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EXAMINING THE DEPARTMENT OF ENERGY'S EXCESS URANIUM MANAGEMENT PLAN

HEARING

BEFORE THE

SUBCOMMITTEE ON
THE INTERIOR

OF THE

COMMITTEE ON OVERSIGHT
AND GOVERNMENT REFORM
HOUSE OF REPRESENTATIVES

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EXAMINING THE DEPARTMENT OF ENERGY'S EXCESS URANIUM MANAGEMENT PLAN

Wednesday, April 22, 2015,

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON THE INTERIOR,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:12 a.m. in room 2154, Rayburn House Office Building, the Honorable Cynthia Lummis [chairwoman of the subcommittee], presiding.

Present: Representatives Lummis, Buck, Farenthold, Palmer, Gosar, Russell, Lawrence, Plaskett and Cummings.

Ms. LUMMIS. Without objection, the Chair is authorized to declare a recess at any time.

Good morning and welcome to today's hearing of the Subcommittee on Interior of the Oversight and Government Reform Committee.

Our purpose today is to examine the Department of Energy's management of the U.S. excess uranium inventories. This is uranium, of varying grades, owned by the Federal Government that has been declared surplus to the national security needs of the United States. This uranium has significant value. Selling it generates revenue for the Federal Government and displaces uranium produced by private industry in the marketplace.

The Department of Energy's management of this uranium has prompted questions by the domestic uranium industry as well as the Government Accountability Office, a non-partisan agency that investigates how the Federal Government spends taxpayer dollars.

The GAO found that the Department of Energy failed to consistently value uranium that transferred to third parties in exchange for other services. The GAO found that other transfers violated the miscellaneous receipts statute which requires government officials who receive money on the government's behalf to deposit those funds with the Treasury, except where otherwise provided by law.

By not depositing an amount equal to the value of the uranium into the Treasury, DOE has inappropriately circumvented the power of the purse granted to Congress under the Constitution.

Further, the GAO found that the Department of Energy's studies to assess the market impact of proposed uranium transfers is required by the USEC Privatization Act of 1996 failed to show quality assurance guidance to provide detail about the data, methodology and assumptions made in studies and has had other shortcomings.

This raised questions about the validity of the conclusion that the proposed transfers would have no adverse material impact on domestic uranium industries. The domestic uranium industry plays an important role in ensuring America is not completely dependent on foreign sources of energy, particularly in the area of uranium where we actually import about 90 percent of the uranium that we use here, completely unnecessary to do so.

While I note that the DOE is in the process of revising its procedures to determine the market impact on proposed transfers of excess uranium, it is important to discuss previous problems to ensure they are not repeated.

Today, we will hear from the GAO to discuss their reports. We will also hear from the Department of Energy to learn more about their management of excess uranium and their response to the GAO. Finally, we will hear from a representative of the domestic uranium industry to discuss how these transfers have affected the industry.

A representative of the Fluor-B&W Portsmouth, the DOE contractor for cleanup at the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio, was invited to the hearing to discuss the importance of the cleanup that some of the transfers have funded but was unable to attend.

I look forward to hearing the panel discuss ways the excess uranium management can be improved to eliminate legal concerns and ensure the best value for the taxpayer while not disrupting the domestic uranium industry and continue to meet DOE's obligation to clean up its legacy sites.

With that, I would like to thank the witnesses in advance for your testimony.

I now recognize Mrs. Lawrence, the Ranking Member of the Subcommittee on the Interior, for her opening statement.

Mrs. LAWRENCE. Thank you, Madam Chairwoman. I want to thank you for holding this hearing today and also want to thank our witnesses for their testimony today.

One of the core missions of this committee is to oversee the proper stewardship of government assets. Today, we will be focusing our attention on an important asset, uranium, managed by the Department of Energy.

It is important that the Department of Energy will be able to sell and swap uranium in order to support objectives of the agency. Selling uranium to nuclear power plants and swapping uranium in exchange for environmental cleanup activities are both necessary uses of the excess uranium.

However, the agency must be careful that all of its uranium transactions are carried out in accordance with the law. I am pleased that the GAO and the department are both here to help us understand more about the laws pertaining to past and future uranium transfers.

If the Congress needs to resolve different interpretations of the law now is the time to let us know so we can begin that process. It is also critical that we maintain a robust domestic uranium industry which is particularly important to the States of Wyoming and Utah where the bulk of our uranium is mined.

The department's decisions must be backed by sound market studies on whether any particular sale or transfer would be a negative impact on our domestic uranium industry.

Let us all keep an open mind—I will—to the testimony that will be offered today and the information.

Thank you, Madam Chair.

Ms. LUMMIS. I thank the Ranking Member.

I will hold open the record for five legislative days for any member who would like to submit a written statement.

We will now recognize our panel of witnesses. I am pleased to welcome Mr. John Kotek, Principal Deputy Assistant Secretary, Office of Nuclear Energy, U.S. Department of Energy; Mr. David Trimble, Director, Natural Resources and Environment, U.S. Government Accountability Office; and Mr. Scott Melbye, Executive Vice President at Uranium Energy Corp. Welcome all.

Pursuant to this committee rules: all witnesses will be sworn before they testify. Please rise and raise your right hand.

Do you solemnly swear or affirm that the testimony you are about to give will be the truth, the whole truth, and nothing but the truth?

[Witnesses respond in the affirmative.]

Ms. LUMMIS. In order to allow time for discussion, please limit your testimony to 5 minutes even if your entire written testimony is longer. It will be made part of the record.

I would first recognize Mr. John Kotek. Thank you so much for being here.

WITNESS STATEMENTS

STATEMENT OF JOHN KOTEK

Mr. KOTEK. Thank you, Chairman Lummis, Ranking Member Lawrence and members of the committee. I appreciate the opportunity to be here today to discuss the Department of Energy's management of its excess uranium.

I do have a longer written statement for the record.

Currently, I serve as the Principal Deputy Assistant Secretary in DOE's Office of Nuclear Energy where I am responsible for helping to advance nuclear power to meet our Nation's energy needs. I took this position about 3 months ago but earlier in my career, I served in a number of roles in DOE within the Department of Energy's National Lab system at Argonne National Lab West in Idaho right over the border from Wyoming.

I later served as Deputy Manager of the department's Idaho Operations Office where I was responsible for Federal management of the Idaho National Lab.

More recently, I had the honor of serving as Staff Director to the blue ribbon Commission on America's Nuclear Future which recommended a strategy for managing nuclear waste in the United States.

When I am not serving in Washington, I still make my home in Idaho with my wife and three kids.

As a legacy of the department's activities, DOE has an inventory of uranium that exceeds its expected needs. This uranium comes from various sources, including governmental weapons programs

from its own former enrichment activities and from inventories of Russian origin natural uranium.

This excess uranium has value to taxpayers. Among the chief uses in recent years, DOE barters excess uranium to fund work under crucial DOE programs—the environmental cleanup of the gaseous diffusion plant at Portsmouth, Ohio and the down blending of highly enriched uranium to eliminate excess weapon grade uranium, which occurs in Erwin, Tennessee.

The department manages its excess uranium inventory in accordance with the Atomic Energy Act of 1954 and other applicable laws. Specifically, the Atomic Energy Act authorizes DOE to transfer special nuclear material and source material.

However, the USEC Privatization Act places certain limitations on DOE's authority to transfer uranium from its excess uranium inventory. Before certain uranium transactions, the Secretary of Energy must determine that the sale of uranium will not have an adverse material impact on the domestic uranium mining, conversion or enrichment industries.

In terms of our current work, the department plans to issue a new secretarial determination covering continued transfers of uranium for cleanup services in Ohio and for down blending of highly enrichment uranium in Tennessee.

To inform its deliberations, the department is engaged in two rounds of public comment seeking input from the public and from the industry about the effects of continued uranium transfers on the domestic uranium industries and recommendations about factors it should consider in assessing whether a given set of transfers would have an adverse material impact on the domestic uranium industry.

The most recent comment period closed on April 6. We appreciate the comments we received from the range of uranium industries and from others, as well as from the recipients of bartered uranium.

DOE's staff is still reviewing comments and preparing recommendations for the Secretary so I will be limited in what I can say on issues that are presently being addressed in our pending proceedings. However, I can speak to the process we have recently undertaken to solicit public comment.

In conclusion, Madam Chairman, I would like to emphasize that the department understands the importance of the uranium industry in many communities. DOE remains committed to managing its uranium inventories in compliance with all statutory requirements and in a manner that is consistent with and supportive of a healthy, domestic nuclear industry.

Thank you again for the opportunity to testify.

[Prepared Statement of Mr. Kotek follows:]

Statement of
John Kotek
Principal Deputy Assistant Secretary
Office of Nuclear Energy
U.S. Department of Energy

Before the

Committee on Oversight and Government Reform
Subcommittee on the Interior
United States House of Representatives

The Department of Energy's Uranium Transfers

April 22, 2015

Thank you Chairman Lummis, Ranking Member Lawrence, and members of the Committee; I appreciate the opportunity to be here today to discuss the Department of Energy's (DOE) transfers of uranium, the majority of which are used for accelerated cleanup of DOE sites and the down-blending of highly-enriched uranium.

DOE Uranium Transfers

The Department holds inventories of uranium in various forms and qualities, including highly enriched uranium (HEU), low-enriched uranium (LEU), natural uranium (NU), and depleted uranium that are currently held as excess and not dedicated to national security missions. The Department's uranium comes from various sources including governmental weapons programs, from its own former enrichment activities, and from inventories of Russian-origin natural uranium it was directed by Congress to purchase.

Among the chief uses of the excess uranium in recent years, DOE barters excess uranium to fund work under two crucial DOE programs: the environmental clean-up of the gaseous diffusion plant ("GDP") at Portsmouth, Ohio and the down-blending of HEU to eliminate excess weapon-grade HEU, which occurs at Erwin, Tennessee. For each program, DOE transfers uranium from its inventory in exchange for services provided by a contractor—Fluor-B&W Portsmouth ("FBP") for cleanup services at Portsmouth and WesDyne for down-blending of HEU.

USEC Inc. (USEC)—now known as Centrus Energy Corp.—the lessee of the DOE GDP at Portsmouth, Ohio, ceased enrichment operations at Portsmouth in 2001 and initiated the process to return the facilities to DOE. The Department, however, was unable to accept the return of that GDP and contracted with USEC for it to place the facility in cold standby status and provide surveillance and maintenance ("S&M") until the Department could accept return of

the facility. In 2009, in anticipation of awarding the decontamination and decommissioning (D&D) contract, DOE modified USEC's S&M contract to include accelerated cleanup services in exchange for uranium. In 2011, DOE entered into a contract with FBP to cleanup environmental contamination at Portsmouth. Since the D&D contract was awarded to FBP, DOE has been making quarterly transfers of uranium in exchange for a portion of the services provided under the D&D contract.

NNSA down-blends HEU that is no longer needed for national security to LEU, which effectively transforms possibly weapons-usable HEU into LEU that is suitable for use in civilian nuclear power reactors. NNSA contracts with WesDyne to perform the down-blending work. In exchange for these services, DOE transfers a certain amount of the resulting LEU to the contractor. That program, which began with an initial contract in 2008, continues today.

DOE's Statutory Authority and Requirements for Uranium Sales and Transfers

DOE manages its excess uranium inventory in accordance with the Atomic Energy Act of 1954 (42 U.S.C. § 2011 et seq., "AEA") and other applicable laws. Specifically, Title I, Chapters 6–7 and 14, of the AEA authorize DOE to transfer special nuclear material and source material. Low-enriched uranium (LEU) and natural uranium are types of special nuclear material and source material, respectively.

The USEC Privatization Act (Pub. L. 104-134, 42 U.S.C. § 2297h et seq.) places certain limitations on DOE's authority to transfer uranium from its excess uranium inventory. Specifically, under section 3112(d) of the USEC Privatization Act (42 U.S.C. § 2297h-10(d)), DOE may not make certain transfers of natural or low-enriched uranium until:

1) The President determines that the material is not necessary for national security needs,
2) The Secretary determines that the sale of the material will not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industry, taking into account the sales of uranium under the Russian HEU Agreement and the Suspension Agreement, and
3) The price paid to the Secretary will not be less than the fair market value of the material.

42 U.S.C. § 2297h-10(d)(2)(B).

The validity of any determination under this section is limited to no more than two calendar years subsequent to the determination. See Section 306(a) of Division D, Title III of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235).

2013 Uranium Management Plan

In March 2008, the Energy Secretary issued a Policy Statement outlining a framework within which DOE intended to make decisions concerning use and disposition of its excess uranium

inventory. The Policy Statement observed that DOE's excess uranium inventory "is a valuable commodity both in terms of monetary value and the role it could play in achieving vital Departmental missions and maintaining a healthy domestic nuclear infrastructure," and it laid out certain principles for managing the inventory prudently to achieve those values. One of those principles was the notion that the Department would, "[t]o the extent practicable . . . manage its excess uranium inventories in a manner that is consistent with and supportive of the maintenance of a strong domestic nuclear industry." The Policy Statement further stated that "as a general matter, the introduction into the domestic market of uranium from Departmental inventories in amounts that do not exceed ten percent of the total annual fuel requirements of all licensed nuclear power plants should not have an adverse material impact on the domestic uranium industry."

Based on this Policy Statement, in December 2008 DOE released its Excess Uranium Inventory Management Plan providing a comprehensive inventory of its excess uranium and details about DOE's preliminary plans for future management of its excess uranium inventory ("2008 Plan").

The 2008 Plan contemplated transfers of LEU for DOE's HEU down-blending program, sale of portions of its Russian-origin UF6 inventory or enrichment of the material for addition to DOE's inventory as LEU, sale of its off-specification non-UF6 natural uranium inventory, and the potential sale of higher assay portions of its depleted uranium inventory. DOE noted that it planned to update the 2008 Plan periodically to reflect new and evolving information, policies and programs.

In July 2013, the Secretary issued a revised Excess Uranium Inventory Management Plan ("2013 Plan"), based on an updated inventory of the Department's uranium as of December 31, 2012. The 2013 Plan identified DOE uranium inventories that had entered the market since the 2008 Plan and transactions that were ongoing or being considered by DOE through 2018. The 2013 Plan went on to state that the May 2012 Determination "effectively sets forth uranium transfers being considered during the time span of this Plan." The May 2012 Determination covered transfers of 2,400 metric tonnes of natural uranium for clean-up services at Portsmouth and LEU equivalent to 400 metric tonnes of natural uranium for down-blending.

The 2013 Plan reaffirmed the Department's goals of maintaining sufficient inventories to meet DOE needs, transacting "in a transparent and competitive manner," and managing inventories in a manner "consistent with and supportive of the maintenance of a strong domestic uranium industry." The 2013 Plan also announced that DOE could achieve these goals without use of the ten percent guideline established in the 2008 Policy and Plan.

