we identified several adjustments that are needed in Morgan's net present value analysis. Treasury believes that we applied these adjustments to our analysis of a government corporation, but not to our analysis of a private USEC, and that our analyses are therefore inconsistent.
- Treasury believes that we did not adequately consider the existing contracts that provide electricity to the existing enrichment plants at favorable rates.

In response to these comments, we first note that we used the best available information to address the act's requirements that we evaluate the extent to which (1) the revenues gained by the federal government under the privatization plan would represent at least the net present value of the corporation and (2) the privatization plan would result in any ongoing obligations or undue costs to the federal government. Most of the information we used, by necessity, came from USEC and Morgan. Second, because the proposed sale of USEC is many months away, we could not determine whether the actual proceeds from the sale of USEC would at least equal the net present value of the corporation. Consequently, we had to start with Morgan's estimate of the gross proceeds from the sale to project the effect of the proposed sale on the Treasury.

To estimate the net present value of the corporation, we first reviewed Morgan's calculation of the net present value of a privatized USEC. In doing so, we identified several weaknesses in Morgan's analysis. However, we did not identify the dollar effect of the needed adjustments to Morgan's analysis because (1) USEC raised concerns that doing so would involve sensitive proprietary issues and information and (2) a change in Morgan's net present value estimates would not necessarily affect Morgan's final estimate of the sale proceeds, which is based, in part, on other analyses and professional judgment. It is also important to note that most of the adjustments are not applicable to the government corporation scenario and would not necessarily affect the final estimate of the sale proceeds.

To further aid the Congress as it considers the privatization plan we also looked at the net present value of a government USEC, and, for illustrative purposes, applied a wide range of potential private-sector discount rates to the government corporation's cash flows to show the sensitivity of the different rates. However, we know of no assumptions used in any of our work that are, as Treasury suggested, inappropriate to the calculations required by the act, nor did Treasury specifically identify any.

Thus, we believe that we objectively and completely accomplished our legislative mandate, although we clearly recognize that the current, available information is subject to much uncertainty. Furthermore, we believe that our report presents the results of these analyses impartially, for informational purposes, and notes that other factors should be considered by federal decisionmakers when evaluating the privatization of USEC. We did not take a position on the privatization because there is no specific transaction to evaluate.

When comparing our analysis of the impact on the U.S. Treasury of privatizing USEC with our estimate of the net present value of retaining USEC as a government corporation, one needs to consider the financial impact of the initial public offering discount, the fees paid to the underwriter(s), and the cash USEC will take with it. These factors associated with the privatization will likely cost the government several hundred million dollars; thus, any future taxes and the actual sale proceeds may not necessarily increase the total return to the Treasury to the same level as the net present value of a government corporation's estimated revenue stream. We would also point out that there are only three key differences between our net present value analysis of a government corporation and Morgan's analysis of a private USEC: (1) the government corporation scenario does not assume the building of an AVLIS plant, (2) the government corporation does not pay taxes, and (3) the discount rate for the government corporation scenario is lower than the discount rate for the private-sector scenario. Furthermore, it is also possible that, because of the weaknesses we identified in Morgan's model, the privatization plan's estimate of the sale proceeds should be raised.

Finally, it appears that Treasury and some others may be unaware that the Secretary of Energy has determined that certain power purchase agreements related to the operation of the plants cannot be transferred from DOE to USEC under the agreements' terms. As authorized under the act, DOE continues to receive power under these contracts, and, through the lease and a memorandum of agreement, resells such power to USEC at cost. Thus, the effect of these favorable rates is already included in our (and Morgan's) net present value calculations for USEC.

In conclusion, we believe our report fully and objectively responds to our legislative mandate, given the constraints mentioned above. However, we recognize that the privatization of USEC is an evolving process and that better and more complete information may become available. Therefore, we plan to continue to assist the Congress as it participates in the process and Treasury conducts it own analysis of the privatization.

We performed a number of steps to obtain and analyze information for this report. To determine the government's costs and ongoing obligations associated with the uranium enrichment program and the proposed privatization of USEC, we interviewed DOE, Commerce, Treasury, USEC, and Office of Management and Budget officials and reviewed pertinent documents, such as the USEC privatization plan, the lease agreement for the enrichment plants, the uranium enrichment power contracts, and proposed legislation. To estimate the net present value of USEC's cash flows, we interviewed USEC and Morgan officials, reviewed Morgan's model and USEC's strategic planning documents, and spoke to DOE officials who formerly managed the program. Using available data from USEC and Morgan, we also constructed our own cash flow model for USEC if it remained a government corporation. Appendix V contains a more detailed discussion of our objectives, scope, and methodology. We conducted our review between March 1995 and August 1995 in accordance with generally accepted government auditing standards.

We are sending copies of this report to the Secretary of the Treasury, the Secretary of Energy, the President and Chief Executive Officer of USEC, and the Director of the Office of Management and Budget. We will make copies available to others upon request.

If you have any questions or need additional information, please contact me at (202) 512-3841. Major contributors to this report are listed in appendix VIII.

Victor S. Rezendes
Director, Energy and
Science Issues

List of Recipients

The Honorable Frank H. Murkowski
Chairman
The Honorable J. Bennett Johnston
Ranking Minority Member
Committee on Energy and
Natural Resources
United States Senate

The Honorable Pete V. Domenici
Chairman
The Honorable Wendell H. Ford
Ranking Minority Member
Subcommittee on Energy
Research and Development
Committee on Energy and
Natural Resources
United States Senate

The Honorable Thomas J. Bliley, Jr.
Chairman
The Honorable John D. Dingell
Ranking Minority Member
Committee on Commerce
House of Representatives

The Honorable Dan Schaefer
Chairman
The Honorable Frank Pallone, Jr.
Ranking Minority Member
Subcommittee on Energy and Power
Committee on Commerce
House of Representatives

Contents

Abbreviations

AVLIS	atomic vapor laser isotope separation
DOE	Department of Energy
GATT	General Agreement on Tariffs and Trade
HEU	highly enriched uranium
ITA	International Trade Administration
ITC	International Trade Commission
LEU	low enriched uranium
NAFTA	North American Free Trade Agreement
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OSHA	Occupational Safety and Health Administration
SWU	separative work unit
UPA	Uranium Producers of America
USEC	United States Enrichment Corporation
USSR	Union of Soviet Socialist Republics

Russian Enriched Uranium Contract

One of the most complicated issues surrounding the privatization of the United States Enrichment Corporation (USEC) concerns the disposition of Russian highly enriched uranium (HEU). The complexity of this issue arises from the need to balance concerns about nonproliferation with a host of commercial interests.

In February 1993, Russia agreed to sell approximately 500 metric tons of HEU extracted from dismantled Russian nuclear weapons to the United States. The HEU is to be converted to low enriched uranium (LEU) suitable for use as fuel in commercial nuclear power reactors. The agreement, financed through the commercial sale of the converted uranium, is not expected to cost the U.S. taxpayers any money. Under the contract implementing the agreement, USEC, the designated U.S. executive agent, pays for approximately two-thirds of the LEU's value within 60 days of receipt; it pays for the remaining third after it resells or uses the natural uranium component.[18] Based on the initial price established under the contract, the estimated value of the LEU is $12 billion.

Existing trade restrictions limit the commercial sale in the United States of uranium imported from the Russian Federation (Russia).[19] USEC officials state that from a business standpoint, it would be imprudent to pay for the natural uranium component upon delivery without a resale market for the uranium. If the corporation did so, the uranium would appear as an impaired asset on its balance sheet, compromising its attempt to privatize. The Russians, however, want to be paid upon delivery for the natural uranium component and have threatened to pull out of the agreement unless a satisfactory solution can be found.

A number of possible solutions have been suggested. For example, the Senate legislative proposal, S. 755, introduces a framework to allow the introduction of Russian natural uranium into the U.S. market. Under this proposal, title to the natural uranium displaced under the HEU contract

[18]The Russian HEU was created from natural uranium that was originally enriched to bomb-grade material. Under the HEU agreement, this material is blended down to LEU, which is the product being sold under the contract. The price for the LEU includes charges for two components. First, there is a charge for the service of enrichment, which is measured in separative work units (SWU). SWU is the standard U.S. measure of enrichment services that represents the effort expended to separate uranium into a stream containing a higher concentration of the fissionable U-235 isotope and a stream containing a lower concentration of U-235. Second, there is a charge for the natural uranium (or feed) that is actually enriched.

[19]According to USEC officials, it is not efficient to use the uranium to overfeed the corporation's plants. Overfeeding introduces more natural uranium into the enrichment process to lower the energy costs—the more feed used, the less energy needed for enrichment. USEC officials also state that because of existing trade barriers overseas, it is unlikely that the uranium could be sold outside the United States.

would be given to the Russians. Russia could sell the uranium now, but only for delivery in the United States after 2002.

The administration made another suggestion. Recently, the U.S. Vice President met with the Russian Prime Minister to discuss the HEU agreement. Recognizing the importance of the agreement, both sides reaffirmed their commitment to the accord in a protocol signed at the meeting.[20] The protocol specifies that the United States will (1) take the necessary actions to allow the corporation to implement a tiered sales approach for the entry into the U.S. marketplace of the natural uranium component and (2) enact the legislation necessary to authorize the President to waive antidumping duties and other trade restrictions against LEU under the HEU contract.

The Nuclear Energy Institute (NEI), a trade group representing the nuclear industry, has also proposed a solution to the HEU problem. NEI proposes, in a "talking points" paper, that a government entity be named as the executive agent under the government-to-government agreement.[21] USEC would have the right of first refusal to purchase the value of the enrichment services, measured in separative work units (SWU), at cost. The uranium component would be sold to the highest bidder(s) at some agreed-upon future date. Deliveries would begin in 1998.

The Government-to-Government Agreement

The government-to-government agreement was signed on February 18, 1993.[22] One of the objectives of the agreement was the conversion, as soon as practicable, of the HEU resulting from the dismantlement of nuclear weapons in Russia into LEU for use as a commercial fuel. The agreement committed the parties, through their executive agents, to enter into an implementing contract establishing the terms of the purchase.