2014 Secretarial Determination

On May 15, 2014, the Secretary determined that sales or transfers of a total of 2,705 metric tonnes uranium per calendar year would not have an adverse material impact on the domestic

uranium mining, conversion, or enrichment industry ("2014 Secretarial Determination"). To inform the May 2014 Secretarial Determination—as it had for a number of previous determinations—DOE contracted Energy Resources International, Inc. (ERI), a uranium market consultancy, with assessing the potential effects on the domestic uranium mining, conversion, and enrichment industries from DOE's proposed volume of uranium transfers. In addition to its review and consideration of the report prepared by ERI (2014 ERI Report), DOE held in-person meetings and accepted written communications regarding the transfers from several entities that expressed an interest in DOE's proposed uranium transactions. This input included substantive feedback on the report ERI had prepared to inform the 2012 determination. DOE staff in the Office of Nuclear Energy ("NE") then prepared a separate analysis based on these and other inputs and recommended a course of action to the Secretary.

The NE analysis and the 2014 ERI Report were submitted to the Secretary for his review under a Memorandum to the Secretary, presenting the matter for his consideration. After reviewing this information and recommendations, the Secretary signed the 2014 Secretarial Determination.

Ongoing Activities

DOE currently plans to issue a new Secretarial Determination covering continued transfers of uranium for cleanup services at the Portsmouth GDP and for down-blending of HEU to LEU. As a preparatory step, DOE sought information from the public through a Request for Information (RFI) published in the Federal Register on December 8, 2014. In that RFI, DOE sought comment from the public about the effects of continued uranium transfers on the domestic uranium industries and recommendations about factors it should consider in assessing whether a given set of transfers would have an adverse material impact on the domestic uranium industries.

DOE also contracted ERI with preparing an additional analysis of DOE transfers (''2015 ERI Report''). On March 18, 2015, DOE issued a Notice of Issues for Public Comment (NIPC) announcing the availability for public review the comments received from the public in response to the RFI and the 2015 ERI Report. The comment period for the NIPC closed on April 6, 2015. DOE received a number of submissions, and the Department is currently evaluating the comments received.

Conclusion

Because departmental staff are still reviewing comments and preparing recommendations for the Secretary, I will be unable to comment today on issues that are presently being addressed in our pending proceedings. However, I can speak to how DOE exercises its statutory authority or the process we have recently undertaken to solicit public comment.

In conclusion, Madam Chairman, I would like to emphasize that DOE is committed to managing its uranium inventories in compliance with all statutory requirements and in a manner that is

consistent with and supportive of the maintenance of a healthy domestic nuclear industry, while performing its important missions.

Ms. LUMMIS. Thank you, Mr. Kotek.

Mr. Trimble, we would like to hear from you.

STATEMENT OF DAVID TRIMBLE

Mr. TRIMBLE. Chairman Lummis, Ranking Member Lawrence and members of the subcommittee, my testimony today discusses our observations on DOE's management of its excess uranium inventory.

My observations are drawn from GAO's work since 2006 in which we have identified four key issues: one, DOE's elimination of a guideline limiting its uranium sales and transfers; two, DOE's efforts to insure the quality of its uranium market impact studies; three, legal concerns related to DOE's transfers of uranium; and four, DOE's stewardship of the government's uranium resources.

In 2013, DOE announced that it would no longer use a 10 percent guideline to limit its uranium sales and transfers. While DOE established the guideline in 2008 after soliciting input from industry, DOE did not consult with industry before deciding to abandon the guideline.

Industry officials told us that the elimination of the guideline will diminish the transparency and predictability of DOE's future transfers affecting an already depressed market.

In our report, we recommended that DOE obtain industry input on the amount of DOE uranium transfers the market can absorb annually and assess whether it needs to reinstitute a guideline.

Second, our 2014 report found that DOE did not take steps to assess the technical quality of its 2012 and 2013 market impact studies. Such quality control efforts are called for in the contract with the vendor as well as DOE's own quality assurance guidelines.

These studies were used by the Secretary of Energy to conclude that DOE's transfers would not have an adverse impact on the domestic uranium market as required by the USEC Privatization Act.

DOE officials told us they did not conduct an assessment of the technical quality of the studies nor did they request additional information requested from the contractor about their methodology. DOE Stated they contracted for this work since they did not have the technical capability to do the work themselves and further, they wanted the contractor studies to be independent.

Third, we have repeatedly noted legal concerns related to certain DOE transfers of uranium. In 2006 and 2011, we found that DOE violated the miscellaneous receipts statute when it did not deposit the proceeds from uranium sales into the Treasury.

Specifically, DOE provided uranium to USEC for sale to a third party and allowed USEC to keep the proceeds as payment for a new cleanup contract. Such actions undercut Congress' authority to appropriate funds.

In addition, DOE transferred uranium without obtaining a Presidential determination that the material was no longer needed for national security purposes. Notably, just 1 year earlier, DOE had acquired the same material for national security purposes.

Finally, we have noted that DOE likely does not have authority to sell or transfer depleted uranium and have suggested that Congress clarify DOE's authority in this area.

Fourth, regarding DOE's stewardship of the government's uranium resources, DOE has not established guidance on how depleted uranium tails should be valued. Specifically, if DOE does sell such material despite its apparent lack of authority to do so, it must at least charge a fair price for it as the Atomic Energy Act requires.

For example, in 2012, DOE developed multiple estimates for the same transfer with values ranging from 0 to $300 million. In this case, DOE decided to not charge anything for the tails reasoning that they had no value since the tails could be considered an environmental liability.

However, the tails were transferred for an economic purpose, to be re-enriched in lieu of natural uranium. Further, in a prior transaction, DOE charged a fee for tails that were transferred for re-enrichment and in 2013, DOE entered negotiations with another company for the sale of a portion of its tails inventory. DOE disagreed with our recommendation that it develop guidance for valuing tails.

We believe that until DOE develops such guidance, it cannot ensure the government will be reasonably compensated for any future tails transfers.

In closing, let me note that uranium is both an important national security asset and a commodity with economic value. Consequently, the government's inventory of uranium represents a valuable asset that DOE must effectively and responsibly manage.

To do this, DOE must ensure that disposition decisions fully consider national security needs, provide the Nation's taxpayers with value for these assets and ensure that transfers do not adversely impact the domestic uranium industry.

Although DOE has disagreed with many of our recommendations, we are encouraged by some recent steps DOE has taken to increase transparency by seeking public input on its proposed uranium transfers.

However, we continue to believe that DOE needs to take additional steps to ensure that it conducts future transfers in a more transparent manner, consistent with law and that such transfers benefit taxpayers while not harming the uranium industry.

Thank you. I would be happy to answer questions.

[Prepared Statement of Mr. Trimble follows:]

United States Government Accountability Office

GAO

Testimony

Before the Subcommittee on Interior, Committee on Oversight and Government Reform, House of Representatives

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DEPARTMENT OF ENERGY

Management of Excess Uranium

STATEMENT OF DAVID C. TRIMBLE, DIRECTOR,
NATURAL RESOURCES AND ENVIRONMENT

GAO-15-475T

GAO Highlights

Highlights of GAO-15-475T, a testimony before the Subcommittee on Interior, Committee on Oversight and Government Reform, House of Representatives

April 22, 2015

DEPARTMENT OF ENERGY

Management of Excess Uranium

Why GAO Did This Study

DOE maintains inventories of natural, enriched, and depleted uranium and periodically sells or transfers its excess uranium from its inventory. Under the Atomic Energy Act of 1954, as amended by the USEC Privatization Act, DOE's sales and transfers of uranium are subject to certain conditions. For example, according to the USEC Privatization Act, DOE must determine that any sales or transfers of uranium will not have an adverse material impact on the domestic uranium market, among other things. In 2008, DOE issued a plan for managing its excess uranium and adopted a guideline—after consultation with the uranium industry—to generally restrict its uranium sales and transfers to 10 percent of annual U.S. requirements for nuclear fuel. DOE updated its uranium management plan in July 2013 and announced that it would discontinue using its guideline.

This testimony discusses issues related to DOE's management of excess uranium and is based on seven prior GAO products issued from July 2006 through May 2014.

Over nearly a decade, GAO has made numerous recommendations to improve DOE's management of excess uranium, including seeking industry input on the amount of DOE uranium transfers the market can absorb annually and developing a consistent method for valuing depleted uranium tails. DOE has concurred and taken action on some recommendations and has disagreed with others. GAO will continue to monitor DOE's implementation of these actions. GAO is not making new recommendations in this testimony.

View GAO-15-475T. For more information, contact David C. Trimble at (202) 512-3841 or trimbled@gao.gov.

What GAO Found

GAO has identified four key issues related to the Department of Energy's (DOE) management of excess uranium and uranium transfers in reports, testimonies, and a legal opinion issued since 2006 as follows:

- **Elimination of a guideline to limit DOE's annual uranium sales and transfers.** In May 2014, GAO found DOE's decision to discontinue its 10 percent guideline for limiting uranium sales and transfers might introduce uncertainty in the uranium market by providing less transparency for DOE's future sales and transfers. In interviews with GAO, industry representatives said that DOE officials did not consult with the uranium industry before deciding to discontinue using its 10 percent guideline. The representatives said DOE's introduction of material into the uranium market is causing a deteriorating demand for non-DOE uranium and driving down uranium prices.
- **DOE's steps to assess the quality of market impact studies.** In part to ensure that its uranium transfers will not have an adverse material impact on the domestic uranium industry, DOE contracted for studies on the potential market impact of most of its planned uranium transfers. In GAO's September 2011 and May 2014 reports, GAO examined these studies and identified concerns with their analyses. For example, in 2014, GAO found that DOE did not take steps outlined in its contracts or in departmental quality assurance guidance to assess the technical quality of these studies. In addition, GAO also found in 2014 that the studies provided only limited detail about their methodology, data sources, and assumptions, although DOE's quality assurance guidance states that DOE information disseminated to the public should contain such information.
- **Legal concerns related to DOE's transfers of uranium.** In May 2014, GAO found legal concerns with four uranium transactions DOE conducted from 2012 through 2013. For example, for a transaction in May 2012, GAO concluded that DOE likely lacked authority to transfer depleted uranium "tails"—a product of the enrichment process—because of prohibitions imposed by the USEC Privatization Act. In July 2006 and September 2011, GAO found that certain of DOE's uranium transfers involving USEC—a former government-owned corporation that was privatized in 1998—did not comply with the miscellaneous receipts statute, which requires an official or agent of the government receiving money from any source on the government's behalf to deposit the money into the Treasury.
- **DOE's stewardship of its uranium resources.** In its May 2014 report, GAO found that DOE did not have consistent methods or guidance for valuing depleted uranium tails and questioned whether DOE received reasonable compensation for a large transfer of tails in 2012. Specifically, GAO found that DOE estimated the tails it transferred in 2012 for re-enrichment had a potential value ranging from $0 to $300 million, but DOE ultimately decided that the tails had no value and that the transfer had no cost to DOE. GAO concluded that, without consistent guidance for valuing its tails, DOE cannot ensure the government is reasonably compensated for its uranium transfers.

Chairman Lummis, Ranking Member Lawrence, and Members of the Subcommittee:

Thank you for the opportunity to discuss our work on the Department of Energy's (DOE) management of excess uranium, including its uranium transfers.[1] As you are aware, DOE maintains inventories of natural, enriched, and depleted uranium[2] and periodically sells or transfers excess uranium from its inventory.[3] For example, DOE regularly transfers uranium to contractors as payment for environmental cleanup services at its former uranium enrichment plant in Ohio in addition to using appropriated funds to support those activities. DOE has also transferred uranium to USEC, Inc. (USEC)—a former government-owned corporation that was privatized in 1998[4]—to support the development of next generation uranium enrichment technology and for other national security purposes.

Under the Atomic Energy Act of 1954, as amended by the USEC Privatization Act, DOE's sales and transfers of uranium are subject to certain conditions, including a required determination by the Secretary of

[1]We define uranium transfers as the exchange of natural, enriched, or depleted uranium, or uranium enrichment services between DOE and another party.

[2]A key step in processing uranium as a source of nuclear material for defense and commercial purposes is the enrichment of natural uranium. Enrichment is the process of separating uranium-235—the form, or isotope, that undergoes fission to release enormous amounts of energy in nuclear reactors and weapons—from uranium-238 to increase the concentration of uranium-235. The enrichment process results in two principal products: (1) enriched uranium hexafluoride, which can be further processed for specific uses, such as nuclear weapons or fuel for power plants, and (2) leftover "tails" of uranium hexafluoride, which also are called depleted uranium because the material is depleted in uranium-235 compared with natural uranium.

[3]DOE's inventory of uranium comes from a variety of sources, including the dismantling of some of the nation's nuclear weapons, as well as material remaining from U.S. government enrichment activities before 1993. In 1992, the U.S. government established the United States Enrichment Corporation (USEC) as a government corporation to take over operations of DOE's enrichment facilities and to provide commercial uranium enrichment services for the U.S. government and utilities that operate nuclear power plants. In 1998, USEC was privatized under the USEC Privatization Act. USEC Privatization Act, 42 U.S.C. §§ 2297h-2297h-13 (2015).

[4]USEC filed for Chapter 11 bankruptcy protection in March 2014 and emerged from Chapter 11 reorganization in September 2014 under the name Centrus Energy Corp. For the purposes of this testimony, we will refer to the company as USEC because all uranium transactions discussed in this testimony occurred while the company was named USEC.

Energy that the transfer will not have an adverse material effect on the domestic uranium market.[5] Since 2006, we have issued four reports, two testimonies, and a legal opinion that have addressed DOE's management of its excess uranium, as well as uranium transfers that DOE has conducted.[6] For example, in a March 2008 report, we found that DOE likely does not have the authority to sell depleted uranium tails—a product of the enrichment process.[7] In addition, in July 2006 and September 2011, we reported on the legal bases for certain DOE uranium transactions involving USEC and concluded that DOE had violated federal fiscal law because it did not deposit the net proceeds of certain transactions into the Treasury.[8] More recently, in May 2014, we reported on four uranium transfers DOE conducted involving USEC, and we identified numerous issues related to the transparency of DOE's uranium transfers, including concerns with DOE's assessment of the market impact of its transfers, the legality of the transfers, and DOE's methods for valuing depleted uranium tails.[9]

[5]See Atomic Energy Act of 1954 §§ 53, 63, codified as amended at 42 U.S.C. §§ 2073, 2093 (2014); USEC Privatization Act § 3112(d), codified as amended at 42 U.S.C. § 2297h-10 (2015).

[6]GAO, *Department of Energy: Enhanced Transparency Could Clarify Costs, Market Impact, Risk, and Legal Authority to Conduct Future Uranium Transactions*, GAO-14-291 (Washington, D.C.: May 9, 2014); GAO, *2012 Annual Report: Opportunities to Reduce Duplication, Overlap and Fragmentation, Achieve Savings, and Enhance Revenue*, GAO-12-342SP (Washington, D.C.: Feb. 28, 2012); GAO, *Excess Uranium Inventories: Clarifying DOE's Disposition Options Could Help Avoid Further Legal Violations*, GAO-11-846 (Washington, D.C.: Sept. 26, 2011); GAO, *Nuclear Material: DOE's Depleted Uranium Tails Could Be a Source of Revenue for the Government*, GAO-11-752T (Washington, D.C.: June 13, 2011); GAO, *Nuclear Material: Several Potential Options for Dealing with DOE's Depleted Uranium Tails Could Benefit the Government*, GAO-08-613T (Washington, D.C.: Apr. 3, 2008); GAO, *Nuclear Material: DOE Has Several Potential Options for Dealing with Depleted Uranium Tails, Each of Which Could Benefit the Government*, GAO-08-606R (Washington, D.C.: Mar. 31, 2008); and GAO, *Department of Energy: December 2004 Agreement with the United States Enrichment Corporation*, B-307137 (Washington, D.C.: July 12, 2006).

[7]See GAO-08-606R. The recommendations we made to address this issue, along with their status, are discussed later in this statement.

[8]See GAO-11-846 and B-307137. In 2011, we also reported on the market analyses for certain DOE uranium transactions involving USEC. The recommendation we made to address this issue, along with its status, is discussed later in this statement.

[9]See GAO-14-291. The recommendations we made to address these issues, along with their status, are discussed later in this statement.

In this context, my testimony today discusses DOE's management of excess uranium. Specifically, I will address four aspects of DOE's management of uranium about which we have raised issues in previous products since 2006: (1) DOE's elimination of a guideline to limit its annual uranium sales and transfers, (2) DOE's steps to assess the technical quality of uranium market impact studies for which it contracted, (3) legal concerns related to DOE's transfers of uranium, and (4) DOE's stewardship of its uranium resources. My testimony is based on our four reports, two testimonies, and a legal opinion issued from July 2006 through May 2014. Detailed information about the scope and methodology used to conduct this work can be found in each of our issued products. We conducted the work on which this statement is based in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Since the 1940s, the federal government has been processing natural uranium into enriched uranium. Many decades of uranium enrichment have resulted in an extensive DOE inventory of natural, enriched, and depleted uranium.[10] For example, according to DOE officials, as of June 2014, DOE maintained approximately 525,000 metric tons of uranium in the form of depleted uranium tails, with varying residual concentrations of uranium-235. Tails have historically been considered waste and treated as an environmental liability; however, under certain conditions, some tails may have economic value and therefore be considered an asset. For example, tails can be profitably re-enriched and used in lieu of natural uranium when the price of natural uranium is high.

[10]Natural uranium is mined from the earth and contains 0.7% of the uranium-235 isotope, the isotope of uranium that undergoes fission to release energy in nuclear reactors and weapons. Enriched uranium contains greater than 0.7% uranium-235. Low-enriched uranium, which is used in commercial nuclear power reactors and for tritium production, typically has a concentration of 3 to 5 percent uranium-235. In contrast, depleted uranium—a product of the enrichment process generally treated as waste but that in some cases contains enough uranium-235 that it can be re-enriched—contains fewer isotopes of uranium-235 than occur in natural uranium.

In addition to economic considerations, the United States needs an assured source of low-enriched uranium to produce tritium, a radioactive isotope of hydrogen, used to enhance the power of U.S. nuclear weapons. To produce tritium, DOE has stated that it can only use low-enriched uranium with no obligation to other countries under international agreements to use it for only peaceful purposes.[11] As we reported in May 2014, in 2012 DOE transferred a significant quantity of depleted uranium tails to a third party, who contracted with USEC for re-enrichment of the tails.[12] DOE conducted this transaction in part to ensure the availability of a supply of unobligated low-enriched uranium for future tritium production.

The Atomic Energy Act of 1954, as amended, gives DOE general authority to transfer uranium related to its nuclear energy functions; to distribute natural uranium under certain conditions to qualified entities; and to sell, lease, grant, distribute, or otherwise make available enriched uranium under certain conditions. In 1996, Congress enacted the USEC Privatization Act to amend the Atomic Energy Act. The USEC Privatization Act restricted DOE's authority to conduct certain transfers of uranium.[13] In particular, Section 3112 prohibits DOE from transferring or selling uranium except as consistent with the act's terms and conditions. For example, DOE is authorized to sell natural uranium and low-enriched uranium from its stockpile if (1) the President determines the material is not necessary for national security needs; (2) the Secretary of Energy determines the sale will not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industries; and (3) the price paid will not be less than the fair market value of the material. DOE has satisfied the second requirement for a secretarial determination with individual determinations of market impact signed by the Secretary of Energy for each transaction or group of transactions. To help inform the

[11]Uranium is considered unobligated when neither the uranium nor the technology used to enrich it carries an obligation from a foreign country requiring that the material only be used for peaceful purposes. These obligations are contained in international agreements to which the United States is a party. We reported in October 2014 on the basis for DOE's practice of using only domestic enrichment technology in the provision of unobligated uranium enriched for national security purposes. See GAO, *Department of Energy: Interagency Review Needed to Update U.S. Position on Enriched Uranium That Can Be Used for Tritium Production*, GAO-15-123 (Washington, D.C.: Oct. 14, 2014).

[12]See GAO-14-291.

[13]See USEC Privatization Act § 3112, codified as amended at 42 U.S.C. § 2297h-10 (2015).

Secretary's determinations, DOE has contracted with Energy Resources International, Inc. (ERI), a nuclear fuel consulting firm, to develop studies analyzing the potential impact of planned uranium transfers on the market and has previously made these studies available on its public website. With respect to the third requirement pertaining to fair market value, DOE previously maintained a pricing policy for uranium that at various times specified standard prices or a market value standard for depleted uranium.[14] Such a pricing policy generally informed DOE determinations as to the value of tails until the early 1990s, but DOE has not relied on this policy since the mid-1990s.

In March 2008, we reported on options for dealing with DOE's inventory of depleted uranium.[15] We recommended that the department develop a comprehensive uranium management assessment containing detailed information on the types and quantities of depleted, natural, and enriched uranium managed by DOE and a comprehensive assessment of the department's options for this material. DOE neither agreed nor disagreed with our recommendation but, in December 2008, DOE published its *Excess Uranium Inventory Management Plan*. The plan, which DOE developed with input from the uranium industry, detailed the amount of uranium held by the department and its plans for selling or transferring a portion of it. In addition, in 2008, DOE adopted a guideline to generally restrict sales and transfers of uranium to no more than 10 percent of the annual U.S. requirements for nuclear fuel which, according to DOE at the time, generally would ensure that such transfers would not have an adverse material impact on the domestic uranium industry. The guideline was established with input from representatives from the uranium industry and was intended, in part, to address concerns that DOE uranium sales could depress uranium prices and harm the domestic mining, conversion, and enrichment industries.[16] The Secretary of Energy also issued a policy

[14]See for example, DOE Pricing Policy Change for Sale of Uranium Depleted in Isotope U-235, 47 Fed. Reg. 17,110 (Apr. 21, 1982). See also notices from DOE's predecessors in operating the enrichment facilities, Atomic Energy Commission, Uranium Hexaflouride: Base Charges, Use Charges, Special Charges, Table of Enriching Services; Specifications and Packaging, 32 Fed. Reg. 16,289 (Nov. 29, 1967); Energy Research and Development Administration, Uranium Heraflouride (sic): Base Charges, Use Charges, Special Charges, Table of Enriching Services; Specifications, and Packaging: Revisions, 42 Fed. Reg. 51,635 (Sept. 29, 1977).

[15]See GAO-08-606R.

[16]Conversion is the process of converting mined natural uranium to a gas that can be used for enrichment.

statement in 2008 on the management of DOE's excess uranium inventory, which committed DOE to generally undertake transactions involving non-U.S. government entities in a transparent and competitive manner that is supportive of a strong domestic nuclear industry.[17] DOE updated its excess uranium management plan in July 2013. In that plan, DOE announced its decision to discontinue using its 10 percent guideline for limiting uranium sales and transfers and stated that that it could meet its statutory and policy objectives without one.

GAO's Work Has Raised Issues about DOE's Management of Excess Uranium

We have raised four key issues related to DOE's management of excess uranium in seven products issued since 2006. Specifically, in our work, we have found that (1) DOE will no longer use a guideline to limit its annual uranium sales or transfers; (2) DOE did not take steps to assess the technical quality of contracted market impact studies; (3) DOE's uranium transfers have in some cases violated federal law; and (4) DOE may not be effectively stewarding its uranium resources.

DOE Will No Longer Use a Guideline to Limit Its Annual Uranium Sales or Transfers

In our May 2014 report, we found that DOE's decision to discontinue using its guideline for limiting uranium sales and transfers might affect the transparency of DOE's future uranium sales and transfers.[18] During the course of our work for the May 2014 report, DOE officials told us that DOE was not obligated to establish a guideline and, according to DOE's July 2013 *Excess Uranium Inventory Management Plan*, the department determined that it could meet its statutory and policy objectives without a guideline. Instead, the plan states that DOE will review decisions to introduce uranium into the market every 2 years and will publish secretarial determinations with these decisions. In conducting the work for our May 2014 report, industry representatives we interviewed raised concerns about DOE's July 2013 plan, including the following:

- DOE officials did not consult with industry representatives before deciding to discontinue using its 10 percent sales and transfer guideline. DOE officials told us that the department did not specifically seek comment from industry representatives on its 2013 plan or its

[17] *Secretary of Energy's Policy Statement on Management of the Department of Energy's Excess Uranium Inventory* (Washington, D.C.: Mar. 11, 2008).

[18] See GAO-14-291.

decision to discontinue use of the 10 percent guideline but noted that industry representatives could request informal meetings with DOE to discuss their concerns. In addition, DOE officials told us that they have presented the department's plans and listened to views of interested stakeholders at formal industry meetings.

- DOE's introduction of material into the uranium market is causing further deteriorating demand for non-DOE uranium and driving down uranium prices. However, by eliminating its guideline without considering input from the domestic uranium industry, DOE has introduced uncertainty in the uranium market because DOE's uranium management plan provides less transparency on DOE's future uranium transfers for members of industry. The Uranium Producers of America—an association that promotes the viability of the domestic uranium industry—noted in a July 2013 statement that DOE's plan is ambiguous and lacks predictability, which is needed for the uranium industry—a sector that is currently struggling to secure capital to start up, sustain, or grow its operations. DOE's comments in response to our May 2014 report did not address industry concerns about reduced transparency.

In our May 2014 report, we recommended that DOE seek and consider industry input on the amount of DOE sales or transfers of uranium the market can absorb annually and on whether there is a need to reinstitute a guideline that limits annual uranium sales and transfers. DOE disagreed with our findings and recommendations and stated that it has met with industry parties in the past and is open to receiving related information for consideration as it makes future plans. DOE is now taking action consistent with our recommendation because, in December 2014 and March 2015, DOE solicited public input on the potential effects of DOE transfers of excess uranium on the domestic uranium market.

In September 2011, we also identified concerns about market uncertainty resulting from DOE's implementation of its 2008 plan. Specifically, we found that DOE had deviated from the schedule of uranium transfers articulated in its 2008 *Excess Uranium Inventory Management Plan* by allowing more uranium to enter the market sooner than the plan stated.[19] At that time, domestic uranium industry officials we interviewed told us that DOE's departure from its 2008 plan had created anxiety about how

[19]See GAO-11-846.

much further DOE might deviate from its plan in the future. In particular, industry officials were concerned that uncertainties about the quantities of uranium DOE might suddenly decide to sell or transfer could cause uranium prices to fall. Industry officials told us that this fear of declining prices discouraged potential investment in the industry, particularly in newer mining companies seeking to start production.[20] In our September 2011 report, we recommended that DOE update its 2008 *Excess Uranium Inventory Management Plan* to more accurately reflect the department's plans for marketing its uranium. DOE agreed and, in response to our recommendation, released an update to its plan in July 2013. However, as described above, that update may in fact diminish the transparency of DOE's planned future uranium sales and transfers.

DOE Did Not Take Steps to Assess the Technical Quality of Market Impact Studies for Which It Contracted

In May 2014, we found that DOE did not take steps to assess the technical quality of two market impact studies ERI conducted for DOE in 2012 and 2013.[21] DOE uses these market impact studies, in part, to inform the Secretary's statutorily required determinations about whether DOE sales or transfers of uranium will have an adverse material impact on the domestic uranium mining, conversion, or enrichment industries. Specifically, we found that DOE did not take steps outlined in its contracts or in departmental quality assurance guidance to assess the technical quality of these studies. For example, DOE's contract with ERI includes a statement of work providing that, at regular intervals, DOE will formally evaluate the contractor's performance, which evaluation may include the technical quality of the contractor's deliverables, among other things. In

[20]In June 2014, ConverDyn—a U.S. uranium conversion company—filed a lawsuit seeking to stop DOE's uranium transfers, citing concerns about the impact of these uranium transfers on the domestic uranium conversion industry. According to ConverDyn's complaint, it expects to lose more than $10 million per year in potential revenue through 2021 as a result of DOE's uranium transfer activities. This litigation is ongoing.

[21]The April 2012 study projected the potential market effects during calendar years 2012 through 2033 for three DOE uranium transfers: (1) DOE's May 2012 tails transfer for a transaction involving USEC—accounting for about 16 percent of the material studied; (2) ongoing quarterly transfers of natural uranium to contractors in exchange for environmental cleanup services at a uranium enrichment plant—accounting for 72 percent of the material studied; and (3) transfers of downblended highly enriched uranium—accounting for 12 percent of the material studied. The January 2013 study projected the market impact during calendar year 2013 for one transaction: DOE's March 2013 transfer of the enrichment services component of enriched uranium to USEC. See GAO-14-291 for additional details about the two transactions involving USEC.

addition, DOE's *Information Quality Guidelines* set forth quality assurance steps and procedures to ensure the technical quality of information that DOE makes publicly available.[22] The ERI studies were published on DOE's website, but DOE officials told us that they neither conducted an assessment of the technical quality of the studies nor requested any additional information from ERI about the studies. According to DOE officials, they did not examine the studies' methodology or assess the studies' technical quality because they wanted ERI's studies to be independent and did not want to influence their results. DOE officials told us that they contracted with ERI to provide subject matter expertise that did not exist within DOE and trusted ERI to provide that expertise. However, if DOE did not have the internal subject matter expertise to review the studies, another tool available to the department—specifically discussed in DOE's *Information Quality Guidelines*—is peer review, which is generally defined as the process of having independent experts assess the technical and scientific merit of studies. Nonetheless, ERI's principal author told us that the two studies were not peer-reviewed by a third party.