USEC has been designated as the executive agent for the United States. The agreement provides that the U.S. executive agent will use the LEU converted from HEU so as to minimize disruptions in the market and

[20]Protocol: In Furtherance of the Initial Implementing Contract for the Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Disposition of Highly Enriched Uranium Extracted from Nuclear Weapons (June 30, 1995). The protocol was signed by the president and chief executive officer of USEC and by the minister of the Russian Ministry of Atomic Energy.

[21]According to an NEI official, NEI's position is still evolving.

[22]Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Disposition of Highly Enriched Uranium Extracted from Nuclear Weapons (the agreement).

maximize the overall economic benefit for both parties. Tenex is the executive agent of the Ministry of the Russian Federation of Atomic Energy (Minatom); Minatom is the executive agent of the Russian Federation.[23]

The Implementing Contract

The initial implementing contract was signed by USEC and Tenex on January 14, 1994.[24] Based on the initial price for the LEU delivered under the contract, the total value of payments by the United States would be approximately $12 billion over 20 years, the life of the contract.[25] According to corporation officials, the enrichment services represented approximately two-thirds of the contract's total price (about $8 billion) and the feed about one-third (about $4 billion).

Under the implementing contract, the Russians are to be paid within 60 days of USEC's receiving a properly submitted invoice. The 60-day period generally will begin upon notification by the corporation's contracting officer's representative that the transfer of title to the LEU at St. Petersburg has been accomplished. However, payment for the feed component is not required until USEC has used or resold the corresponding natural uranium.[26] USEC may order up to the amount of LEU contained in 10 metric tons of HEU per year for the first 5 years. For the following 15 years, USEC may order the amount of LEU contained in 30 metric tons of HEU annually. Additional annual amounts may be ordered, subject to mutual agreement in annual reviews.

Although, the agreement contemplated that the initial delivery of converted HEU would be made by October 1993 if possible, implementation has been delayed. Three deliveries arrived just recently in Ohio. According to USEC officials, the delay was caused by technical problems encountered

[23]Either party has the right to change its executive agent upon 30 days' written notice to the other party.

[24]Initial Implementing Contract for the Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Disposition of Highly Enriched Uranium Extracted from Nuclear Weapons (the contract).

[25]The $12 billion figure assumes a constant price over the life of the contract. However, prices for future years may be adjusted as part of an annual review to account for U.S. inflation and changes in international market conditions. If an agreement is not reached during the annual review, the price for the previous year is to apply in the following year. If agreement is not reached at the next annual review, Tenex is not obligated to deliver LEU in the absence of an agreement on price.

[26]The implementing contract specifies an understanding that by the end of the contract's term, USEC will have purchased and paid for all quantities of the natural uranium component of the LEU delivered by Tenex during this period. Tenex has the option, at the annual review, to request the return of all or part of the natural uranium that is delivered in the LEU but was not ordered by the corporation.

by the Russians in meeting commercial nuclear fuel specifications; these problems have apparently been resolved. Attention is now being given to the concerns expressed by the Russians over their inability, under the implementing contract, to be paid for the natural uranium component upon delivery. As previously noted, current U.S. trade restrictions limit the commercial sale in the United States of Russian uranium.

Trade Restrictions

Under U.S. trade laws, the United States may impose and collect antidumping duties on products after administrative determinations have been made that foreign merchandise is being sold in the U.S. market at less than fair value and that such imports materially injure or threaten to materially injure a U.S. industry. Dumping is generally considered to be the sale of an exported product at a price lower than that charged for the same or a like product in the exporter's "home" market. U.S. antidumping laws seek to combat this practice, which is recognized as a form of unfair price discrimination that potentially harms the importing nation's competing industries. Antidumping duties are special customs duties imposed to offset the price difference between the U.S. price and the foreign market value of imported merchandise that is materially injuring U.S. industry.

In an antidumping investigation, the International Trade Administration (ITA), an agency within the Department of Commerce, is to determine whether sales are at "less than fair value" by calculating the difference between the foreign market value of the product and the U.S. price. Depending on the circumstances, the foreign market value is derived from sales in the exporting country, sales in a third country, or a constructed value based on a formula, set forth in the statute, that uses production costs and profit margins.

In a parallel process, the International Trade Commission (ITC), an independent, quasi-judicial federal agency with broad investigatory powers in matters of trade, decides whether a U.S. industry is materially injured or threatened with material injury by reason of criteria specified in 19 U.S.C. 1677. If ITA determines that dumping exists, it can impose duties on each importer, provided that ITC finds that a U.S. industry was materially injured or threatened with material injury.

In November 1991, an antidumping petition was filed by the Ad Hoc Committee of Domestic Uranium Producers and the Oil, Chemical, and Atomic Workers International Union. The petition alleged that uranium imports from the former Union of Soviet Socialist Republics (USSR) were being sold at less than fair value and were causing material injury to U.S. uranium producers.

ITC issued an affirmative preliminary injury determination on December 23, 1991. On June 3, 1992, ITA published its preliminary determination. It found that six republics of the newly independent states of the former USSR (Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan) had imported and sold uranium in the United States at less than fair value.[27] A preliminary duty of approximately 116 percent was imposed on imports of uranium from these republics into the United States.

On October 30, 1992, ITA published a notice suspending the antidumping investigation. The suspension was based on agreements by the governments of the six independent republics to restrict the volume of direct or indirect uranium exports to the United States in order to avoid suppressing or undercutting the price levels of U.S. domestic uranium. Under the suspension agreements, imports from the six republics were prohibited if the market price for uranium was below $13 per pound. At the same time, ITA also amended its preliminary determinations to include HEU within the scope of the investigation.[28]

The Russian Federation's notice of suspension provided that the agreement would

> "in no way prevent[] 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." (article IV(M.1)).

The notice stated that DOE's disposition of the HEU was in the public interest because, among other things,

[27]On December 25, 1991, the USSR dissolved, and the United States subsequently recognized the 12 newly formed independent states that emerged. ITC continued its investigation against the 12 independent states. On September 25, 1992, the U.S. Court of International Trade sustained the Department of Commerce's decision to continue the investigation against the independent states. 802 F. Supp. 469 (CIT 1992).

[28]The suspension agreements were published in the Federal Register on October 30, 1992. 57 Fed. Reg. 49220 (1992).

". . . (2) any utility-owned uranium products delivered pursuant to enrichment contracts affected by purchase of HEU or HEU products are not resold in the United States, either as natural uranium or as LEU produced in excess of the contractually-specified amount." (article IV(M.2)).

According to USEC officials, article IV(M) may prohibit the corporation from reselling the Russian natural uranium in the United States.[29]

ITA and the Government of the Russian Federation signed an amendment to the suspension agreement on March 11, 1994.[30] The amendment recognized that the agreement had not generated the anticipated increase in the price of U.S.-origin natural uranium that would have permitted renewed sales of Russian uranium under the price-tied quota mechanism; neither had the agreement increased sales of U.S.-origin natural uranium or employment in the U.S. uranium industry. The amendment incorporated a "matched sales" program, allowing certain annual specified quantities of lower-cost Russian imports to be paired with U.S.-origin natural uranium on a pound-for-pound basis. Quotas were also established on matched sales for enrichment services (SWU), extending through March 1996.

Questions have arisen about the interplay between the amended Russian suspension agreement, specifically article IV(M), and the HEU purchase contract. For example, in response to concerns raised under the North American Free Trade Agreement (NAFTA), chapter 20, the State Department has provided the Canadian government with assurances that "the natural uranium component imported under the [Russian HEU contract] is subject to the restrictions of Section IV.M of the suspension agreement." On the basis of these assurances, the Canadian government agreed to suspend its NAFTA consultations on uranium without prejudice to its right to reactivate them should circumstances warrant.

USEC's Role Under the HEU Agreement

Under the Energy Policy Act of 1992 (the act), the corporation is authorized to negotiate the purchase of all HEU made available by any state of the former Soviet Union under a government-to-government agreement or must assume the obligations of DOE under any contractual agreement

[29]USEC officials noted that differing interpretations of article IV(M) were possible. However, according to USEC, Commerce has interpreted the provision as prohibiting the corporation from reselling the Russian natural uranium in the United States.

[30]The amendment to the Russian suspension agreement was published in the Federal Register on April 1, 1994. 59 Fed. Reg. 15373 (1994). The amended suspension agreement is being appealed in the United States Court of International Trade by the Ad Hoc Committee of Domestic Uranium Producers and the Oil, Chemical, and Atomic Workers International Union. (Ct. No. 94-05-00268).

reached prior to July 1, 1993. The act also requires that the corporation seek to minimize the impact on domestic industries (including uranium mining) of the sale of LEU derived from HEU.[31]

The act established USEC to operate as a business enterprise on a profitable and efficient basis. At the same time, USEC was to continue to meet the objectives of ensuring the nation's common defense and security.[32] The act contemplated that after being restructured, the corporation would be in a position for transfer to private ownership. Thus, the act provided for the transmittal of a privatization plan by July 1, 1995, to the Congress and the President and allowed for the plan's implementation upon certain conditions.[33] Accordingly, in carrying out its role as the executive agent, USEC has been guided not only by the nonproliferation goals of the HEU agreement but also by the contract's impact on the corporation's eventual sale.[34]

USEC recognizes the economic value of being the executive agent under the HEU agreement. The global uranium enrichment industry has four major producers: USEC, Tenex, Eurodif (a French-Belgian-Spanish-Italian-Iranian consortium), and URENCO (a British-Dutch-German consortium). According to USEC, the market for enrichment services has become highly competitive because the nuclear power industry has been growing slowly while the world's uranium enrichment capacity has been expanding. The implementing contract enables USEC to control a large volume of material while, at the same time, giving Tenex the opportunity to take advantage of USEC's marketing ability. Without this opportunity, Tenex might be tempted

[31]The act also provided that uranium purchased for the purpose of overfeeding shall be of domestic origin and purchased from domestic producers to the extent permitted under the General Agreement on Tariffs and Trade (GATT) and the U.S.-Canada Free Trade Agreement. 42 U.S.C. 2296b. USEC officials note that this provision would not, in their view, apply to the Russian uranium.