In our May 2014 report, we also found that ERI's studies provided limited detail about their methodology, data sources, and assumptions, even though DOE's *Information Quality Guidelines* direct such information to be included in publicly disseminated documents.[23] For example, ERI did not provide information about the sources of data it used to develop its market supply curves, which were fundamental to its market analysis. We also identified shortcomings in the studies that raise questions about their conclusions, which DOE used to inform the Secretary of Energy's statutory determinations that its uranium transfers would not have an adverse material impact on the domestic uranium market. For example, we identified concerns about ERI's assumption that DOE's planned uranium transfers would not have a cumulative effect on the term

[22]These guidelines—developed by DOE as required by the Information Quality Act and under associated guidelines issued by the Office of Management and Budget—set forth quality assurance steps and procedures to ensure the quality and objectivity of information that DOE makes publicly available. The guidelines state that DOE should seek to ensure that information disseminated to the public meets a basic level of quality, which is measured by the objectivity of the information and whether the information is accurate, clear, complete, and reliable. Consolidated Appropriations Act, 2001, Pub. L. No. 106-554 Title V § 515 (a), 114 Stat. 2763A-153 to 2763A-154 (2000) (commonly referred to as the Information Quality Act).

[23]See GAO-14-291.

market.[24] Similarly, in September 2011, we also identified concerns with the results of two market impact analyses ERI conducted for DOE in November 2009 and December 2010 because of issues related to the economic model developed by ERI.[25]

In our May 2014 report, to ensure the quality, credibility, and transparency of any future uranium market impact studies, we recommended that DOE (1) conduct assessments of the quality of its future market impact studies consistent with DOE's *Information Quality Guidelines* or have an independent third party conduct a peer review and (2) require that the studies include information on the methods, data sources, and assumptions used consistent with DOE's *Information Quality Guidelines*.[26] DOE neither agreed nor disagreed with this recommendation and stated that it would continue to consider the applicability of its *Information Quality Guidelines* to independent analyses of the potential market impact of the proposed transactions and take appropriate steps if applicable. DOE did not comment on the second part of our recommendation to include information on the methods, data sources, and assumptions in its studies. We continue to believe that DOE should require that its future studies contain such information to ensure their quality, credibility, and transparency.[27]

[24]Specifically, we identified several concerns with the certainty of ERI's conclusions regarding the effect of DOE's uranium transfers on the term and spot markets, including (1) the completeness of the data ERI used to develop the market supply curves, which were fundamental to its term market analysis; (2) ERI's assumption that DOE's planned uranium transfers would not have a cumulative effect on the term market; and (3) ERI's model that it developed for its analysis of the spot market, which accounts for some, but not all, factors that can affect spot market prices. See GAO-14-291 for our analysis of ERI's market impact studies and discussion of these concerns.

[25]See GAO-11-846.

[26]See GAO-14-291.

[27]In April 2014, ERI released a report assessing additional proposed DOE transfers. In that assessment, ERI does not make any conclusion about whether or not the release of DOE inventories into the commercial markets will result in an adverse material impact. Instead, ERI notes that, in accordance with the USEC Privatization Act, any determination of adverse material impact is made by the Secretary of Energy.

DOE's Uranium Transfers Have, in Some Cases, Violated Federal Law

Since 2006, we have reported on legal concerns with a number of transfers or potential transfers of uranium.[28] In May 2014, we identified legal concerns with four DOE uranium transactions conducted from 2012 through 2013.[29] For a March 2013 transaction, for example, we found that DOE transferred ownership of uranium previously obtained for national security purposes without obtaining the required presidential determination that the uranium material was no longer necessary for national security purposes.[30] For another transaction, in May 2012, we found that DOE likely lacked authority to transfer tails because of specific prohibitions imposed by the USEC Privatization Act.[31] As we explained in our May 2014 report—and had explained in our 2008 report when we addressed the same legal issue[32]—section 3112 of the USEC Privatization Act prohibits DOE from selling or transferring "any uranium" to "any person" except in a manner consistent with the act. Because the act specifies no conditions for the sale or transfer of depleted uranium tails, in contrast to the act's conditions for other types of uranium, statutory construction rules indicate DOE likely lacks authority to sell or transfer depleted uranium. DOE disagreed with this conclusion, citing its general authority under the Atomic Energy Act to distribute source material.[33] Even if that general authority applied to the transfer of depleted uranium, however, we found that DOE did not meet the Atomic Energy Act's requirement to charge a price for the tails because it transferred them without charging any price at all.

To ensure the same type of scrutiny that Congress has required for sale or transfer of DOE's other valuable federal uranium assets—such as

[28]See GAO-14-291, GAO-11-846, GAO-08-606R, and B-307137.

[29]See GAO-14-291.

[30]See GAO-14-291.

[31]USEC Privatization Act § 3112, codified as amended at 42 U.S.C. § 2297h-10.

[32]See GAO-08-606R.

[33]DOE said its position is "consistent with" section 3112's broad prohibition because Congress included no conditions authorizing the sale or transfer of depleted uranium. This only reinforces GAO's interpretation. Congress imposed conditions on DOE's sale of all valuable uranium; because depleted uranium was not valuable in 1996, Congress did not need to address its sale or transfer and instead addressed its disposal in section 3113. When depleted uranium later became valuable, its sale or transfer remained prohibited unless and until Congress sets conditions to ensure appropriate management of this federal asset. See GAO-14-291 and GAO-08-606R.

price, protection of the domestic uranium industry, and safeguarding the national security—we suggested that Congress consider clarifying DOE's authority to manage depleted uranium and provide explicit direction about whether and how DOE may sell or transfer it.[34] Legislation has been introduced that would authorize DOE to sell or transfer depleted uranium subject to certain conditions but, as of March 2015, Congress has not passed legislation to clarify or enhance DOE's authority.[35]

In our May 2014 report, we recommended that for each uranium transaction it conducts, DOE should publicly identify the legal authority it relies on and explain how the transaction meets the requirements of that authority. DOE disagreed with this recommendation and stated that it would not publicly report the authorities it relies on because it is not legally required to do this and because citing the law would disclose information "traditionally...protected as attorney work product or privileged pre-decisional documents." Reporting DOE's final decision on which law it has relied on for its transactions would breach no privilege, however, and we maintain that reporting this to Congress and the public would improve transparency. After we issued our report, Congress took action in the Consolidated and Further Continuing Appropriations Act, 2015, to require what we had recommended: that DOE report to the Committees on Appropriations the provisions of law under which it conducts uranium transactions not less than 30 days prior to conducting the transaction.[36]

In July 2006[37] and September 2011,[38] we reported on a different legal concern, finding that certain of DOE's uranium transfers were sales authorized by the USEC Privatization Act but that DOE violated federal fiscal law in how it handled proceeds from these transfers. Specifically, the miscellaneous receipts statute requires an official or agent of the government receiving money from any source on the government's behalf to deposit the money into the Treasury.[39] We found that DOE provided

[34]See GAO-12-342SP and GAO-08-606R.

[35]SAVE Act, H.R. 614, 114th Cong. § 114 (2015).

[36]Pub. L. No. 113-235, div. D tit. III, § 306(b) (2014).

[37]See B-307137.

[38]See GAO-11-846.

[39]Miscellaneous receipts statute, 31 U.S.C. § 3302(b) (2015).

uranium to USEC for sale to a third party and allowed USEC to keep the proceeds of the sales as payment for services rendered to DOE, but DOE did not deposit the value of the net proceeds from these uranium sales into the Treasury. Even with no money changing hands, we concluded that an amount equivalent to the value that went to USEC should have gone to the Treasury. While our 2011 report noted that the transactions we analyzed in 2011 differed in some superficial respects from the transactions we analyzed in 2006, we found the core substance was the same and, as DOE officials told us in 2011, the department intentionally structured the disposition of federal assets to avoid payment of the proceeds for those assets into the Treasury. Our September 2011 report suggested that Congress consider providing DOE with explicit authority to barter excess uranium and to retain the proceeds from bartering, transferring, and selling uranium but, as of March 2015, Congress had not passed legislation giving DOE this authority.

DOE May Not Be Effectively Stewarding Its Uranium Resources

In our May 2014 report, we found that DOE did not have consistent methods for valuing depleted uranium tails.[40] As discussed above, we found that DOE likely lacks authority to sell such material but noted that if DOE sells it, nonetheless, it should seek to maximize the value received by the government in any such transaction.[41] Specifically, we found that DOE did not have guidance for determining the value of tails when they are treated as an asset in a transaction and, as a result, DOE estimated the tails it transferred for re-enrichment in a 2012 transfer had a potential value ranging from $0 to $300 million. For this 2012 transaction, DOE decided that the tails it transferred had no value because tails are typically considered to be an environmental liability and, therefore, the transaction had no cost to the department. However, because the tails were re-enriched and used in lieu of natural uranium, we found that the tails were an asset in the context of this transaction and, therefore, should have had some value. Moreover, in other cases, DOE has determined

[40]See GAO-14-291.

[41]Even if DOE has authority to transfer tails, the 2008 *Secretary of Energy's Policy Statement on Management of the Department of Energy's Excess Uranium Inventory* required DOE to ensure that the department receives reasonable value in return for transferred uranium. In addition, the Atomic Energy Act requires DOE to establish a nondiscriminatory price for uranium that would provide reasonable compensation to the government. Further, the USEC Privatization Act requires DOE to obtain fair market value for transferred uranium.

that tails do have value. For example, in November 2013, DOE announced that it would begin negotiations with GE-Hitachi's Global Laser Enrichment about selling part of DOE's inventory of tails. The fact that DOE received commercial interest in its tails underscores the point that tails can be viewed as an asset. Previously, in a DOE 2005 transfer of tails to Energy Northwest—a membership organization of public utilities in the northwestern United States—DOE charged a price for its tails. Without consistent guidance for how to value its tails in the context of transactions that treat them as an asset, DOE cannot ensure the government is reasonably compensated for its uranium transfers.

Therefore, in May 2014, we recommended that DOE develop guidance for consistently determining the value of depleted uranium tails when transferring them as an asset. DOE disagreed with this recommendation and stated that it is not required to establish guidance or a pricing policy for depleted uranium and to do so would hinder DOE's ability to maximize the value received by the government in a given transaction. However, we continue to believe that, because DOE may sell or transfer additional tails in the near future, having guidance that provides a consistent and transparent method for determining the value of tails in the context of a transaction is necessary.

Having guidance that provides a consistent and transparent method for determining the value of tails is particularly important when uranium prices are volatile. In March 2008, we reported that uranium prices are very volatile, and a sharp rise or fall in prices could greatly affect the value of DOE's tails inventory.[42] At the time of that report, we concluded that the dramatic increases in uranium prices in 2008 had presented the U.S. government with an opportunity to gain potentially billions of dollars from depleted uranium tails material that was once considered a liability.[43] However, since then, global market prices for uranium have declined

[42]See GAO-08-606R.

[43]While we concluded that DOE's authority to sell depleted uranium tails was doubtful, we found that DOE generally has authority to re-enrich and then sell the tails.

steeply.[44] This raises questions as to whether DOE's plan for its excess uranium management considers the timing of its potential uranium transfers with market conditions to maximize the value of uranium for the government.

In conclusion, DOE requires uranium for national security purposes, and DOE's inventory of uranium represents a valuable and important asset that the government must effectively and responsibly manage. Over nearly a decade, we have made numerous recommendations in our reports to address issues related to the management of excess uranium. In our most recent 2014 report, DOE generally disagreed with our recommendations to improve the transparency of its uranium transfers. However, DOE has taken some recent steps that are consistent with the intent of one of our recommendations. For example, in a notice published in the *Federal Register* in December 2014, in anticipation of a new secretarial determination covering future transfers of uranium, DOE solicited public input on the potential effects of DOE transfers of excess uranium on the domestic uranium mining, conversion, and enrichment industries and on methodologies to assess the market impact of these transfers.[45] Similarly, in a *Federal Register* notice in March 2015, DOE summarized the responses it received regarding the December 2014 notice and the list of factors DOE has identified for analysis of the potential effects of DOE transfers on the uranium mining, conversion, and

[44]In March 2011, a tsunami caused by a major earthquake off the coast of Japan resulted in irreparable damage to four nuclear reactors at the Fukushima Daiichi power plant. The accident has led to a review of civilian nuclear power programs worldwide, affecting the global market for uranium enrichment services and resulting in significant downward pressure on market prices for low-enriched uranium. For example, in the wake of the accident, the Japanese government directed that all but 2 of Japan's 50 civilian nuclear power reactors be shut down pending a complete safety review and, as of March 2014, all reactors had been shut down. In March 2014, we reported that it was uncertain when these reactors will be brought back online. In addition, Germany accelerated the shutdown of its nuclear power reactors. Specifically, on June 30, 2011, after the Fukushima Daiichi accident, the German parliament voted to fully shut down its nuclear power plants by the end of 2022. This vote followed the suspension of operations of 8 of Germany's 17 nuclear power plants. See GAO, *Nuclear Safety: Countries' Regulatory Bodies Have Made Changes in Response to the Fukushima Daiichi Accident*, GAO-14-109 (Washington, D.C.: Mar. 6, 2014).

[45]Excess Uranium Management: Effects of DOE Transfers of Excess Uranium on Domestic Uranium Mining, Conversion, and Enrichment Industries; Request for Information, 79 Fed. Reg. 72,661 (Dec. 8, 2014).

enrichment industries.[46] We will continue to monitor DOE's actions that may address our recommendations and any other steps the department takes to improve the transparency of its uranium transactions.

Chairman Lummis, Ranking Member Lawrence, and Members of the Subcommittee, this completes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

GAO Contact and Staff Acknowledgments

If you or your staff members have any questions about this testimony, please contact me at (202) 512-3841 or trimbled@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. GAO staff who made key contributions to this testimony are Susan D. Sawtelle, Managing Associate General Counsel; Allison B. Bawden, Assistant Director; Eric Bachhuber, Antoinette Capaccio, Karen K. Keegan, Amanda K. Kolling, Mehrzad Nadji, Rebecca Shea, and Karen Villafana.

[46]Excess Uranium Management: Effects of DOE Transfers of Excess Uranium on Domestic Uranium Mining, Conversion, and Enrichment Industries; Notice of Issues for Public Comment, 80 Fed. Reg. 14,107 (Mar. 18, 2015).

Related GAO Products

Department of Energy: Enhanced Transparency Could Clarify Costs, Market Impact, Risk, and Legal Authority to Conduct Future Uranium Transactions. GAO-14-291. Washington, D.C.: May 9, 2014.

2012 Annual Report: Opportunities to Reduce Duplication, Overlap and Fragmentation, Achieve Savings, and Enhance Revenue. GAO-12-342SP. Washington, D.C.: February 28, 2012.

Excess Uranium Inventories: Clarifying DOE's Disposition Options Could Help Avoid Further Legal Violations. GAO-11-846. Washington, D.C.: September 26, 2011.

Nuclear Material: DOE's Depleted Uranium Tails Could Be a Source of Revenue for the Government. GAO-11-752T. Washington, D.C.: June 13, 2011.

Nuclear Material: Several Potential Options for Dealing with DOE's Depleted Uranium Tails Could Benefit the Government. GAO-08-613T. Washington, D.C.: April 3, 2008.

Nuclear Material: DOE Has Several Potential Options for Dealing with Depleted Uranium Tails, Each of Which Could Benefit the Government. GAO-08-606R. Washington, D.C.: March 31, 2008.

Department of Energy: December 2004 Agreement with the United States Enrichment Corporation. B-307137. Washington, D.C.: July 12, 2006.

Ms. LUMMIS. Thank you, Mr. Trimble.

Mr. Melbye, you are now recognized for 5 minutes.

STATEMENT OF SCOTT MELBYE

Mr. MELBYE. Thank you. Good morning, Chairwoman Lummis, Ranking Member Lawrence and members of the subcommittee.

My name is Scott Melbye. I am Executive Vice President of Uranium Energy Corporation.

I am proud to be a second generation U.S. uranium miner, my father having discovered and developed uranium deposits in Wyoming's Powder River Basin and the Colorado plateau of the western United States.

I have worked in the uranium industry now for more than three decades, including senior roles at Cameco and Uranium One. I also previously served as President of the Uranium Producers of America.

While I remain firmly optimistic in the potential of U.S. uranium production, we are facing the most challenging market conditions in my career, with market prices having fallen below the level of all but the most competitive production cost operations.

My company, Uranium Energy Corporation, based in Corpus Christi, Texas, has gone through what has become an all too familiar development. We, like other U.S. uranium producers, were incentivized by market conditions in 2009 and 2010 to startup or expand uranium operations.

In South Texas, we brought on the first new mine there in many years, employing as many as 85 people in 2012. Today, however, we are idling operations, ceasing new well field development, and cutting back our staff to 39 employees.

We recognize the department's transfers are not solely responsible for the current market conditions. However they have made the situation decidedly worse. All of us in the mining industry understand and regularly deal with normal, healthy competition and the ups and downs that are inherent in our cyclical business.

However, what the DOE is doing in this market defies normal business logic. At a time when producers in the United States, and elsewhere, are reducing production, shutting in mines and canceling new projects, the Federal Government has substantially increased its sales volumes and become our largest competition.

For context, the department sold nearly twice as much uranium in 2014 as the entire domestic industry produced. Under the volumes announced in the May 2014 Secretarial Determination, the Federal uranium transfers account for more than 100 percent of the global uncommitted utility demand for 2015, meaning there is no room for the domestic producers to compete.

The UPA is not opposed to DOE leveraging America's uranium assets. However, the disposition of the uranium inventory should be predictable, transparent, and done in a way which minimizes the impact on our industry and secures the highest value for taxpayers.

As you know, under the USEC Privatization Act, before making any uranium transfer, the department must certify the transfer "will not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industries." The department also

has a legal obligation to ensure taxpayers receive fair value for this asset.

UPA maintains the department's recent actions, including the May 2014 Secretarial Determination, fail to meet its legal obligations under the USEC Privatization Act.

When prices crashed following Fukushima, domestic producers throttled back operations. DOE's response was the exact opposite. As uranium prices dropped, DOE pushed more material into a market that was already oversupplied.

UPA recently commissioned a market report from Trade Tech, a leading market industry analyst, to look at the impact of the department's uranium transfers. Trade Tech found transfers of DOE material outweighed other supply developments due to Fukushima in the short-term.

In addition, Trade Tech concluded if DOE does not reduce the amount of material entering the market, the transfers will influence the fates of uranium producers, both existing and in development, through its impact on prevailing prices and producer margins.

Let me briefly outline UPA's recommendations regarding steps the department could take to reduce the impact of future transfers on the domestic industry.

1 would be to reinstate an annual cap on transfers. In 2008, the uranium industry, utilities, and the department reached consensus on a plan to limit annual transfers to 10 percent of domestic utility requirements, about 5 million pounds per year.

Unfortunately, the department quickly abandoned the cap and has dramatically increased the amount of material entering the market. UPA recommends reinstating a cap of 5 million pounds per year that includes all categories of DOE material and would be phased-in over 5 years.

2 would be to reform how material enters the market. The manner in which DOE moves the material into the market, primarily through the spot market or near-term contracts, is nearly as damaging to our industry as the amount of material being transferred.

UPA encourages the department to work with the domestic converter uranium producers to minimize the impact of government material coming into the market, as was done under the Megatons to Megawatts Agreement.

Uranium producers, with a vested interest, can feed the material into long-term contracts, which will ease some of the pressure in the short-term when the market is oversupplied.

3 would be to subject future Secretarial Determinations to full notice and comment before they are finalized with greater transparency and oversight on DOE actions.

Thank you again for the opportunity to testify at today's hearing. I would be pleased to take your questions.

[Prepared Statement of Mr. Melbye follows:]

STATEMENT OF SCOTT MELBYE
EXECUTIVE VICE PRESIDENT, URANIUM ENERGY CORPORATION

APRIL 22, 2015

BEFORE THE

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
SUBCOMMITTEE ON INTERIOR

FOR A HEARING

EXAMINING THE DEPARTMENT OF ENERGY'S
EXCESS URANIUM MANAGEMENT PLAN

Good afternoon Chairman Lummis, Ranking Member Lawrence, and Members of the Subcommittee. My name is Scott Melbye, and I am the Executive Vice President of Uranium Energy Corporation.

I'm proud to be a second-generation, U.S. uranium miner, my father having discovered and developed uranium deposits in Wyoming's Powder River Basin and the Colorado Plateau of the Western United States. I've worked in the uranium industry now for more than three decades, including senior roles at Cameco and Uranium One. I also previously served as President of the Uranium Producers of America.

While I remain firmly optimistic in the potential of U.S. uranium production, we are facing the most challenging market conditions in my career, with market prices having fallen below the level of all but the most competitive production cost operations. My company, Uranium Energy Corporation, based in Corpus Christi, Texas, has gone through what has become an all too familiar development. We, like other U.S. uranium producers, were incentivized by market conditions in 2009 and 2010 to start up or expand uranium operations. In South Texas, we brought on the first new mine there in many years, employing as many as 85 people in 2012. Today, however, we are idling operations, ceasing new well field development, and cutting back our staff to 39 employees. As such, we appreciate the chance to testify today and share our recommendations for actions the Department of Energy could take to minimize the impact of its uranium transfers on the domestic industry.

We recognize the Department's transfers are not solely responsible for the current adverse market conditions, however they have made the situation decidedly worse. All of us in the mining industry understand and regularly deal with normal, healthy competition and the ups and downs that are inherent in our cyclical business. However, what the DOE is doing in this market defies normal business logic. At a time when producers in the United States, and elsewhere, are reducing production, shutting in mines and cancelling new projects, the federal government has substantially increased its sales volumes and become our largest competitor. For context, the Department sold nearly twice as much uranium in 2014 as the entire domestic industry produced. Under the volumes announced in the May 2014 Secretarial Determination, the federal uranium transfers account for more than 100 percent of the global uncommitted utility demand for 2015, meaning there is no room for the domestic producers to compete.

The UPA is not opposed to DOE leveraging America's uranium assets. However, the disposition of the uranium inventory should be predictable, transparent, and done in a way that minimizes the impact on our industry and secures the highest value for taxpayers. As you know, under the USEC Privatization Act, before making a uranium transfer, the Department must certify the transfer "will not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industries." UPA maintains the Department's recent actions, including the May 2014 Secretarial Determination, fail to meet its legal obligation to protect the domestic uranium industry and violate the USEC Privatization Act.

When prices crashed following Fukushima, domestic producers throttled back operations. DOE's response was the exact opposite. As uranium prices dropped, DOE pushed more material into a market that was already oversupplied. UPA recently commissioned a market report from

Trade Tech, a leading industry analyst, to look at the impact of the Department's uranium transfers. Trade Tech found transfers of DOE material outweighed other supply developments due to Fukushima in the short-term. In addition, Trade Tech concluded if DOE does not reduce the amount of material entering the market, the transfers will influence the fates of uranium producers, both existing and in development, through its impact on prevailing prices and producer margins.

Let me briefly outline key steps the Department could take to reduce the impact of future transfers on the domestic industry:

- **Reinstate an annual cap on transfers** – In 2008, the uranium industry, utilities, and the Department reached consensus on a plan to limit annual transfers to 10 percent of domestic utility requirements – about 5 million pounds per year. Unfortunately, the Department quickly abandoned the cap and has dramatically increased the amount of material entering the market. UPA recommends reinstating a cap of 5 million pounds per year that includes all categories of DOE material and would be phased-in over five years.

- **Reform how material enters the market** – The manner in which DOE moves the material into the market – primarily through the spot market or near-term contracts – is nearly as damaging to our industry as the amount of material being transferred. UPA encourages the Department to work with uranium producers to minimize the impact of government material coming into the market, as was done under the Megatons to Megawatts Agreement. Uranium producers, with a vested interest, can feed the material into long-term contracts, which will ease some of the pressure in the short-term when the market is oversupplied.

- **Subject future Secretarial Determination to full notice and comment before they are finalized** –While we appreciate the recent actions the Department has taken to solicit public input, given the significant impact these transfers have on our industry, the Department should initiate a full rulemaking process and release a draft Secretarial Determination for public comment before it is finalized.

Thank you again for the opportunity to testify at today's hearing. I would be pleased to take your questions.

Ms. LUMMIS. Thank you, Mr. Melbye, you were spot on with your 5 minutes.

Gentlemen, we will now begin questions. I would actually like to recognize the Ranking Member first.

Mrs. LAWRENCE. Thank you, Madam Chair.

The testimony is clear that the uranium market is currently facing depressed conditions. However, the department is increasing the amount it transfers into the market.

Mr. Kotek, why has DOE elected to transfer its uranium now rather than waiting for the market prices to rebound? Can you please respond?

Mr. KOTEK. Thank you for the question.

Of course the department has to make a determination about the impact that such transfers would have on the industry. The Secretary of Energy considers a variety of factors when making such determinations and of course is very interested in ensuring that we both protect a robust domestic nuclear industry, including the uranium industry while also meeting our other obligations for cleanup and non-proliferation.

What I will say going forward is that the department has certainly heard the concerns expressed by this committee, the industry and others and is trying to engage in a process going forward that will address some of the concerns that have been raised here today, particularly regarding the transparency and the opportunity for comment.

As you may know, we issued a notice late last fall requesting an initial input from the industry. We more recently provided an opportunity for industry to provide feedback on further information, a compilation of comments we received and some other analyses so that we understand fully both the views of market conditions and the opinions of participants in the industry on other issues so that going forward we have provided the types of opportunities for transparency and input that participants in this marketplace are looking for.

Mrs. LAWRENCE. Does the DOE monitor real time market conditions to maximize the value that it is obtaining or the value of the uranium for the government? I am asking because shouldn't it be the objective of DOE to prevent depressing the market after marketing a transfer?

Can you delve into what have been the steps for you to have a real price value? You are gathering this information but what have you done to ensure we are not depressing the market?

Mr. KOTEK. As mentioned this morning, we conduct regular analysis that look at the amount of material or a range of the amount of material that can go into the marketplace and get an industry expert organization to help us understand what impacts particular ranges of transactions could have.

We are, of course, very mindful of the value of the asset that we hold in terms of this uranium. We try to structure our transactions in a way that best serves the interests of the taxpayers and our programs.

When actually structuring the transactions, we peg the value of the uranium to be transferred on market indices and publicly avail-

able at the time, so we try to ensure that the taxpayers are, in fact, getting the best value for that resource.

As you may know, in accordance with the law, we also provide a 30-day advance notification to Congress on the amounts, the value and the timing of the uranium transfers that we will engage in for both the cleanup and for the non-proliferation programs.

Mrs. LAWRENCE. It is my understanding that the DOE enters into long term contracts for the environmental cleanup of the gaseous diffusion plant in Portsmouth, Ohio and for the down blending of weapons grade uranium in Erwin, Tennessee, is that correct?

Mr. KOTEK. We have contracts for both of those activities, yes.

Mrs. LAWRENCE. Are those contracts funded by the transfer of uranium in exchange for the cleanup services?

Mr. KOTEK. Thank you for the question.

As part of fulfilling or obligations under those contracts, there is uranium bartered to cover some of the services provided under each contract. There are also appropriations that cover I think in both cases the majority—certainly the cleanup contract for the majority of the activity.

Mrs. LAWRENCE. When these transfers happen or are bartered, do you use the market value at that current time for the uranium that you are bartering?

Mr. KOTEK. That is my understanding. I will confess, the cleanup program and the non-proliferation programs are outside of my program area but that is my understanding. If that is incorrect, we will correct it as a followup.

Mrs. LAWRENCE. I yield my time.

Ms. LUMMIS. The gentlelady's time has expired.

The Chair now recognizes herself for 5 minutes.

Mr. Trimble, I want to start by asking what is the miscellaneous receipts statute?

Mr. TRIMBLE. I am not a lawyer so I would ask to take a formal response for the record but the general principle is if there is money coming in to the government, money should be deposited to the Treasury so that it basically protects Congress' authority and control over the purse.

Congress appropriates money. It has that authority. If you didn't respect that, an agency could take in money and then decide how to spend that money itself. It essentially prevents the circumvention of the appropriations process.

Ms. LUMMIS. Between 2009 and 2011, DOE made seven transfers of excess uranium to pay for cleanup services at a DOE enrichment facility, is that correct?

Mr. TRIMBLE. That is correct.

Ms. LUMMIS. Did that activity violate the miscellaneous receipts statute?

Mr. TRIMBLE. That was our finding in our 2011 report, yes.

Ms. LUMMIS. Mr. Kotek, the Department of Energy has contracted with Energy Resources International to conduct market impact analysis of proposed transfers of excess uranium.

Prior to 2014, the analysis reached a determination that there would be no adverse material impact on the domestic uranium industry. It explicitly Stated that conclusion. In 2014, however, the

ERI analysis did not make a determination of market impact. Can you tell me why that is?

Mr. KOTEK. Thank you, Madam Chairman.

First of all, I should point out, with the fact that the 2014 process is subject to litigation, there is a limit to what I can say.

We did provide comment on the 2014 ERI draft as we always do. Our comments conveyed this is ultimately the Secretary's decision. The statute leaves it up to the Secretary to make that determination.

[Slide.]

Ms. LUMMIS. I would like to show you some slides because we requested from ERI documents regarding the process that is used in its market impact analysis.

[Slide.]

Ms. LUMMIS. The first slide I am showing you shows the 2010 ERI market assessment. As you can see in the highlighted language that is blocked off on the right, it finds no adverse material impact. That is the 2010 report.

Now you go to the next slide which is the 2013 ERI market assessment. It also finds no adverse material impact. There are 2010 and 2013.

[Slide.]

Ms. LUMMIS. Now let us go to the 2014 draft ERI market assessment. It notes, in a departure from previous years, that ERI can no longer make a definitive statement of no adverse material impact.

[Slide.]

Ms. LUMMIS. Now go to slide four, please. This slide shows the final 2014 ERI market assessment. It clearly States that ERI makes no conclusion regarding an adverse material impact which seems to be a departure from their draft.

[Slide.]