[32]Under proposed legislation, the corporation's national security purpose would be repealed upon privatization. According to USEC officials, the Department of Energy is responsible for the national security aspects of the agreement, under a transparency agreement with Russia. DOE administers the transparency agreement to ensure that the LEU is derived from the dismantled weapons themselves.

[33]USEC may implement the privatization plan after a mandated congressional review period of at least 60 days has elapsed, the President has approved the plan, and the corporation has determined that privatization will meet certain statutory requirements.

[34]In the past, USEC officials have stated that the corporation should be compensated for what it termed the "national security premium," or the difference between its marginal price and the price it pays for enrichment services under the implementing contract. (USEC's marginal cost of production is well below the initial contract price for the enrichment services. This difference is reflected in the net present value of the corporation calculated by Morgan.) USEC officials strongly state that this is no longer their position and that they are not currently advocating that the government reimburse the corporation for the difference between its marginal cost and the contract price.

to compete directly with the corporation by developing its own marketing ability.

USEC officials believe that privatization will require no changes to the implementing contract. Nor does the corporation contemplate any changes in the government's oversight of the contract. USEC officials informed us that an interagency group—including representatives of the National Security Council and the Departments of State, Defense, and Energy (and other agencies as appropriate, such as the Department of Commerce or the Office of the U.S. Trade Representative)—oversees the contract. This group generally meets quarterly (more often when necessary) and receives periodic briefings by the corporation on its activities. According to USEC, the corporation would need to seek the approval of this group before it could enter into any new implementing contracts.[35] USEC does not envision the need to enter into any agreement specifying the agency relationship between itself and the government after the corporation is privatized.

Finding a Solution

Both the United States and Russia recognize the important nonproliferation goals of the HEU agreement. However, the Russians have recently raised strong concerns about not being paid upon delivery for the value of the feed contained in the LEU it delivers under the HEU contract. The corporation would like to be able to pay the Russians for the value of the feed component upon delivery. However, current trade restrictions limit the resale of Russian uranium in the U.S. market. These trade restrictions stem from the suspension agreement in the antidumping case against Russian uranium imports; assurances provided to Canada also play a role.

S. 755 proposes a legislative solution to the HEU controversy.[36] Under this bill, natural uranium displaced by LEU imported under the HEU agreement with the Russians would be deemed to be of Russian origin and title to such material would be given to the Russians. The uranium component could be sold immediately, but only for delivery after 2002 (i.e., as futures contracts). The Russians would be free to dispose of the uranium in one of

[35]The HEU agreement provides that "For any purchase, the Executive Agent shall negotiate terms (including price), which shall be subject to approval by the Parties." USEC officials contend that "purchase" refers to the entire 500 metric tons of HEU. Further contracts for additional amounts would require approval. According to USEC, subsequent modifications may be subject to approval. However, USEC officials note that changes in price are not contract modifications, since the price may be adjusted annually under the terms of the contract.

[36]The legislation passed by the House did not address the HEU problem.

four ways: (1) sell it for delivery in the United States as a matched sale, (2) sell/deliver it outside the United States as Russian uranium, (3) sell it to USEC for overfeed, or (4) sell it for delivery in the United States under futures contracts for delivery after 2002.[37]

For this provision to be workable, several issues would need to be addressed. The Russians would have to agree to it, since it would, more than likely, result in a modification of the implementing contract. Under the implementing contract, the Russians have the option of taking title to any uranium component that the corporation does not order. In addition, deliveries would have to be ensured to provide certainty in the futures market.

Moreover, according to an analysis performed by J.P. Morgan Securities, Inc. (Morgan), USEC's financial adviser, Russia could have difficulty receiving up-front cash payment from utilities for uranium that could not be delivered until 2002. Morgan suggests that prepayments could be structured with other entities under certain terms and conditions. Banks or other financial investors would be interested in providing cash up front in the form of debt financing for uranium inventory, but, according to Morgan, they would have to be compensated (in the form of higher returns) for the substantial risk inherent in any prepayment structure. Because of the extended period when uranium cannot be sold, these risks, as well as the "normal" discounting for the time value of money, could result in an estimated up-front cash payment that is significantly less than the current market price in any forward sales scenario.

In testimony on the bill, the Uranium Producers of America (UPA), a trade association of domestic uranium mining and milling companies, as well as NEI, which represents more than 350 companies and organizations worldwide involved in the nuclear industry, gave support to the framework suggested in S. 755. UPA stated that the bill represents "a balanced and sensible approach to address the various complex issues." According to NEI, the Senate legislation "eliminates the potential liability that USEC faced; it provides a means to allow the Russians to receive payments earlier than would otherwise be possible; it makes uranium available to utilities sooner than otherwise; and it supports the revitalization of the uranium mining industry."

[37]The Russians would be able to sell futures for as much as 10 million pounds of natural uranium per year between 2002 and 2011. After 2011, the limit would increase to 20 million pounds.

The administration has also given thought to the HEU controversy. The Vice President of the United States and the Prime Minister of Russia met recently to try to resolve some of the confusion surrounding the implementation of the HEU agreement. Their meeting led to the signing of a protocol under which the corporation agreed to seek administrative and legislative action that would allow the Russians to be paid for the natural uranium upon delivery.[38]

The protocol contemplates the use of a tiered sales approach for introducing the Russian uranium into the U.S. marketplace, coupled with the enactment of legislation in the United States necessary to authorize the President to waive antidumping duties and other trade restrictions against LEU under the HEU contract. According to USEC officials, the sales approach envisions four basic tiers. Under the first tier, USEC would attempt to sell the uranium in foreign countries. Under the second tier, the corporation could accept futures contracts for delivery of the uranium after 2002. USEC officials state that since these options are not currently prohibited under the current suspension agreement, no further administrative action would be needed. Under the third tier, U.S. miners could purchase the natural uranium at cost from the corporation. This option would necessitate administrative action to modify the suspension agreement. The fourth tier would also require a change to the suspension agreement. Under this tier, the corporation would be allowed to sell any remaining uranium that is not sold in the first three tiers but not below spot market prices. The option under the fourth tier could be executed only after efforts had been made for 9 months to execute sales under the first three tiers.

Aside from the administrative actions needed to implement the tiered sales approach, legislation would be required, corporation officials say, to ensure the continued operation of the Russian HEU contract. For example, USEC noted that if the suspension agreement fails (for reasons that may have nothing to do with the HEU agreement), the President must be able to waive the antidumping duties that would apply to Russian natural uranium and SWU.

The corporation indicated that the tiered sales approach represents a compromise that would help the Russians by providing a market

[38]Under the protocol, USEC also agreed to provide the Russians with an advance payment of $100 million. On January 14, 1994, Ukraine, Russia, and the United States agreed to the Trilateral Statement allowing the removal of all nuclear warheads from Ukraine. Under the statement, Ukraine is transferring all nuclear weapons to Russia in return for fair compensation in the form of nuclear reactor fuel. This $100 million advance payment by USEC will supplement an earlier $60 million advance payment made by USEC in 1994; both payments will facilitate the delivery of nuclear fuel to Ukraine.

mechanism for the sale of the natural uranium component and, therefore, the payment upon delivery for the natural uranium component contained in the LEU. At the same time, according to USEC, it is responsive to domestic uranium mining companies' concerns that prices not be suppressed, and it is responsive to the maximum extent possible, in light of the national security interests served by implementing the Russian HEU contract, to concerns expressed by Canada.

USEC officials informed us that the Department of Commerce is currently considering the administrative action necessary to implement the tiered sales approach. According to USEC officials, ITA can modify the suspension agreement if doing so is in the public interest. The corporation has also drafted legislation for the administration to consider. The drafted legislation is currently being reviewed by the appropriate federal agencies.

In a recent talking points paper, NEI took issue with the administration's four-tiered approach from both a national security and a commercial perspective. NEI stated that the commercial interests of USEC are not identical to the national security objectives of the United States. Moreover, NEI suggested that the four-tiered approach vests undue market power in the corporation.

According to NEI, nonproliferation and national security are government responsibilities and therefore a U.S. government entity, not a privatized USEC, should be the executive agent under the government-to-government agreement with Russia. NEI has proposed that a U.S. government executive agent negotiate the purchase of the Russian LEU at a price tied by a market indicator to a market price. Under this approach, the U.S. executive agent would pay the Russians for both components of the LEU (the natural uranium and the SWU) upon delivery to the United States. Payment for the LEU would be made from the "exit dividend" left to the United States after USEC was privatized.[39] This "exit dividend" would be placed in a revolving fund set up to cover the HEU agreement. Revenues from the government's sales of natural uranium and SWU would be funneled back into the fund. USEC would have the right of first refusal to purchase the SWU component at cost. The uranium component would be sold to the highest bidder(s) at some agreed-upon future date, much as it would be under the S. 755 futures approach. However, NEI suggests that deliveries begin in 1998.

[39]USEC's privatization plan projects that the government will retain $600 million to $800 million of the approximately $1.2 billion USEC expects will be in its Treasury account at the time of privatization. USEC's plan refers to this amount as an "exit dividend."

During the markup of S. 755, the Committee will review possible strategies for resolving the HEU controversy. The corporation anticipates that the administration's proposal may be considered at that time, along with other possible solutions. USEC plans on working closely with the Congress in reaching a final solution.

The Value of USEC

The act set forth a process for privatizing USEC. After the period for congressional review of a privatization plan expires and the President approves the plan, USEC's sale will proceed as described in the plan if certain legislative requirements are met. In developing the plan, USEC hired Morgan as its financial adviser to determine the value of the corporation if it were privatized.

According to an April 1995 presentation to USEC's board of directors, Morgan employed three valuation methodologies to estimate the value of USEC as a private corporation and forecast the proceeds resulting from a public sale: dividend yield,[40] comparable price/earnings multiples,[41] and the net present value of projected cash flows. Morgan officials said that public equity market investors would probably analyze dividend yield or comparable price/earnings multiples to estimate USEC's value while interested merger and acquisition buyers would probably analyze the net present value of cash flows.