Ms. LUMMIS. Let me ask you to put up one more slide, please. This fifth slide shows DOE's comments in response to the 2014 draft assessment. In it, comments from DOE suggest that it is not the place of ERI to determine if the transfers would constitute an adverse material impact.

It appears that at one point, the fact that ERI was concluding there was no adverse material impact was OK but then when they decided, we cannot say that anymore, that was when DOE intervened and said, oops that is a Secretarial determination. Do you know who made those comments?

Mr. KOTEK. I am afraid I do not. Having been with DOE for less than 3 months in this position, I am afraid I do not have the history.

Ms. LUMMIS. I appreciate the situation you are in but we still thank you for being here today.

I do want to understand why when the contract provider determined there was no adverse material impact, that was accepted, but when they hit the point where they said we cannot say that anymore, all of a sudden DOE says, oh, well, that is not yours to say.

Thank you, Mr. Kotek and Mr. Trimble.

My time having expired, I will return to the normal order of things and yield to Mr. Russell of Oklahoma for 5 minutes—the gentleman from Texas, Mr. Farenthold.

Mr. FARENTHOLD. Thank you, Madam Chairman.

Mr. Melbye, as a constituent, welcome to Washington.

I would like to ask Mr. Kotek a couple of questions. Is there any disagreement that DOE transfers are depressing uranium prices? You all are not disputing that, are you?

Mr. KOTEK. As you see in our analyses, we certainly look at the situation in the marketplace and have an evaluation done of the potential impacts of transfers into the marketplace. Those show some movement in prices certainly.

Mr. FARENTHOLD. I am little concerned you are also using the uranium to basically barter. If I sold my office furniture to pay for a junket to China, I would be in a little bit of trouble. Did you all not see this coming?

Mr. KOTEK. My understanding is this practice has been undertaken for some number of years.

Mr. FARENTHOLD. I am a little concerned about it. That may be something the overall committee needs to be looking at governmentwide.

I see Congress has really kind of damaged our ability to govern by surrendering some of the power of the purse. It is probably a bigger issue beyond this hearing.

I would like to go to Mr. Melbye for a second. You and your family have been in the uranium business for a long time. There was some talk about the uranium being sold in the spot market.

Where is there a spot market for uranium? My understanding is there are very limited uses for uranium. Obviously, you have depleted uranium that is not a subject here that has some uses but radioactive uranium—medical, nuclear energy and bombs—am I missing something?

Mr. MELBYE. In the commercial nuclear energy industry, the uranium is used for production of electricity, so the spot market for uranium is composed of electric utility companies buying requirements for their nuclear power plants.

Mr. FARENTHOLD. Do they normally buy on a long term contract or do they just go out?

Mr. MELBYE. That is an important point. These are big investments in nuclear power plants and to fuel these reactors, utilities generally cover their requirements well in advance of the actual need.

The actual unfilled uranium requirements that fall into the spot market being utilities needing to buy to fuel their reactors are quite low. Hence, the focus of DOE uranium dispositions in the spot and near term market has a disproportionate impact on prices.

Mr. FARENTHOLD. I guess that goes both ways though. You all probably do not sell that much into the spot market. I guess where I am going with this is where can you guys come together and make this work? It seems like you tried but now it is all in court. Is there another starting point we can get to?

Mr. MELBYE. There certainly is, Mr. Farenthold. Really, the solution that will provide the greatest benefit to the taxpayer and have

the least impact on industry really can be found in a compromise solution.

The way the current barter program is working, it is really kind of a senseless and self perpetuating, downward spiral where the more uranium the DOE sells, the more it impacts price. The more it impacts uranium price, the more uranium they have to sell.

This was even something that was acknowledged by the Ohio congressional delegation as a challenge faced by the Portsmouth cleanup. Really, the solution is to have these measured caps, predictable limits on the inventory sales and involve domestic industries as much as possible.

Mr. FARENTHOLD. Let me ask you one more question because I am very limited on time.

The DOE has reported that domestic uranium production was up 5 percent in 2014 compared to 2013. Given your remarks about the State of the industry, I was surprised to see an uptick in production. Again, you also have Fukushima and a potential decrease in demand. What is the story behind that?

Mr. MELBYE. Mr. Farenthold, that is an excellent question. I am glad you asked it.

The mining business, not just uranium mining, has very long lead times in terms of permitting, licensing, and development of mines. A lot of the investment decisions that were made particularly in the U.S., I think most of the major U.S. uranium producers made investment decisions in the 2009–2010 timeframe and only now in 2013–2014 have seen production top out.

I can assure you that the amount of exploration drilling, drilling contractors in south Texas will tell you that the well field development has absolutely ceased. In Wyoming, it is the same story. The production levels we are going to see in 2015 and 2016 are certainly going to follow on the lack of investment. It is just the lag time to ramp up.

Mr. FARENTHOLD. Maybe the government will get some more money for their uranium, but again, not good for your industry.

I see my time has expired. Thank you very much, Madam Chairman.

Ms. LUMMIS. I thank the gentleman and apologize to the gentlelady from the Virgin Islands. I should have recognized her next. The gentlelady is recognized for 5 minutes.

Ms. PLASKETT. Thank you, Madam Chair.

Good morning, gentlemen.

I wanted to go back to the slides the Chairperson had us looking at earlier today. Chairman, did you put these into the record as yet? I did not hear you ask for unanimous consent.

Ms. LUMMIS. I ask for unanimous consent that they be placed in the record. Without objection, so ordered.

Ms. PLASKETT. Thank you.

Would you please bring up the draft 2014 market analysis slide that was shown to you, if that is possible? Thank you.

[Slide.]

Ms. PLASKETT. The sentence "Given the current weak State of the markets and the impact described in this report, ERI can no longer make such a definitive statement" is highlighted.

Then when I look several sentences down, I see the sentence "Based on the analysis contained in the study, it is not clear that a reduction in DOE inventory releases would cause the overall market conditions to change enough to make a significant difference in the health and status of the domestic industry."

The gentlewoman from Wyoming would appear to show that there was some bias that DOE had put into this report but I note that neither of these sentences, which are contradictory sentences in the draft report, were in the final market analysis report.

If you pull up the final market analysis, that same context, you will see both of those sentences have been removed which seems to me to negate each of those sentences being contradictory conclusions and both of the sentences being edited out, I do not believe the final slide proves any bias or predetermined conclusions motivated by the edits since if they were contradictory and they were both removed, that seems to be pretty even handed and not to bring the scale one way or the other.

I have other questions that I wanted to address this morning related to the uranium industry.

One of the legal requirements for transferring excessive uranium is that the Secretary must make a determination that the transfers would not have a material adverse impact on the domestic mining conversion or enrichment industries.

Mr. Kotek, for transfers in 2012 and 2013, the Secretary's decisions were based on market studies by Energy Resources International that concluded no adverse impacts were proposed for sales, am I correct? Is that right?

Mr. KOTEK. Yes.

Ms. PLASKETT. However, according to GAO's testimony, DOE did not take steps outlined in its contracts or departmental quality assurance guidelines to assess the technical quality of these studies. Mr. Trimble, can you explain that?

Mr. TRIMBLE. Yes, I can. Our 2014 report looked at these studies and had similar findings to what we had in 2011 which really addressed the conclusiveness. We questioned whether the reports' sort of definitive conclusions could be reached given the information we had.

Specifically in the 2014 report, we noted there was limited information in the studies on their methodology, their assumptions or their data sources. We noted that the completeness of the data was in question.

Specifically, they were using general industry information which was fine but they were reaching very specific information with sort of general, sort of top level data which we thought was a bit too much.

They assumed no cumulative effect or impact of transfers over time. They sort of looked at each transfer in isolation of the prior transfer.

Ms. PLASKETT. Let us give Mr. Kotek a chance. What is your department's response to the GAO's finding?

Mr. KOTEK. Thank you for the question.

We have, of course, a detailed response to the GAO's findings that can actually be found at the back of the GAO report.

Ms. PLASKETT. Just give me a high level—what is your response?

Mr. KOTEK. The department took issue with several of the findings from the GAO report. With respect to the ERI report, one of the things we are trying to do going forward is provide more transparency and more opportunities for input to our process.

For instance, fairly recently, we published in the Federal Register a document providing some of the analysis that has been prepared for us. We have made the ERI report broadly available so that people can provide us with input where they think the report might be off the mark.

Ms. PLASKETT. What steps are you taking to mitigate the negative market impacts that resulted from that when you used that study for the 2014 transfers?

Mr. KOTEK. Thank you for the question.

The 2014 process is all subject to litigation, so I am limited in what I can say about that. What I can say is that going forward, we have heard the concern about lack of transparency and lack of opportunity for input.

We are trying something we have not done before in terms of the number of opportunities for providing for input. We have been very pleased with the number of responses and the quality of responses we have received.

Those will be factored into the new determination that is issued and it should be fairly soon. Frankly, we will adjust the process going forward as we see how the situation unfolds.

Ms. PLASKETT. Thank you.

Thank you, Madam Chairman, for the time.

Ms. LUMMIS. Thank you. The gentlelady yields back.

The Chair recognizes the gentleman from Arizona, Mr. Gosar.

Dr. GOSAR. Thank you, Madam Chairman.

Mr. Kotek, do you understand market forces?

Mr. KOTEK. I have only been on the job now X amount of time.

Dr. GOSAR. But do you really understand market forces? I am going to give you an example.

Do you understand the rare earth issue in the world—that we have China that manipulates them, they have a monopoly. What they actually do is they flood the market so it is inconceivable that actually a mining process can do it and make some type of a profit. Then they continue to raise it up to the point that people want to get back in and then they cut it back down?

Mr. KOTEK. Sir, I can actually claim some understanding of the rare earth issue. In a past life, I participated in some of the communications work around a proposed rare earth mine in the northeastern part of the great State of Wyoming in the Bear Lodge District, so yes.

Thank you for calling attention to that issue. That is an important one.

Dr. GOSAR. Yes, it is manipulation of the marketplace. This is what I want to go back through. I know my colleague from Texas actually highlighted that.

With the Fukushima accident and subsequent shuttering of the Japanese nuclear reactors, the price of uranium was dropped from $70 per pound down to $55. With the subsequent flooding of the market, we are down to $28 per pound and currently about $37 per pound.

In my State of Arizona, there is now only one producer left operating in the whole State. This has stunted economics. This is an aspect of great job stability in rural Arizona. From my standpoint, when you manipulate the marketplace without looking at the consequences of it, it drives this marketplace very differently.

Is your agency pro-mining?

Mr. KOTEK. Our agency supports a strong domestic mining industry and the uranium mining industry in particular.

Dr. GOSAR. What efforts have you taken to help streamline the rules and regulations in regard to mining?

Mr. KOTEK. That doesn't really fall into the purview of our agency, sir.

Dr. GOSAR. Well, but it has inferences on it because you want to promote it, right?

Mr. KOTEK. If I could take just a minute to describe some of the other things we are trying to do to promote a healthy domestic uranium industry broadly which has implications for the nuclear industry.

Our organization, the Nuclear Energy Office, is principally an R&D organization. For example, it was our organization that helped lay the technical groundwork for the license extensions that allowed nuclear power plants in the U.S. to go from 40 years of operation to 60 years.

Dr. GOSAR. That is fine and good. I understand but I have limited time here. I understand that aspect but it is a multilayered aspect. There are fuels in, diversified fuel out, applications so you want not just one aspect of delivery, right? You do not want spent fuels—new uranium and mining not only from Texas and Arizona, you want dynamic markets and diversified markets.

How have you looked at that from that diversified market, how have you looked at it from the standpoint of the impact of flooding the marketplace with current mining? You know, people have to stay in business and have to make a profit. By flooding the marketplace, you have actually taken away the application. In my State, we are down to one and they are holding on by a thread.

Mr. KOTEK. Thank you, sir, for that concern. That is something we have heard broadly from the industry, particularly as it pertained to the 2014 determination and the 2013 management plan.

That is why we are engaged in a process this year that is designed to provide more input into the Secretary's determination process prior to his making that determination.

Dr. GOSAR. I keep coming back to this. The highest grade of uranium is found in my district and found in my State and southern Utah. Yet, we have had this predilection in regard to eliminating that type of mining. We have not seen a cohesive aspect of support for that mining aspect.

Mr. Melbye, have you seen that? You are very well aware of the Breccia Pipes up in northern Arizona and southern Utah. We are down to one mine that is barely holding on. We have an Administration continuing on with this advancement of potentially extending the Antiquities Act even further on this application.

Do you see DOE actually engaging you in an active aspect of having a diversified mining application to help with this?

Mr. MELBYE. Thank you, Mr. Gosar.

It is ironic that the Administration does support nuclear energy as a way to provide energy security to the United States and have an impact on carbon emissions, yet it seems like our biggest competitor in a very difficult market condition.

U.S. uranium producers we can compete with any other producers in the world. We have advantages and environmentally clean operations. We are in safe and peaceful jurisdictions with strong regulation.

Utilities want to buy from us but if we cannot get over the head winds that we are facing from DOE and dumping material into our markets, we just cannot really fulfill our potential.

Dr. GOSAR. Your story is very unique because it is one of the cleanest mining processes around. Mitigation, I have taken numerous people up to the northern rim of the Grand Canyon and people cannot even find it. In fact, it may even help percolation of water into subsurface areas in a cleaner fashion. I want to compliment you on that.

I do not envy you the problems because the Administration obviously does not understand market factors.

Ms. LUMMIS. The gentleman's time has expired. Thank you.

Unless there is an objection, we will move to round two and unless there is objection, we will return to the regular order. Do you object to returning to the regular order?

Mrs. LAWRENCE. No objection.

Ms. LUMMIS. Thank you. In round two, I will recognize myself for 5 minutes.

Mr. Trimble, your May 2014 report identified legal concerns with another series of transfers undertaken by DOE. How did the DOE value the materials they were transferring?

Mr. TRIMBLE. In our report, we looked at a series of transactions. The key finding regarding value was there was inconsistent practice at DOE in terms of how it valued tails. In my opening statement, I made reference to one transaction, which was a large transaction, ultimately I believe DOE saw benefit or cited benefits over $700 million in this transaction.

Internally, they estimated the value to be zero or $300 million. Ultimately, they chose zero for the transaction even though it was being transferred for the purpose of re-enrichment, so it had economic value.

The problem we cite in the report is simply that there is no internal guidance or policy governing how such decisions are to be made. That leads to inconsistent applications. Prior transfers going back several years, they had set a price for similar transactions for a similar purpose and they also entered negotiations for the disposition of some of its tails for re-enrichment, again, suggesting there is value and the price should be set.

Moreover, under the law, both the Atomic Energy Act as well as the USEC Privatization Act, they are required to set a price to obtain a fair value for the commodity. By setting the price to zero, they were not consistent with that law.

Ms. LUMMIS. Mr. Kotek, does the department review the contracts between Fluor and Trexus that outline how the uranium transferred by DOE to Fluor will be sold into the market and at what price?

Mr. KOTEK. My understanding is that is an arms-length arrangement. We do not get involved in the specifics. Again, that falls into a different program office. If I have that wrong, I will be corrected here shortly.

Ms. LUMMIS. OK. If not, how does DOE ensure that these transfers are receiving fair value and not resulting in an adverse material impact on the domestic industry?

Mr. KOTEK. My understanding is that when we are engaged in our bartering arrangement with the cleanup contractor, that is when we have to ensure we get the fair value. We ensure that takes place at that transaction.

Ms. LUMMIS. You do ensure that takes place. How do you ensure that takes place?

Mr. KOTEK. My understanding is that is based on an evaluation of the market conditions and prices at the time.

Ms. LUMMIS. Mr. Melbye, following up on that, you indicated in your testimony that DOE may not be securing the highest value for the government's uranium assets. Can you explain that statement?

Mr. MELBYE. In this regard, meaning the domestic industry and the taxpayers, are completely aligned in getting the highest value for those government assets I think by limiting the amount that DOE puts into the market particularly in periods of market weakness.

The value of the uranium that they do sell is going to be at a higher price, so that goes to the measured predictable and limited caps. Also, I think if you involve the domestic industry, meaning the converter and the United States and the uranium producers, no one has more of a vested interest to ensure that the uranium does not have an adverse impact on our markets.

I think our ability to put it into portfolios of long term contracts—we do not mean spot or near term, forward carried trades the commodity traders are adept at doing—we are talking about the market that uranium producers sell to electric utilities over five to 8 year agreements at higher prices.

We think that would certainly lift all the boats in this issue and get higher value for the taxpayer and less adverse impact on the industry.

Ms. LUMMIS. Mr. Trimble, how can we be sure the taxpayer is being reasonably compensated for all this?

Mr. TRIMBLE. Sort of following up the recommendations from our 2014 report, I think there are two things that jump to mind. One is we have recommended and believe that DOE should establish guidance and internal policies on how such transfers will be valued and priced so there is clarity as to how that process is carried out and there is transparency regarding how those prices will be set.

Second is we talked a bit about the market impact studies. The second part of this is that we have recommended DOE follow its own guidelines to ensure the quality of those studies. When it contracted out with the vendor for these market impact studies, it did not take steps to verify the quality of those studies as called for by its own guidance.

We think, at a minimum, those steps should be taken to flag early any problems with that analysis.

Ms. LUMMIS. I thank the gentlemen.

The Chair now recognizes the Ranking Member, Mrs. Lawrence, for 5 minutes.

Mrs. LAWRENCE. Mr. Trimble, according to your testimony, the Department of Energy published the excess uranium inventory management plan based on your agency's recommendation back in 2008, correct?

Mr. TRIMBLE. That is correct.

Mrs. LAWRENCE. Was that recommendation based on a GAO finding that the department needed transparency in planning the use of excess uranium? Could you explain?

Mr. TRIMBLE. Our work in this area goes back at least as far as 2006, so we were flagging several of these issues back then and identified the need for the department to come up with a plan. The department had been working on something so we recommended that they complete that and develop a comprehensive plan.

We also recommended that they clarify the legal authority as I highlighted in my statement.

Mrs. LAWRENCE. Mr. Kotek, the management plan established the guideline that it would cap its uranium at 10 percent of industry needs, is that correct? In 2008, the plan established that.

Mr. KOTEK. That was not a cap, that was a guideline.

Mrs. LAWRENCE. It was a guideline, so you did not perceive it as a cap?

Mr. KOTEK. That is my understanding, yes.

Mrs. LAWRENCE. The department has never operated that there was an established cap. Did you adhere to the guideline?

Mr. KOTEK. The guideline, I believe was adhered to, yes, in the first several years of the transactions.

Mrs. LAWRENCE. Currently, what is the amount or the cap that you are using or is there a cap or a guideline existing now?

Mr. KOTEK. There is not one now. The 2013 Uranium Management Plan made clear the department was moving away from the 10 percent but was continuing to, of course, meets its obligation that the Secretary assess the situation and make a determination that there was no adverse material impact on the uranium markets.

Mrs. LAWRENCE. Do you know if the department consulted with the domestic industry representations in deciding how this uranium—you call it a guideline, some call it a cap—was there any interaction with the domestic market?

Mr. KOTEK. Having not been here then, I cannot speak to the specifics. I know there is regular interface between my organization and the department broadly and the uranium industry but certainly, the desire for more industry input is one of the things that has informed the process we are using this year with the 2015 Secretarial Determination.

Mrs. LAWRENCE. Mr. Melbye, as far as you know, did the Energy Department seek industry input when it moved from what we are being told was not a cap but a guideline on the transfer and did it seek industry input when it significantly ramped up its uranium transfers into the market? Were you consulted?

Mr. MELBYE. Thank you, Ranking Member Lawrence.

They did not consult us when they decided to ramp up. It was very troubling. It wasn't a couple years after they established the

2008 Inventory Management Plan. It was really less than 6 months after it was put in place.

I will say that the industry was consulted in the formation of the so-called industry consensus which involved the Nuclear Energy Institute, the electricity companies and the domestic producers. That recommended—it was not a guideline, it was a cap on how much uranium DOE puts into the market.

That is critically important when financial institutions or shareholders are looking to invest in our companies, that they know there is an upside limit to how much the government is going to impact our markets.

Mrs. LAWRENCE. Mr. Kotek, you Stated DOE sought comment from the public about the effects of the continuous uranium transfers on domestic industries and recommendations about the factors it should consider in assessing whether to give these transfers and the adverse material impact.

Was this request for comment part of the department's response to concerns that the management process is no longer transparent and what was the decision of DOE when we looked at the impact of not having a cap? It seems like you just sell now and there are no guidelines.

Mr. KOTEK. Thank you for the question.

In the feedback we have received, first, to respond to your question about what we are doing in response to the expression of concern, yes, we have heard from the market participants. We understand their desire for more opportunity for input to the process and greater transparency. We are trying to achieve that.

In response to the first round of comment that we received from industry, in March of this year, we published a list of six factors that we would intend to consider as a part of future determinations: market prices; realized prices for current operators; production and existing facilities; employment levels in the industry; changes in capital improvement plans and development for future facilities; and then, the long term viability and health of the industry.

We published those for comment. We have received comment. While I have not read each of the comments we received back, my understanding from the response we have received back is that those factors seem to be a pretty good and thorough set of things for the Secretary to consider in making determinations going forward.

Mrs. LAWRENCE. Madam Chair, I just want to say there are clearly two different experiences when it comes to input and responses to the industry and what the DOE is saying. I think that is a flag that this committee needs to really explore.

Thank you.

Ms. LUMMIS. The Ranking Member yields. The Chair now recognizes the gentleman from Texas for 5 minutes.

Mr. FARENTHOLD. Thank you very much. I am not going to use the entire 5 minutes.

Mr. Melbye, I just want to make sure I heard right a second ago. You guys in the industry viewed the 10 percent as a cap, not a guideline, is that correct?

Mr. MELBYE. That is absolutely correct.

Mr. FARENTHOLD. You went to your bankers, you decided to buy equipment, you made leases, you went with business decisions based on what you believed were good faith representations by the government?

Mr. MELBYE. It is something that the investment community watches very closely. When they try to model our businesses and our industry, they need to know how much impact the government is going to have on our business.

Mr. FARENTHOLD. So it wasn't just you guys that thought it was a cap, your lenders and investors thought it was a cap too?

Mr. MELBYE. Correct, and the utilities and the NEI-led consensus.

Mr. FARENTHOLD. I just wanted to make sure that was clear in the record.

I yield back. Thank you.

Ms. LUMMIS. I thank the gentleman.

I do have one more question. Does the Ranking Member have any more questions?

Mrs. LAWRENCE. No, Madam Chair.

Ms. LUMMIS. With your indulgence, I will ask my final question.

Mr. Kotek, you said earlier that your contract with Fluor is an arms-length transaction, did I get that right?

Mr. KOTEK. My understanding, Madam Chairman, is that it is the contract between Fluor and I think it is Trexus. That is the arms-length relationship I was talking about.

Ms. LUMMIS. I am going to ask once again, do you review the contract between Fluor and Trexus?

Mr. KOTEK. My understanding is no, Madam Chairman—unfortunately, that is not in my program area in DOE, so I would like to offer to have folks get back to you with the specifics on that if I am incorrect.

Ms. LUMMIS. That would be perfect. I would request that you respond in writing or have a colleague respond in writing to that specific question.

Do you have an additional question?

Mrs. LAWRENCE. Madam Chair, I really would like the agency to respond to the definition of a cap and a guideline. When we have the industry and lending industries clearly operating on a cap—it was removed and I would like clarification. Is there a guideline, as DOE calls it, or is there a perceived cap in that industry? I would really like clarification on that through the Chair.

Ms. LUMMIS. Mr. Kotek, I believe the question is directed to you.

Mr. KOTEK. I am sorry, I thought that was a request to respond for the record.

Ms. LUMMIS. Would you rather have the response in writing for the record?

Mrs. LAWRENCE. Yes, I would rather have the response for the record.

Ms. LUMMIS. Do you understand the question?

Mr. KOTEK. Yes. Thank you very much.

Ms. LUMMIS. Thank you.

Mr. KOTEK. Just to reiterate, having not been here at the time, my understanding is that at least the folks on our side view the 10 percent number showing in the 2008 report as, again, a guide-

line, not a cap, that we could go higher or lower each year but certainly, we have heard a different perspective here. We would be happy to followup with you.

Thank you very much.

Ms. LUMMIS. Thank you, Mr. Kotek.

The gentleman from Alabama, Mr. Palmer, has just arrived. Mr. Palmer, do you have any questions?

Mr. PALMER. Nothing.

Ms. LUMMIS. Thank you.

There appearing to be no further questions, I want to thank the Ranking Member and others for being here today.

Mr. Kotek, I want you to thank Secretary Moniz, on my behalf, for taking time when he was in Wyoming last summer, to meet with me and others regarding this issue.

Would you please also pass along to him that this committee has document requests outstanding with the department, including those regarding Mr. Poneman. I would like to reiterate my request for those documents.

Mr. KOTEK. Thank you, Madam Chairman. I will be sure to pass that along.

Ms. LUMMIS. Thank you.

That being said, I think it is important that the committee conducts oversight of the workings of the Federal Government, not just to find problems, but to help identify solutions. In that regard, I want to thank all three of the gentlemen for being here today.

In 2008, the DOE and domestic industry met and negotiated ways to ensure that both parties benefited from the transfer program. It is my hope that the Department of Energy can work with the domestic industry and those involved in cleanup to develop a way to ensure that excess uranium can be used to meet cleanup needs while ensuring a strong uranium industry in America that lessens our dependence on foreign sources of energy.

I am sure that Congress would be interested in legislation that does so. I am hopeful that the Administration and industry can work toward those ends.

I would like to thank our witnesses for taking time to appear before us today. Given the requests that we have submitted, we hope to hear from you soon in writing, Mr. Kotek.

If there is no further business, without objection, the subcommittee is adjourned.

[Whereupon, at 11:20 a.m., the subcommittee was adjourned.]

APPENDIX

Material Submitted for the Hearing Record

ERI 2010 Market Analysis

ENERGY RESOURCES INTERNATIONAL, INC.

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5. Summary of Potential Market Implications and Nature of Industry Concern

5.1 Potential Market Implications

Based on presently available information and the results of the analysis described in this report, ERI does not believe that either (i) the potential price effect of the presently proposed quantities of equivalent UO_2, conversion services and enrichment services that DOE is considering transferring during the next several years beginning in the first quarter of 2011, or (ii) the quantities of domestic production, if any, that might be displaced due to the proposed DOE transfers are of a magnitude that they would constitute a material adverse impact on the domestic industries or any of the initiatives that are presently underway. These initiatives include uranium exploration and development, previously announced plans to license and construct new enrichment facilities, or the U.S.-Russian HEU Agreement.

5.2 Nature of Industry Concern

The nuclear fuel markets recognize that DOE controls a very large amount of material and the predictability of DOE's transfer of that material into the commercial markets over time is very important to the orderly functioning of these markets. If based upon DOE actions, the perception of domestic suppliers of uranium concentrates, for example, was that DOE might begin to transfer into the market quantities of uranium that are significantly larger than those quantities that DOE had previously indicated to the industry it may transfer (e.g., DOE 2008 Plan), then the potential adverse impact on uranium exploration and development could become significant for the domestic industry. In this regard, it is critical for long-term planning and investment decisions by the domestic industry that there can be confidence that DOE will adhere to what it presents as being established guidelines and plans.

The transfer by DOE of material during any year in an amount that is substantially larger than 10% of U.S. annual requirements is likely to be viewed by the industry as DOE establishing a precedent by which it may make future transfers without any regard for the *"maintenance of a strong domestic nuclear industry."*

If the industry believes that such a precedent is being established, then ERI expects that domestic suppliers within each of these markets may become concerned that (i) previously proposed schedules of transfers would be accelerated at some time in the future, resulting in a larger amount of DOE inventory being introduced into the market each year, and or (ii) additional U.S. inventory that has not yet been identified as surplus would be added to the transfer schedule. Either of these could result in a larger amount of equivalent nuclear fuel materials and services being introduced into the market, which, if of sufficient magnitude, could potentially have a material adverse effect on the markets.

ERI-2142-02-Iv01 December 2010 37 Energy Resources International, Inc.

"ERI does not believe that either (i) the potential price effect of presently proposed quantities of [uranium], conversion services and enrichment services…or (ii) the quantities of domestic production…are of a magnitude that they would constitute a material adverse impact on domestic industries or initiatives that are presently underway."

ERI 2013 Market Analysis

ENERGY RESOURCES INTERNATIONAL

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Markets
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industry. As for USEC, it is clear that the company supports and will benefit from the transfer 0.3 million SWU that is under consideration by DOE. In addition, it should be noted that the NNSA DOE transfers of uranium materials containing equivalent enrichment services to TVA have been known to the market for many years and are long-term contracts in nature.

Therefore, the potential impact of the transfer of DOE material presently under consideration on the enrichment services industry is not significant.

The transfer of an additional 0.3 million SWU in 2013, when assessed in conjunction with other possible transfers of equivalent new enrichment services into the market by DOE, results in a total transfer to the commercial market that remains well below 10% of U.S. enrichment requirements in 2013. The total to be transferred to the commercial markets from HEU down blend remains consistent with the representative amount for 2013 originally projected in the DOE 2008 Plan, as does the net total from all DOE transfers of enrichment services.[17]

In summary, based on presently available information and the results of the analysis described in this report, ERI does not believe that either (i) the potential price effect associated with the transfer by DOE of an additional 0.3 million SWU to USEC during 2013; or (ii) the quantities of domestic enrichment services, if any, that might be displaced due to the proposed DOE transfers are of a magnitude that they would constitute a material adverse impact on the domestic enrichment industry, taking into account the sales of uranium under the U.S.-Russia Highly Enriched Uranium Agreement (HEU Agreement) and the Suspension Agreement.