After considering the results of these analyses, Morgan used its judgment of investors' perceptions and management's credibility to project that the sale price of USEC's common stock in an initial public offering would range from $1.5 billion to $1.8 billion (less transaction fees of about $100 million).[42] Figure II.1 shows the ranges estimated for the various analyses Morgan performed in April 1995 to forecast the sale proceeds and demonstrates that no single analysis led to Morgan's estimate of the proceeds. We also note that Morgan's estimate of the gross proceeds does not appear to give much weight to the net present value computations for the scenario that assumes the building of a plant using the atomic vapor laser isotope separation (AVLIS) process.

Morgan officials said that, under their valuation methodologies, they used the years 1996 through 1999 to estimate the market value of a privatized USEC using the comparable price/earnings multiples. However, during these years, the costs of developing the AVLIS technology reduce net income, lowering the corporation's market value below the value that

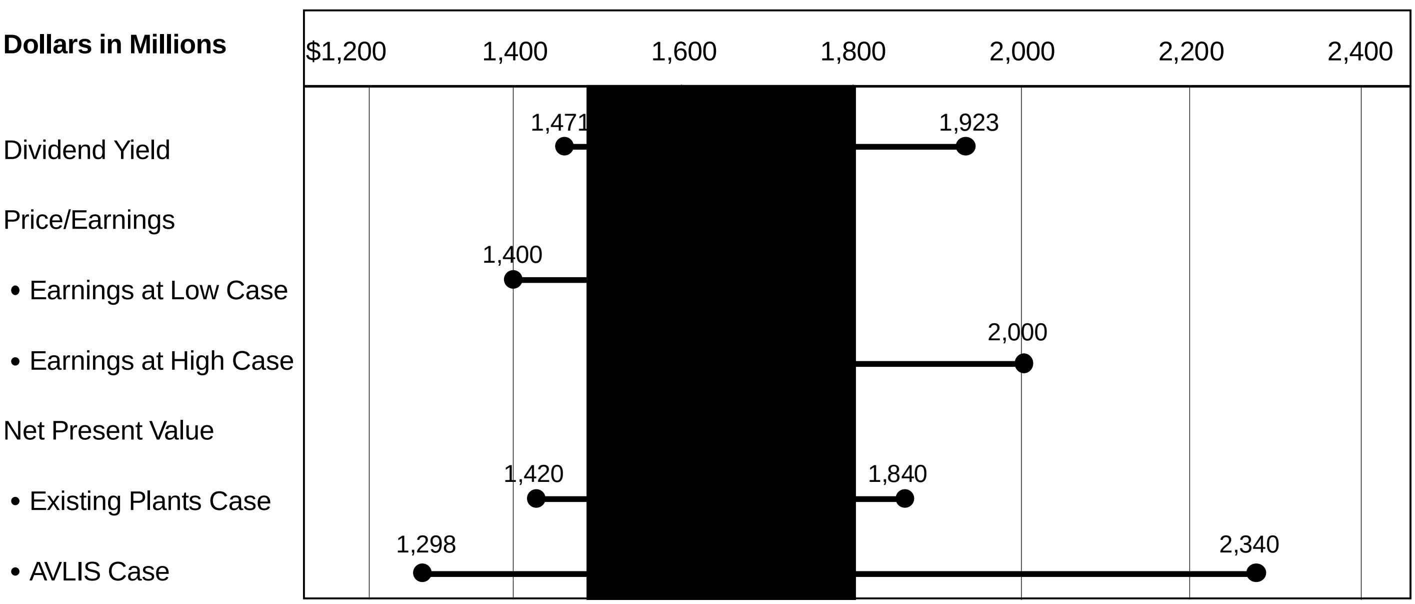
[40]Dividend yield is the percentage of the purchase price returned through dividends each year. Dividends are the portion of a company's profits paid out to the company's shareholders.

[41]Comparable price/earnings multiples are calculated by taking the market price per share for stocks of similar businesses and dividing that price by the earnings per share. Because USEC would be the only publicly traded uranium enrichment company in the world, no true comparables exist. However, Morgan identified several peer groups that it judged to have similar investment profiles.

[42]The actual terms of a merger and/or acquisition transaction, including the price, are negotiated and buyer-specific. As a result, Morgan believes it is not possible at this early date to accurately estimate the gross proceeds resulting from such a transaction.

would be expected without these costs. In projections for later years, Morgan shows improvements in net income resulting from AVLIS benefits. However, these improvements do not increase the expected market value because they occur after 1999. Nevertheless, according to Morgan and USEC officials, AVLIS is an important part of the USEC investment "story" that will be told to public equity investors. As a new technology, AVLIS offers an important potential source of earnings growth, but, in Morgan's judgment, its promise should not be emphasized too strongly with investors because its benefits are, as yet, unproven. Ultimately, the value of a privatized USEC will be determined by investors' own assessment of the investment story that they hear.

Figure II.1: Morgan's Estimate of the Gross Proceeds From an Initial Public Offering of USEC's Stock



Source: GAO's presentation of estimates developed by J.P. Morgan Securities, Inc. Proprietary data have been removed.

Each of Morgan's valuation methodologies is based on an analysis of USEC's future earnings. The first two methods—dividend yield and price/earnings multiples—are usually used when the "inside" information needed to calculate a company's long-range future cash flows is not known and an alternative valuation method is sought. However, the act requires us to focus on the third of these methodologies by evaluating the extent to which the revenues gained by the federal government under the privatization plan would represent at least the net present value of USEC.

Because Morgan had already generated cash flow projections and net present value analyses for the private corporation scenario, we did not independently project cash flows for a privatized corporation. Instead, we (1) evaluated Morgan's model for a private USEC and (2) calculated a net present value for a government corporation's cash flows. We adjusted or updated the analysis that Morgan used in the privatization plan to reflect our view of the activities of a government corporation. Because we relied on the analysis used in the plan's valuation, which is subject to significant business, economic, and competitive uncertainties, our results are subject to the same uncertainties.

We also note that at the request of the Department of the Treasury, USEC hired Ernst & Young, LLP, a valuation consultant, to conduct an independent review of Morgan's valuation of USEC, including the results of the net present value analyses. Ernst & Young, in a June 9, 1995, briefing to USEC stated that the valuation results appear reasonable, given current market conditions and the passage of pending legislation assumed under Morgan's analysis. Ernst & Young also stated that it did not find any cause to refute the range of values for the gross proceeds for the sale of USEC.

Needed Revisions to Morgan's Net Present Value Analysis for a Private USEC

At this time, there is no specific transaction (i.e. stock sale, merger, or acquisition) with which to compare Morgan's estimate of the corporation's net present value; therefore, we focused our review on the plan's estimated sale price. In an April 1995 report, Morgan calculated a range of net present values for USEC under two scenarios—one that used only the existing plants and the other that assumed an AVLIS plant would be built. The net present value analyses used discount rates ranging from 10.4 to 20.0 percent, depending on Morgan's judgment of which rate best reflected private-sector investors' concerns about the risk and rate of return for each scenario. Morgan included all of the money deposited in USEC's Treasury account in its net present value analyses of USEC. Then it subtracted the amount ($484 million) from USEC's Treasury account that it projected would be left with the government. Finally, it reduced the resulting net present value ranges by 10 to 15 percent to reflect investors' uncertainty about investing in a new, unproven stock, such as USEC's.

(Morgan and Ernst & Young told us that such an "initial public offering discount" is commonly offered to stimulate the purchase of a new stock).

We reviewed Morgan's net present value model to understand the sources of the data, the internal flow of the data through the model, the key estimates and assumptions applied, and the valuation conclusions. We also analyzed the integrity of the model using nonrandom sampling to ensure that the calculations and numerical results were internally consistent, given the underlying assumptions and estimates, and independently verified a number of key calculations used in the model to determine whether the model was performing the calculations correctly.

Generally, Morgan's model was internally consistent and worked as purported. Furthermore, except as noted below, the model's assumptions about revenues and costs and the enrichment market were generally consistent with the information and data we were able to collect. Almost all of the data, including key revenue and cost assumptions used in the model, were obtained directly from USEC or derived by Morgan after consulting with USEC.

However, we believe that the net present value analysis needs revision because it (1) assumes that the current price of the Russian enriched uranium to be purchased by USEC under the long-term contract will not change, (2) may include more working capital than USEC will actually need, and (3) does not reflect, among other things, current market conditions and the administration's current estimate of the amount of cash USEC will take with it if it is privatized. (For a complete list of the adjustments and updates we believed should be made to Morgan's analysis, see app. III.) Also, Morgan's analysis does not consider the value of USEC's excess inventory, which we estimate could be worth about $303 million.

Continued Payment of Current Price for Russian Uranium Not Certain

Morgan assumed that the price of Russian enriched uranium will remain constant; however, the price may change. Under the terms of its contract with Russia, USEC has agreed to purchase the low enriched uranium derived from 500 metric tons of highly enriched uranium over the next 20 years. The initial price set under the contract can be reviewed and adjusted every year to reflect U.S. inflation and/or changes in the international uranium market. It is likely that a for-profit corporation, such as a privatized USEC, would try to lower the price, since the initial contract price for enrichment services exceeds USEC's current production costs. Moreover, USEC's production costs may drop significantly if an AVLIS facility is built. Conversely, the Russians may attempt to raise the price. For these reasons, we believe the price is subject to change.

Allowance for Working Capital Too Large

Morgan assumed that $200 million in cash would be held at all times for working capital requirements and therefore excluded this amount from its estimate of USEC's net present value. Our conversations with a DOE official who managed the program for DOE and our analysis of Morgan's determination of USEC's working capital requirements suggest that Morgan may have exceeded the actual requirements by $50 million or more. If so, this "excess" cash would increase USEC's net present value by the same amount.

Recent Changes Not Reflected

Some recent changes have overtaken Morgan's April 1995 analysis. Morgan estimated the net present value and expected gross proceeds from privatizing USEC on the basis of then-current market conditions. So that decisionmakers can have the best information available, changes in market conditions and other circumstances should be reflected in the analysis before the privatization date. For example, interest rates have declined by about 1 percent since Morgan determined its discount rate. Using Morgan's formula for determining the appropriate private-sector discount rate, we determined that this decline should lower the average discount rate used in Morgan's analysis of the existing plants case by about the same percentage and thereby increase the net present value computation.

In addition, legislative and administrative actions already and soon to be taken could significantly affect the validity of Morgan's analysis. For example, Morgan's analysis assumes a royalty payment rate that was not reflected in the recent DOE—USEC agreement transferring AVLIS to USEC. The difference increases the net present value of USEC's cash flows.

Finally, Morgan's April 1995 analysis assumes that USEC will take with it about $725 million in federal funds from its Treasury account when it is privatized. However, the plan assumes that the corporation will take only between $400 million and $600 million. The actual amount taken will be determined by Treasury and other administration officials, who will try to balance the need to create confidence among potential investors and the need to maximize the return to the government. Morgan's evaluation should reflect the actual cash amount so that officials deciding on the final sale will have an up-to-date analysis of the present value of USEC's cash flows. We note that Ernst & Young, in its review of Morgan's valuation analyses, expressed its view that the lower end of this range ($400 million) more adequately balances the government's need to protect the taxpayers' interests while still maintaining the corporation's viability.

Excess Inventory Not Considered

Morgan's analysis does not consider excess inventory, which we estimate is worth about $303 million. In our view, this excess inventory could be sold to generate additional profit that is not considered in Morgan's analysis. According to USEC officials, as of June 1, 1995, USEC owned about 11,000 metric tons of natural uranium worth about $403 million at current market prices. In addition, USEC says that it owns enriched uranium containing enrichment services worth about $609 million at current market prices. While some of the natural and enriched uranium is needed during normal operations in the production cycle and some may be needed as a "buffer" to ensure against production delays, we estimate conservatively, on the basis of our review of USEC's inventory records and past DOE records and our interviews with DOE officials, that at least $122 million of the natural uranium and about $181 million of the enriched uranium—or $303 million of inventory—is excess.[43] Furthermore, DOE plans to transfer additional uranium inventory to the corporation before it is privatized; this inventory could be worth up to $400 million.[44]

However, valuation experts told us that the presence or absence of excess inventory, within reason, would not significantly affect the market price. Therefore, the market may not compensate the government for all of this inventory if it becomes part of the privatization transaction. We believe that USEC's final valuation should include the net present value of the corporation's excess inventory. Alternatively, as part of the sales agreement, the government could retain an interest in future sales of the excess inventory.

[43]We believe that the fair market value of the excess inventory can be approximated by current market prices, although a one-time sale of the inventory may depress current market prices.

[44]Morgan's analysis assumed that this inventory would be worth about $100 million.

Calculating the Net Present Value of Cash Flows for USEC as a Government Corporation

Because the act did not state whether we should calculate the net present value of the cash flows of a private or a government corporation, to further aid the Congress as it considers the privatization plan, we developed a model to calculate the net present value of the corporation's estimated cash flows if USEC remains in the government. This model required a different set of assumptions from Morgan's model and resulted in a different net present value estimate. For example, we assumed that a government corporation would probably not build a plant using the AVLIS technology, whereas a private corporation might do so. In addition, we incorporated a lower discount rate[45] (the government's cost of borrowing) than Morgan to calculate the net present value of a government corporation's estimated cash flows. This discount rate is inversely related to the net present value—as the discount rate is lowered, the net present value increases.

To determine the net present value of USEC's cash flows if USEC remains a wholly owned government corporation, we adjusted Morgan's cash flow projections to reflect (1) the fact that a government corporation would not pay future federal, state, and local income taxes and (2) the likelihood that a government corporation would not take on new technology investments, such as constructing new uranium enrichment facilities using the AVLIS technology or invest in related businesses. We then discounted the cash flows projected for a government corporation using, as a base case, an average government borrowing rate of 6.6 percent, rather than a rate appropriate for a private corporation. This methodology is consistent with the methodology we used in our past evaluations of federal asset sale proposals.[46]

Since estimates of a government corporation's future cash flows are not certain, our model contains a range of projections to account for pessimistic and optimistic assumptions. Computing the present value of the government corporation's cash flows results in a net present value of these cash flows in a range of $2.8 billion to $3.5 billion. (See app. III for a

[45]The choice of a discount rate is a key determinant of the net present value of USEC. The discount rate adjusts future cash flows to their value today by recognizing that money has earning power over time. The discount rates used by the private sector and the government can differ substantially. In the private sector, discount rates tend to be high because investors must be compensated for bearing the risk of undertaking an activity. Alternatively, the government can finance these same activities at the government borrowing rate, which is generally much lower than private-sector borrowing rates. The government borrowing rate is relatively low because the government guarantees the repayment of its debt even if specific activities prove unsuccessful. Thus, the government, and by implication the taxpayers, bears the risk of the activity without being fully compensated for bearing that risk.

[46]See Lessons Learned About Evaluation of Federal Asset Sale Proposals (GAO/T-RCED-89-70, Sept. 26, 1989) for a more detailed discussion.

discussion of the assumptions used to generate the range of possible cash flows for a government corporation and a complete list of the adjustments made to Morgan's model to reflect the cash flows of a government corporation.)

This range represents our estimate of the present value of the future cash flows that the government would have available to reduce borrowing to meet federal expenditures. However, it does not represent an estimate of USEC's market value because it (1) is calculated using a discount rate that is based on the government's low cost of borrowing rather than a private corporation's rate of return, (2) assumes that USEC would operate with less flexibility as a government corporation than it would in the private sector, and (3) does not consider other kinds of market analyses that typically are used to value a private corporation.

Because the government's cost of borrowing is usually lower than the private sector's, the use of a discount rate based on the government's cost of borrowing will generally yield a greater net present value of future returns from an asset than would the use of a higher private-sector rate. Furthermore, the range of values we developed for a government corporation using a discount rate based on the government's cost of borrowing does not recognize the business risk to a government corporation of some unknown significant adverse development on the corporation's operations. Consequently, we recognize that our analysis of a government corporation's value could imply that government ownership is preferable to private ownership even when government ownership produces no real gains in efficiency. Therefore, for illustrative purposes only, as shown in table II.1, we arbitrarily selected potential private-sector discount rates ranging from 17 to 7 percent and calculated the corresponding net present values using our base government corporation scenario.

Table II.1: Effect of Using Private-Sector Discount Rates to Calculate the Net Present Value of a Government Corporation

Dollars in billions

Discount rate (percent)	Net present value
17	$2.0
15	2.2
13	2.4
11	2.6
9	2.9
7	3.3

Finally, we note that any estimate of earnings from uranium enrichment operations, whether performed by a wholly owned government corporation or a private corporation, is subject to major uncertainties because of the inherent difficulty in determining the amount and selling price of uranium enrichment services. Important and unforeseen market developments, such as a change in existing trade restrictions, could cause significant changes in the estimates. Also, if USEC is sold, the final value of USEC will be determined by the merger and/or acquisition purchaser(s) or the initial public stock offering market at the time of privatization.

Calculating USEC's Net Present Value

The Energy Policy Act of 1992 (the act) requires us to evaluate the extent to which the revenues gained by the federal government under the privatization plan would represent at least the net present value of USEC. However, the act does not define whether the net present value should be calculated for USEC as a wholly owned government corporation or as a private corporation. In other words, the act does not state whether the net present value is intended to be used to determine whether the sale price of the corporation (1) is "fair" in terms of the net present value of a private corporation's expected future cash flows or (2) is at least equal to the net present value of the cash flows expected to be generated by the corporation if it remains in the government. Since each scenario—private or government—would require a different set of assumptions that would result in a different net present value, we evaluated Morgan's net present value analysis for USEC's cash flows under a private scenario and developed a model to calculate the net present value for a government scenario. We note that a net present value analysis is only one method used to determine an estimated sale price. Therefore, these values should not be used to determine whether or not USEC should be sold.

Adjustments to Morgan's Net Present Value Analysis of Cash Flows for USEC as a Private Corporation

In April 1995, Morgan updated its 1994 valuation of USEC and provided the results to USEC's board of directors. Because Morgan—USEC's financial adviser—had already generated cash flow projections and net present value analyses of these cash flows for USEC as a private corporation, we used Morgan's April estimate and asked Morgan to rerun its model with our adjustments. We did not independently value USEC as a private corporation. Our adjustments revised Morgan's analysis to account for current market conditions and different assumptions about costs, assets, and income.

To account for current market conditions, we asked Morgan

- to recalculate the base discount rate to reflect the interest rate on June 30, 1995—the day USEC issued its privatization plan and gave notice of its intent to implement the plan.[47]

[47]Morgan calculated a range of net present values for USEC under two scenarios—one that used only the existing plants and the other that assumed an AVLIS plant would be built. To determine the discount rate for the existing plants case, Morgan adjusted the 30-year Treasury bond rate to reflect the risk associated with an investment in the stock market in general and the specific risk associated with USEC itself. Morgan also determined a discount rate for the AVLIS case. However, since this rate was based primarily on judgment and not on market interest rates, we did not adjust it.

We believe that Morgan's analysis of the net present value of USEC's cash flows should be adjusted to reflect (1) possible changes in the price for Russian enriched uranium, (2) the current estimate of how much cash USEC will retain after privatization, (3) a lower allowance for working capital, and (4) the current estimate of how much money is needed to dispose of depleted uranium.

To account for these items we

- adjusted Morgan's assumption of the price to be paid under the Russian purchase agreement to reflect possible changes in the price;
- lowered Morgan's assumption of how much cash USEC will retain after privatization from $725 million to $500 million to better reflect the amount stated in USEC's privatization plan, understanding that a further adjustment should be made to reflect the actual amount indicated by an up-to-date analysis of USEC's cash flows before a final sale decision is made (since, according to Morgan officials, financial markets tend to value excess cash left with a company at less than 100 cents on the dollar);
- reduced Morgan's assumption of how much working capital is needed to operate the business from $200 million to $150 million (the amount of money needed to pay future bills); and
- used USEC's estimate of the actual cost to dispose of depleted uranium.

Morgan's analysis of the net present value of USEC's cash flows did not reflect (1) the effect of a subsequent agreement between DOE and USEC concerning the use of AVLIS technology and (2) the additional interest income earned on cash holdings.

To account for income not included in Morgan's analysis, we

- increased the revenues generated by AVLIS enrichment operations to reflect the agreement between DOE and USEC on the transfer and funding of AVLIS technology and
- included revenue from interest income after subtracting interest expenses earned on cash holdings.

Determination of the Net Present Value of Cash Flows for USEC as a Government Corporation

To estimate the net present value of USEC as a government corporation, we adjusted Morgan's model, as noted, to reflect assumptions and activities appropriate for a government corporation. Because estimates of a government corporation's future cash flows are not certain, our model for a government corporation contains a range of projections to account for pessimistic and optimistic assumptions.[48] We adjusted Morgan's analysis to account for (1) current market conditions, (2) costs not incurred by a government corporation, and (3) more conservative investment decisions. We also adjusted Morgan's analysis to account for reductions in operating efficiency and any adjustments made to the private corporation that would apply to a government corporation.

To account for current market conditions, the government corporation model

- used the government's cost of borrowing on 30-year government bonds on June 30, 1995—the day USEC issued its privatization plan and gave notice of its intent to implement the plan—as our base discount rate, which we then adjusted plus and minus 0.5 percent for two different scenarios.

To account for costs not related to a government corporation, the government corporation model

- subtracted privatization costs included in Morgan's analysis for (1) expanded insurance coverage and other industry-related costs, (2) USEC headquarters' labor and benefits, and (3) labor and consultant fees, because these costs would not be incurred by a government corporation and
- subtracted costs included in Morgan's analysis for future federal, state, and local income taxes, since the government corporation would not pay these amounts.[49]

To account for less operating flexibility, the government corporation model

[48]Optimistic and pessimistic scenarios are intended to provide a range of possible outcomes based on reasonable assumptions about future operations. They are not intended to show the very best case and the very worse case. For example, the optimistic scenario assumes, among other things, that USEC as a government corporation would operate no more efficiently than USEC as a private corporation. The pessimistic scenario assumes, among other things, that USEC would operate less efficiently—reduce new sales by 10 percent and increase power costs by the amount USEC's management said would result for the government corporation.

[49]Beginning in fiscal year 1998, the act provides for the corporation to make payments in lieu of any and all state and local taxes on the real and personal property of the corporation. Therefore, estimates of these costs of about $50,000 per year were added back in.

- assumed that a government corporation would not take on risky investments, such as constructing new uranium enrichment facilities using the AVLIS technology or investing in related businesses.

To account for reductions in operating efficiency, the government corporation model

- reduced revenues by 10 percent for all new sales from 1996 to 2008 and further reduced all sales after 2008 by 10 percent;[50]
- increased the costs associated with power—USEC's largest operating cost—by the amount specified by USEC's management, since a government corporation would have less flexibility to implement innovative strategies for saving power costs; and
- decreased the operating margin by 5 percent after 2008 to reflect possible increases in operating expenses related to maintaining the enrichment facilities.

To account for adjustments made to the private corporation model that would also be applicable to a government corporation, the government corporation model

- used USEC's estimate of the actual cost to dispose of depleted uranium.

In summary, after we made these adjustments, our calculation of the net present value of the cash flows for USEC as a government corporation ranged between $2.8 billion and $3.5 billion. Since estimates of a government corporation's future cash flows are not certain, we developed two cash flow projections to account for differences in possible outcomes. One projection relied on optimistic assumptions, the other on pessimistic assumptions. For the optimistic case, we (1) assumed that USEC as a government corporation would operate no better than USEC as a private corporation under Morgan's existing plants case, (2) made the adjustments that would apply to a government corporation, and (3) used a lower discount rate (6.1 percent) to adjust future cash flows. For the pessimistic case, we adjusted the cash flows generated for a government corporation to account for reductions in operating efficiency—lower revenues and increased power costs—and used a higher discount rate (7.1 percent) to adjust future cash flows.

[50]The 10-percent reductions are based on judgment, including an analytical review of information provided by USEC's managers supporting what they believe to be a reasonable reduction in sales revenue for USEC as a government corporation.

We did not do an independent valuation of USEC either as a private corporation or as a government entity. Rather, we adjusted Morgan's estimates for the items in Morgan's net present value analysis that we identified as (1) needing update or correction or (2) not applying to USEC as a government corporation. Because we relied on Morgan's valuation, which is subject to significant business, financial market, economic, and competitive uncertainties, our results are subject to the same uncertainties.

The Government's Costs and Ongoing Obligations Associated With the Uranium Enrichment Program

Generally, the government is responsible for all costs incurred by the uranium enrichment program before July 1, 1993, when USEC began operating. We estimate that these costs could total $18 billion or more depending on many factors, including how, when, and to what degree the enrichment plants will be cleaned up. Between July 1993 and early next year, when USEC is expected to be sold to the private sector, we estimate that the corporation will have created liabilities resulting from its operations that could obligate the government to pay anywhere between $258 million and $540 million. Some pending legislation would have the government retain all or most of these liabilities when USEC is privatized.

The government's costs and ongoing obligations associated with the uranium enrichment program can be categorized as

- cleanup costs,
- nuclear and occupational safety compliance costs,
- pension and postretirement health and life insurance benefits,
- power contract liabilities,
- AVLIS technology development costs, and
- other potential liabilities.

Cleanup Costs

In accordance with the Energy Policy Act of 1992 and other agreements, such as the lease between DOE and USEC, DOE is responsible for decontaminating and decommissioning the enrichment plants. According to a 1991 DOE contractor's report, decontamination and decommissioning activities at the enrichment plants could cost $17.4 billion in 1994 dollars.[51] Completing needed remedial actions at the plants by 2010 could cost another $3.0 billion, according to a DOE contractor's draft report dated September 1991. DOE also retains responsibility for substantial costs associated with the treatment and disposal of all low-level radioactive, mixed, and hazardous wastes generated before July 1, 1993, and for the wastes that it generates at the plants. Under the lease, DOE is also responsible for reimbursing the corporation for the costs related to claims, orders, judgments, and other decisions involving certain wastes, such as

[51]Some cleanup costs will be paid from a decontamination and decommissioning fund established by the act to address facility contamination. The fund is supported by required payments from domestic utilities and government appropriations. As of September 30, 1994, the fund had a balance of about $304 million in cash and investments. However, an audit that assessed the financial condition of the fund as of September 30, 1994, found that the expected cleanup liability far exceeds the expected payments from utilities and authorized appropriations. According to the audit, the shortfall in the fund could be made worse by present and future spending on remedial actions and other waste disposal activities that are not recognized in DOE's decontamination and decommissioning liability. Furthermore, a recent court of claims decision has the potential to affect utilities' annual payments into the fund.

polychlorinated biphenyls and asbestos, at the plants, regardless of the time at which the existence or presence of the materials becomes known to the corporation. (DOE is not, however, responsible for any such material introduced by USEC.) DOE estimates that these costs could be as high as $230.9 million for the waste at its Portsmouth, Ohio, plant and $290 million for the waste at its Paducah, Kentucky, plant. In addition, DOE is just starting to study final strategies for disposing of the depleted uranium it generated through enrichment activities before July 1, 1993. DOE now estimates, on the basis of a 1991 contractor's study, that the disposal of this depleted uranium could cost $1.3 billion in 1994 dollars, or $2.32 per kilogram.

H.R. 1215 would make the government liable for the costs of disposing of the depleted uranium generated by USEC between the dates of transition (July 1, 1993) and privatization. Likewise, the administration's bill specifies that the Department is directly liable for the costs of disposing of the depleted uranium generated by the government corporation during this period. According to DOE, depleted uranium is being generated at a rate of 20,000 metric tons a year. On the basis of a projected inventory, USEC estimates that its accrued liability for disposing of depleted uranium, from the transition date to December 31, 1995, would be approximately $258 million. The House bill would also transfer to the government responsibility for treating, storing, and disposing of the low-level radioactive, mixed, and hazardous wastes generated by USEC through enrichment operations before privatization. Responsibility for these wastes under the administration's bill would be addressed by the proposed memorandum of agreement. For this responsibility, USEC projects a liability of $14 million from July 1, 1993, through December 31, 1995.

H.R. 1215 would require DOE, after USEC's privatization, to accept for storage (to the extent that treatment and disposal technologies or capacities do not exist), treatment, and disposal, low-level radioactive and mixed wastes generated by the corporation through its uranium enrichment operations. Moreover, under the House bill, DOE is deemed the generator of any waste it takes from the corporation and must obtain all required permits. The administration's proposal would require DOE to accept for disposal low-level radioactive waste (including depleted uranium if it is later determined to be low-level radioactive waste) generated by the corporation through enrichment operations after privatization. Effective on the date of enactment, S. 755 would require DOE to accept low-level radioactive waste for treatment and disposal from USEC and other operators of uranium enrichment facilities licensed by the Nuclear Regulatory Commission (NRC).

H.R. 1215 and the administration's proposal would require USEC to reimburse DOE in an amount equal to the Department's costs in dealing with these wastes. The administration's proposal specifies that this responsibility includes a pro rata share of any capital costs. S. 755 would allow DOE to recoup only the additional costs that the Department incurs in dealing with USEC's waste. All three bills cap DOE's recovery at the commercial rate.[52] In addition, all three bills allow USEC to seek commercial disposal options. USEC officials informed us that they have contracted for the private commercial disposal of all of the corporation's low-level waste and most of its mixed waste.

Nuclear, DOE, and Occupational Safety Compliance Costs

The USEC-DOE lease agreement requires DOE to reimburse USEC for work that would bring the two operating enrichment plants into initial compliance with NRC's standards and meet DOE's internal safety standards except to the extent that such work is required by conditions attributable to USEC's operations. USEC currently estimates that the costs of meeting the requirements for obtaining an initial NRC certification and of meeting DOE's internal safety standards could total about $80 million. However, a March 1995 DOE cost analysis, which also considers NRC requirements that may be imposed during the approval process, projects potential compliance costs of over $100 million, and DOE advised us in August 1995 that these costs may exceed $120 million. In addition, the lease and a clarifying December 1994 memorandum of agreement also require DOE to pay USEC $35 million to satisfy existing Occupational Safety and Health Administration (OSHA) obligations and to bring the two plants into compliance with OSHA safety requirements in effect on and after July 1, 1993.

To date, DOE has paid about $6 million (of the $35 million) to comply with OSHA requirements. DOE will pay for a major portion of the needed nuclear safety compliance upgrades and related work by transferring to USEC low enriched uranium obtained from blending down about 13 metric tons of excess highly enriched uranium at the Portsmouth plant, according to a December 1994 memorandum of agreement.

[52]Under the administration's bill, there is no commercial cap on the Department's recovery of costs for the disposal of the corporation's depleted uranium (to the extent that it is later determined to be low-level radioactive waste).

Pension and Postretirement Health and Life Insurance Benefits for Contractor Personnel

Under the terms of the act and lease, DOE retains responsibility for the pension and postretirement health and life insurance benefits for contractor employees retired before July 1, 1993. It also retains responsibility for a share of these benefits for active USEC contractor employees; this share is based on the years of service accumulated by the employees before July 1993. Actuarial studies completed in 1993 and 1994 for employees at the two plants indicate that DOE's pension liability for these employees is an estimated $403.8 million. A 1993 actuarial study places DOE's accrued liability for postretirement health and life insurance benefits for contractor employees at the two plants as of June 30, 1993, at $210.1 million. DOE officials told us that DOE has funded $403.8 million of these potential liabilities.

Under H.R. 1215, the government would have to pay the pension and postretirement benefit liabilities incurred between July 1, 1993, and the date of privatization for contractor employees at the two plants. USEC's liability for these earned benefits, projected from the corporation's assessment of actuarial studies, is $41 million. Of these costs, $26 million is allocated to pension benefits and $15 million is allocated to postretirement health benefits. Also, USEC notes that under H.R. 1215, DOE could assume $3 million in severance costs for contractor employees; this estimate is based on the employees' vested years of service between July 1, 1993, and December 31, 1995. The administration's proposal would also extend DOE's liability from July 1, 1993, to the date of privatization. However, according to USEC officials, the liabilities for these pension and postretirement health and life insurance benefits are likely to remain with the corporation under a memorandum of agreement, referenced under the administration's bill, that is to be entered into before privatization. USEC also said that it plans to make a payment to DOE to satisfy the $26 million pension liability.

Power Contract Liabilities

Under the act, DOE remains responsible for managing agreements with two companies that provide electricity to the enrichment facilities. Under the DOE-USEC lease agreement, the total cost of the power used at the plants, including any power agreement termination costs, is passed, together with a DOE administrative cost, to USEC starting July 1, 1993. DOE, however, is responsible for its accrued share (i.e., for the period before July 1, 1993) of the postretirement health and life insurance benefits for eligible power plant employees and a share of the eventual costs to shut down and clean up the three power plants that service the enrichment facilities. DOE's outstanding liability for the postretirement benefits attributable to the period when it operated the facilities is expected to be about $31 million (including interest) at the time that USEC is privatized.[53] DOE's share of the shutdown and cleanup costs is expected to be about $15 million.

Under H.R. 1215 and the administration's proposal, certain costs associated with the power contracts, incurred between July 1, 1993, and the date of privatization, would remain with the government (except for those liabilities that USEC agrees to retain under a memorandum of agreement to be entered into before privatization under the administration's proposal). These are to include employee postretirement health and life insurance benefits and power plant shutdown and cleanup costs; they may also include unamortized debt and termination costs.

- Postretirement benefits: The government could be responsible not only for the costs of employee postretirement benefits attributable to the period before July 1, 1993, but also for the costs of such benefits attributable to the government corporation's tenure. USEC estimates the government corporation's share to be about $3 million.
- Shutdown and cleanup costs: The government could become responsible for the share of this cost incurred by USEC before privatization—approximately $6 million, according to DOE. DOE's share of the power plant cleanup costs plus this $6 million would bring the government's total obligation to about $21 million.
- Unamortized debt: According to DOE, USEC may contend that responsibility for projects undertaken at the power plant on USEC's behalf while USEC was a government corporation should remain with the government. For example, as part of its payment for power, USEC is amortizing the debt associated with an $80 million improvement needed to comply with the Clean Air Act Amendments of 1990. USEC officials state that they will pay down this debt after privatization.
- Termination costs: If, before it is privatized, USEC cancels one or both agreements with the companies that supply power to the enrichment facilities, the government may have to pay the termination costs. According to DOE and USEC officials, termination costs (including unpaid debt) could amount to nearly $500 million. USEC says that it has no intention of canceling either of these agreements before privatization or in

[53]DOE has already paid its share of the cost for postretirement benefits for the employees of one of the power companies by placing $16 million in a trust fund established by the power suppliers specifically for this purpose. However, the liability to the other company has not been paid, and interest is accumulating on this liability because a planned trust fund to accept payments has yet to be set up and may not be set up before USEC is privatized. An actuary for this company estimates that the total accrued government liability for postretirement benefits will be about $34 million as of the end of January 1996.

the near future. If USEC cancels the power agreements after privatization, then it is responsible for any termination costs.

AVLIS

DOE retains the liability associated with the AVLIS facilities at the Lawrence Livermore National Laboratory, including decontamination and decommissioning costs and certain termination costs. However, USEC is also responsible for certain cleanup costs and some termination charges. DOE has not calculated its costs for these liabilities.

Other Potential Liabilities

In addition to these "known" liabilities, a number of other potential liabilities are associated with the enrichment program. These potential costs are related to (1) the government's enrichment contracts, (2) Price-Anderson coverage for the uranium enrichment plants, (3) payment in lieu of taxes, (4) pending litigation and potential claims, and (5) other potential liabilities.

Enrichment Contracts

Under the proposed legislation, the government would remain obligated to the parties to the enrichment contracts transferred to the corporation under the act until such contracts were amended, revised, or otherwise modified. (This liability would also extend to any other contracts, agreements, and leases transferred under the act.) This provision is to assure potential investors that the obligations and benefits of the parties are not changed by privatization. The corporation would be responsible for reimbursing claims paid by the government under the transferred contracts. Both corporation and DOE officials consider it unlikely that the corporation would be unable to fulfill the terms of these contracts.

Price-Anderson Coverage

Under the act and in accordance with the lease, DOE must indemnify the corporation for any public liability that may arise out of the operation of the plants under section 170d of the Atomic Energy Act, as amended (Price-Anderson). According to DOE, the public liability limit under Price-Anderson is currently approximately \$8.9 billion.[54] Similarly, activities connected with the research and development of the AVLIS technology that were performed by DOE's management and operating

[54]The Atomic Energy Act, as amended, permits DOE to require contractors to maintain financial protection. The amount of a contractor's financial protection is subtracted from the public liability limit. Under the lease, the Department must reimburse the corporation for the cost of obtaining this financial protection. However, we understand that DOE does not require the corporation to maintain such protection.

contractor at the Lawrence Livermore National Laboratory would be covered under DOE's Price-Anderson indemnification responsibilities. However, under the Atomic Energy Act, as amended, a new uranium enrichment facility, including an AVLIS facility, would not be eligible for Price-Anderson coverage.

Payments in Lieu of Taxes

Under section 168 of the Atomic Energy Act, as amended, DOE was granted discretionary payment authority for payments in lieu of taxes and special burdens to eligible taxing jurisdictions. Under the act, DOE retained ownership of the property at the Portsmouth and Paducah enrichment plants. In the recent past, DOE's annual payments to the appropriate taxing jurisdictions for these enrichment plants have been based on the value of the property at the time the government acquired it and have been relatively small ($20,000 to $30,000 annually per site). In fiscal year 1994, the Secretary of Energy established a task force to review the Department's treatment of the discretionary payment authority. According to DOE officials, the Department was concerned about the apparent inequity in the treatment of DOE sites across the country. The task force made several recommendations about the valuation of the property and the tax rate to be applied. Department officials state that, depending on the outcome of these recommendations, the calculated payments connected with the enrichment plants could change.

Pending Litigation and Potential Claims

Under H.R. 1215 and the administration's proposal, the United States would be responsible not only for claims brought against the Department for its operation of the uranium enrichment program before the transition but also for claims brought against the corporation between the transition and privatization. The only litigation brought during this period involving USEC that we are currently aware of is a suit filed by a number of the corporation's electric utility customers. The suit alleges that the government has been overcharging for enrichment services provided under contracts with such customers. The customers seek a refund from the United States for enrichment services purchased between July 1, 1993, and September 30, 1994, as well as a determination that the government's price for services after that date should be lower. According to the corporation, the amount of damages sought in the litigation could range from approximately $160 million downward to approximately $80 million for enrichment services projected to be sold to these customers through December 31, 1995.

A number of other potential claims relating to the period between the transition and privatization could subsequently arise. These include workmen's compensation claims or claims involving labor practices filed against the corporation. The Department informs us that there are several ongoing legal actions, including one class action suit against DOE, involving such claims and that similar suits could be brought against the corporation for actions taken before privatization. According to the corporation, the lack of claims currently pending before USEC indicates that there is no basis for anticipating significant liabilities in this respect.

Additional Liabilities

As the executive agent under a government-to-government agreement between the United States and Russia, USEC entered into a contract concerning the transfer of low enriched uranium derived from Russian highly enriched uranium extracted from nuclear weapons. According to DOE, the United States might be liable for any breaches by the corporation under this agreement. If a breach were to occur before privatization, the Department contends that under the House bill or the administration's proposal, the government might have no recourse against the corporation. Corporation officials consider it unlikely that the corporation would be unable to fulfill the terms of the contract.

To support this contract, the corporation agreed to provide two advance payments to the Russian Federation, one in 1994 for $60 million and another recently for $100 million. According to USEC officials, these advance payments are secured by reimbursement agreements with the Department. Under these agreements, the Department assumes a contingent liability for the reimbursement of losses, through the transfer of uranium inventories. According to the corporation, deliveries made under the contract have already reduced the Department's contingent liability by $19 million. Under current delivery schedules, the remaining liability is scheduled to be reduced to zero by the end of 1997.

Objectives, Scope, and Methodology

The Energy Policy Act of 1992 requires GAO to report to the Congress on the extent to which (1) USEC's privatization plan would result in any undue cost or ongoing obligation to the government and (2) the revenues gained by the government under the plan would represent at least the net present value of the corporation. Because the act does not define "undue cost or ongoing obligation" or "net present value of the corporation," our report identifies the government's major costs and ongoing obligations associated with the enrichment program and the net present value of USEC under two scenarios: (1) if it were to remain a government corporation and (2) if it were to be sold to the private sector.

To determine the government's costs and ongoing obligations associated with the uranium enrichment program, we obtained and reviewed pertinent legislation defining the government's liability for past costs and other documents that further define the government's costs and liabilities, such as the current lease agreement between DOE and USEC for the two operating enrichment plants, the power contracts for the two plants that DOE administers, and interagency memorandums of agreement that further define these costs. We also interviewed DOE and USEC officials, including officials at DOE's Oak Ridge operations office, which currently administers the USEC lease and the power contracts. In addition, we reviewed and analyzed proposed legislation that would facilitate the privatization of USEC to determine the legislation's potential effect on the government's costs. We also solicited and obtained the views of DOE's and USEC's general counsels on the proposed legislation and future costs and liabilities. To the extent practical, we obtained reports and other documents projecting future costs we identified.

To evaluate the value of the cash flows for USEC as a private corporation, we obtained the cash flow model developed by J.P. Morgan Securities, Inc., USEC's financial adviser, and interviewed key Morgan and USEC officials to gain an understanding of the model. Using available information, including USEC's most current strategic planning documents, we reviewed the model and then tested the model to determine the effect of needed adjustments we identified. To determine the net present value of the cash flows for USEC as a government corporation, we adjusted Morgan's cash flow projections to reflect a government corporation's cash flows. We also consulted with tax and financial experts to obtain their views on our work.

Comments From the U.S. Enrichment Corporation

USEC

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August 23, 1995

The Honorable Charles A. Bowsher
Comptroller General
General Accounting Office
441 G Street, N.W.
Room 7100
Washington, DC 20548

Dear Mr. Bowsher:

Thank you for the opportunity to provide comments on GAO's report on USEC's privatization. From USEC's inception, Congress and the Administration put in place a structure and process to fix a broken uranium enrichment operation, transform the business to operational and financial health, and then to sell it to private investors. USEC has successfully accomplished the first two tasks and is now ready to privatize. The privatization process is being conducted in full compliance with Congressional and Administration mandates and public law.

The GAO report contains two policy recommendations regarding the role of the President/Treasury and the use of warrants. Both deserve further consideration. We are working very closely with Treasury on all areas of privatization--they have a very active and decision making role. Also, we have discussed the possible use of warrants with Treasury and the decision to utilize this instrument will be made close to the offer date with an analysis of possible future benefits through the warrant however with a reduction in the privatization proceeds.

The majority of the GAO report is devoted to an analytical determination of USEC's value as a private corporation and remaining a government corporation. The analyses are seriously flawed including incorrect tax adjustments in the out years and the gross understatement of costs if USEC remained in the government.

The readers of this report should be advised that, while GAO started with extensive information provided by USEC and its financial advisor, J.P. Morgan Securities, Inc., GAO made changes. Therefore, the analysis, inferences, and conclusions in the report are solely those of the GAO.

Sincerely,

William H. Timbers, Jr.

Offices in Paducah, Kentucky Portsmouth, Ohio Washington, DC

Comments From the Department of the Treasury

DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

August 25, 1995

The Honorable Charles A. Bowsher
Comptroller General
General Accounting Office
441 G Street, N.W.
Room 7100
Washington, D.C. 20548

RE: Comments on the General Accounting Office Draft Report Entitled URANIUM ENRICHMENT: The Process To Privatize The U.S. Enrichment Corporation Needs To Be Strengthened

Dear Mr. Bowsher:

On August 17, 1995, we met with your staff and representatives from the Office of Management and Budget ("OMB"), the Council of Economic Advisors ("CEA") and the National Economic Council ("NEC") to discuss the GAO Draft Report entitled URANIUM ENRICHMENT: The Process To Privatize The U.S. Enrichment Corporation Needs To Be Strengthened (the "Report"). Shortly thereafter, Treasury and the other Executive Branch attendees had an opportunity to confer about the issues raised at our meeting. Based upon these meetings, we welcome the opportunity to provide you with the following comments.

I. General Comments.

As you are aware, the Energy Policy Act of 1992 (the "Act") amended the Atomic Energy Act of 1954 to require the Comptroller General to evaluate the extent to which:

-- the privatization plan would result in any ongoing obligation or undue cost to the Federal Government; and

-- the revenues gained by the Federal Government under the privatization plan would represent at least the net present value of the Corporation.

See 42 U.S.C. 2297d-1(c).

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In view of the limited period of time that GAO was given for its examination, we believe that the GAO Draft Report has made a good start at evaluating some of the issues involved in privatizing USEC. We recognize that these issues are complex and involve both government and market-based analyses. We also agree that the ultimate conclusion about the above-cited statutory requirements are contingent upon resolution of other presently pending issues (e.g., the outcome of legislation currently pending before Congress regarding USEC). Notwithstanding this complexity, however, we note that the Report does not reach any preliminary conclusions nor does it present a framework for reaching them. Accordingly, while we may agree with the general approach used by GAO in the Report, it does not fully evaluate these important statutory issues. Moreover, it fails to state whether GAO expects to have, or will suggest, a continuing role for itself during the privatization process in order to meet its statutory obligations.

We also take serious exception to the Report's strong implication that an estimate of the net present value (NPV) of revenues from USEC remaining in the Government would be greater than the return to the Treasury from privatizing the Corporation. We believe it is inappropriate to allow this strong implication to stand. The Report's valuation estimates are based upon a model developed by J.P. Morgan, which itself was based on numerous assumptions. To the extent several of these assumptions may not be appropriate for calculations required under the Energy Policy Act, extrapolations and conclusions drawn from these assumptions will be likewise flawed. Once discussions have begun on an offer from a company wishing to acquire USEC or underwriters have begun to market an initial public offering there will be much better information upon which to estimate the proceeds from privatization. The Treasury Department expects to evaluate whether the projected privatization revenues will at least equal the NPV of retaining USEC in the Government before it provides final approval for the privatization to occur. We will not proceed with a privatization unless our analysis shows that the requirement to "at least equal" the Government NPV is met.

Finally, we generally support the need for active Treasury participation and oversight in the USEC privatization process. We believe such a role is consistent with Treasury's fundamental mission to establish appropriate Government financial policies in its role as USEC's sole shareholder. Consequently, we do not object to GAO's recommendation that legislation be enacted which would give Treasury the lead role in the privatization process, to the extent that it would give the Congress and the public a clearer picture of Treasury's role in the USEC privatization process. It should be noted, however, that Treasury feels strongly that the Report should not give the incorrect impression that the Treasury has not undertaken a prominent role in the process to date under the Energy Policy Act; nor, that it will not exercise such a role in the future. To ensure Treasury's active participation, USEC has provided Treasury with a letter of understanding which was requested by Treasury and provides for Treasury concurrence with USEC before key actions are taken during the privatization process.

II. **Specific Comments.**

During our August 17 meeting, Treasury and other Executive Branch participants raised concerns about particular aspects of the draft Report.

First, OMB noted that a major methodological flaw exists in the GAO valuation approach in that it counts as much as $800 million in revenues beyond 2008 if USEC remains in the Government, while it arbitrarily cuts off the estimate of tax receipts from the private corporation in 2008. As noted above, the Report itself questions several assumptions in the J.P. Morgan model that cause the model to underestimate the revenues from privatization. GAO modified certain of these assumptions to apparently cause an increased estimate for the NPV of the government corporation. GAO did not, however, make similar adjustments to the estimate for revenue from privatization. Upward adjustments of several hundred million dollars to the estimate of privatization revenues were included in early drafts of the GAO Report, but OMB noted that they were eliminated from the final Report. Consistent treatment of revenues beyond 2008 and of GAO's own adjustments to the J.P. Morgan model could by themselves be sufficient to bring GAO's estimate of the return to the Treasury from privatization of USEC into the range of its estimate of the NPV of retaining the government corporation.

Treasury, CEA and NEC also noted that the Report contained little discussion of electricity costs. More specifically, USEC is presently the beneficiary of U.S. Government power contracts under which the U.S. Government purchases power at very favorable rates. These contracts are an important component in USEC's production costs and, if transferred, will become a valuable asset to USEC. Therefore, an examination of these contracts should be an important element in GAO's evaluation, particularly if it were to be assumed that the benefit of these contracts would continue to be enjoyed by the privatized company.

Finally, all attendees agreed with GAO's recommendation that a continuing evaluation of privatization issues could include consideration and implementation of "clawback" provisions or warrants if it becomes clearer that such features would be needed to ensure against windfall profits to USEC at taxpayer expense.

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III. Conclusion.

Treasury, OMB, CEA and NEC believe that the USEC privatization plan contemplates an ongoing process, with several important privatization issues yet to be conclusively resolved. Such issues include the impact of pending legislation on the valuation of USEC and the amount of cash that USEC will be permitted to retain upon privatization.

While several group members expressed reservations about the valuation figures prepared by GAO, all agreed that the Report appeared incomplete. Accordingly, a fuller analysis by GAO of privatization issues as well as a clearer explanation of the work supporting GAO's valuation figures will be required before we can reach an overall conclusion about the Report.

OMB, NEC and CEA concur with the comments contained in this letter.

Sincerely,

Mozelle W. Thompson

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