[17] Table 11 of the plan projected 0.782 million SWU from Allocated HEU Down-Blend during 2-13, with an offset of 0.586 million SWU for DOE Depleteing

HSI 2142 to USEC January 2013 17 Energy Resources International, Inc.

"ERI does not believe that either (i) the potential price effect associate with the transfer… or (ii) the quantities of domestic enrichment services…are of a magnitude that they would constitute a material adverse impact on the domestic enrichment industry."

ERI Draft 2014 Market Analysis

ENERGY
RESOURCES
INTERNATIONAL, INC.

"In the context of a much stronger price environment, the market impact study conducted two years ago judged, at that time, that the impacts of the DOE inventory releases were small enough so as to not constitute a material adverse impact, even though an absolute definition of what impacts rise to the level of materially adverse does not exist. **Given the current weak state of the markets and the impacts described in this report, ERI can no longer make such a definitive statement.** Clearly, there have been production, employment and financial impacts on the domestic industry due to a variety of market factors culminating in the current oversupplied markets. Based on the analysis contained in this study, it is not clear that a reduction in DOE inventory releases would cause the overall market conditions to change enough to make a significant difference in the health and status of the domestic industries. **However, the uranium and conversion industries clearly feel that a reduction in the amount of DOE inventory enter the markets would make a difference, in part by sending a strong signal to the markets that DOE recognizes the current weak stat of the nuclear fuel markets and is responding."**

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ERI 2014 Final Market Analysis

ENERGY
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INTERNATIONAL, INC.

ERI-2142 17-1401

"In the context of a much stronger price environment, the market impact study conducted by ERI two years ago judged, at that time, that the impacts of the DOE inventory releases were small enough so as to not constitute a material adverse impact. DOE and ERI sought to clarify ERI's role in the development of this market impact study. ERI's role is to analyze the impacts associated with the release of DOE inventories into the commercial markets for the period 2014 to 2033. **In accordance with the USEC Privatization Act, any determination of "adverse material impact" is made by the Secretary of Energy. As such, this market impact assessment does not make any conclusion regarding whether or not the release of DOE inventories into the commercial markets will result in an adverse material impact.**"

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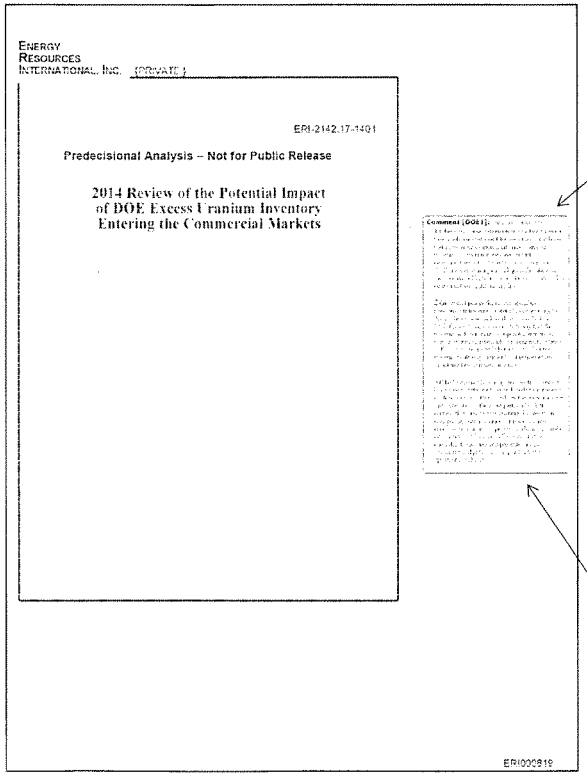
DOE comments on ERI Draft 2014 Market Analysis


ENERGY
RESOURCES
INTERNATIONAL, INC. (PRIVATE)

ERI-2142.17-1401

Predecisional Analysis – Not for Public Release

2014 Review of the Potential Impact of DOE Excess Uranium Inventory Entering the Commercial Markets

ERI000819

1) There are some statements in this latest version that would suggest that ERI feels they have been tasked to make a determination of "adverse material." This is not the case, as that determination is the Secretary's to make, and DOE is seeking analysis and quantification of the potential effects on the market(s) to inform his determination of the materiality.

3) The executive Summary and Sections 5 seem to have a very different tone and angle than the rest of the document. DOE realizes these sections are just excerpts, for the most part, and lack the context that they're in elsewhere. However, as drafted, they seem to draw (or point to) new conclusions that aren't presented elsewhere in the document. DOE suggests ERI keep to the quantifications analyzed/presented in the document and providing proper context for apparent conclusions.

Written Testimony of Mr. Frank Hahne, Uranium Barter Manager
Fluor-B&W Portsmouth LLC
Before the Committee on Oversight and Government Reform,
Subcommittee on the Interior
April 22, 2015

Please accept my regrets but due to a long standing scheduled conflict outside the United States, I am unable to participate in today's hearing. I submit this written testimony and respectfully ask that it be included in the record of today's hearing of the Subcommittee on the Interior of the Committee on Oversight and Government Reform.

Since 2012, I have served as the Uranium Barter Manager for Fluor-B&W Portsmouth LLC. My responsibilities include the management of a Department of Energy uranium barter program that monetizes over $200 million in annual funding for the decontamination and decommissioning (D&D) of the former uranium enrichment facility in Piketon, Ohio.

Fluor-B&W Portsmouth LLC (FBP) is currently the contractor at the Portsmouth Ohio site who receives transfers of Department of Energy (DOE) owned natural UF6 as barter transfers as set forth in our Prime contract (Contract DE-AC30-010CC4017). FBP completed transition on the Portsmouth site March 28, 2011 and executed the first natural uranium barter transfer from DOE in June 2011. Since June 2011 DOE has transferred 7,305 MTU to FBP through December 31, 2014. In turn, FBP has granted DOE $824 million in credits towards FBP Decontamination & Decommissioning (D&D) services carried out at the Portsmouth Ohio site for DOE.

This material has been sold by FBP to Traxys North America (Traxys) under commercial contract terms that are confidential. Objectives of the FBP-Traxys UF6 Sales Agreement were designed to structure a predictable and reliable source of supply that efficiently monetizes the UF6 into the U.S. and international nuclear fuel markets. To minimize the impact upon the near-term spot market supply-demand-price balance, Traxys has placed over 50% of the DOE-to-FBP-to-Traxys UF6 into long-term, multi-year contracts. In their response to the RFI in January Traxys has increased the quantity of material placed in forward-delivery contracts to approximately 90% of the material contracted from FBP to Traxys through early 2016. The 2009-2010 barters conducted by FBP's predecessor, United States Enrichment Corporation (USEC), resulted in 100% entering the spot market. FBP has voluntarily followed advice from the domestic industry to devise a supply chain model to minimize the amount of DOE bartered UF6 entering the spot market and time shift it to forward deliveries, if possible. The FBP-to-Traxys model has moved from 100%-to-50%-to-10% of DOE bartered material being sold into the 0-12 months spot market.

The DOE UF6 barter program has not had an adverse material impact on the domestic uranium industry as shown by recent DOE Energy Information Administration (EIA) data. A few observations:

- The price paid for United States origin uranium over the past 20 years has been at its highest in the last five years;
- United States uranium production has been increasing since barter began and is at its highest levels since 1997;
- United States uranium employment (2009-2012) has grown;
- United States uranium producers market capitalization has increased significantly over time with many approaching pre-Fukushima highs over the last three months; and
- Term and spot UF6 conversion prices are up 40% to 45%.

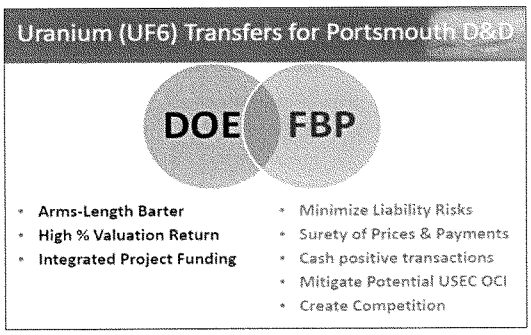
Background

The Portsmouth Site began operations to expand the supply of highly enriched uranium for military purposes, as well as to contribute fuel to a growing nuclear power industry. The more 3,000 acre site has three large process buildings built with more than 14,000 tons of steel to reinforce the concrete floors, 600 miles of process piping, and 1,000 miles of copper tubing. More than 500,000 cubic yards of concrete was used to complete the site. In 2001, uranium operations at the site ended, and closure operations began.

On August 16, 2010 the DOE selected Fluor-B&W Portsmouth LLC (FBP) as the winning contractor for a 5 year D&D contract at the Portsmouth Ohio site. As outlined in Section H.42 *Uranium Transfer*, DOE may transfer title for natural uranium hexafluoride to FBP on a quarterly basis in exchange for an equivalent fair market value of services.

On March 1, 2011 the Secretary made a determination for 4,560 MTU as UF6 to be bartered by DOE for Portsmouth D&D services from 1Q 2011 – 3Q 2013. USEC conducted the 1Q 2011 barter for DOE.

During the 7 months from October 2010 through May 2011 FBP established a structured uranium program within FBP to accept transfers from DOE. Fluor and B&W have no current uranium market presence. Therefore, FBP conducted a methodical investigation that resulted in the selection of an active uranium market participant to allow FBP to offer DOE the highest valuation possible. The combined goals pursued to meet both DOE and FBP's interests throughout this process are graphically summarized below:



The FBP-to-Traxys Contract allowed FBP to offer the highest value of D&D services to be bartered to DOE, while eliminating the highly publicized quarterly auctions. The contract met Fluor and B&W companies risk management requirements. To achieve this highest value FBP requires quantity flexibility to always remain within the DOE Secretarial Determination quarterly timing and quantity limits.

FBP identified companies that had experience taking U3O8/UF6 from DOE or from the United States-Russia Highly Enriched Uranium Purchase Agreement. Additional entities that had North American nuclear fuel cycle facilities in mining, milling, conversion, enrichment and fabrication were added to the list and active market entities were also identified. Initial screening parameters were used to visit with this list of about two dozen companies either face-to-face at WNA/NEI conferences or telephone/email exchanges to identify a short-list of FBP-qualified companies that expressed an interest during this 2011-2013 timeframe.

FBP initially approached a number of the largest electrical utilities to see if they would enter into a long-term UF6 supply contract with FBP; but found that during the 2011-2013 period were not interested in purchasing additional UF6 from FBP during that timeframe, or only a small quantity. During this competitive dialogue process, FBP communicated the most important criteria we were looking for to meet both FBP's need for a secured transaction that yielded the highest value for the uranium—that would be translated by FBP into equivalent D&D services for DOE through the valuation process agreed to with DOE.

FBP ultimately selected Traxys of North America as the preferred company to enter a sales contract from FBP to Traxys. They offered the highest estimated value. Traxys agreed to post a surety of as part of its payment terms to give FBP assured product payment, which increased FBP's confidence. Traxys met FBP's original goal of finding an alternative that would give comparative value to the historical auction model, and also provided an "off-market" transaction that will be less disruptive to the market than quarterly auctions.

The Traxys contract not only met expectations for value, but also the necessary risk minimization goals for FBP. The arrangement allowed FBP to offer the highest value of D&D services to be bartered to DOE, while eliminating the highly publicized USEC quarterly auctions. The model met Fluor and B&W companies risk management requirements. FBP

required the flexibility of always remaining within the DOE Secretarial Determination quarterly timing and quantity limits that have been updated since 2011, in May of 2012 and May of 2014. Stability was achieved by having the entire forward quantities of UF6 placed under contract in advance.

In light of this introductory background, FBP offers its comments within the structure set forth in the DOE's Federal Register request for comments about RFI submitted information, DOE's analytical approach (including Factors for Consideration), the 2015 ERI report (ERI-2142.18-1501- *Analysis of the Potential Effects on the Domestic Uranium Mining, Conversion and Enrichment Industries of the Introduction of DOE Excess Uranium Inventory During CY 2015 Through 2024*) referenced within, and The Summary of Information Under Consideration. FBP has utilized the services, data and input from NAC International (NAC) to supplement FBP's insights and comments contained herein.

First, FBP is directly involved in approximately two-thirds or 68% of the total DOE equivalent natural uranium hexafluoride material transferred into the commercial markets during 2014. That would be 2,055 MTU as UF6 or an equivalent 5.2 million pounds of U3O8 that flow from the Environmental Management (EM) department of DOE. This material has been transferred to FBP by DOE at the rate of 600 MTU per calendar quarter, with the 4th quarter reduced to 255 MTU to equal the annual amount of 2,055 MTU.

"Domestic Industry" includes Portsmouth, Paducah and Oak Ridge sites".

FBP believes that DOE/ERI has too narrowly defined the "Domestic Uranium Mining, Conversion and Enrichment Industries" since the positive effects upon FBP's 1,345 site employees and subcontractors should also be included in the industry analyses of the impact of uranium transfers (The number would be 1,824 if FBP subcontractors are included). Every industry trade association in the world includes not only primary suppliers, but also secondary suppliers and supply chain companies in their "Industry" populations. For example, even though there is only one active U.S. enrichment primary producer (URENCO-LES in Eunice NM) there are active nuclear services participants performing important roles within of the domestic enrichment industry. Remediation, reclamation, decontamination, decommissioning and waste management are all services that are a part of the total nuclear life-cycle and supply chain (i.e. Industry).

Domestic Industries	Domestic Location(s)	Source of Reference	No. of Employees/ Subcontractors
Uranium	See Detailed List in EIA Reference (CO, NE, TX, UT, WY, etc.)	DOE EIA Annual Report 2013 for Domestic Uranium Production Report	**1,153**
Conversion	Honeywell Metropolis IL	ERI-2142.17-1401/April 2014 – Public Record 53-2	**300** (Est. Site Staff)
Conversion*	FBP Portsmouth – Piketon OH	FBP NIPC Response – FJ Hahne Letter	UF6 Transfer Ops staff (See below)
Enrichment	URENCO-LES Eunice NM	LES Information	**300** (Estimated Ops Staff) **600** (Est Construction)
Enrichment	Portsmouth – Piketon OH Site Includes: FBP, BWCS, Centrus, and Subcontractors	FBP NIPC Response – FJ Hahne Letter	**2,518** (Site Staff)
Enrichment	FGG - Paducah KY	FBP NIPC Response – FJ Hahne Letter	**1,472**
Enrichment**	B&W-Nuclear Fuel Services – Erwin, TN	Public Information	1,000(Site Staff) **130** (HEU-to-LEU Staff)
Enrichment	GLE - Wilmington NC	Not Available	Not Available
Enrichment	UCOR - Oak Ridge TN	2014 Annual Review -UCOR	**1,400**

** As an additional part of FBP's commitment to the U.S. DOE to perform D&D services in a safe and cost-effective manner for the benefit of U.S. taxpayers we also include reclamation and recovery of materials that have potential commercial value—such as 30 year old natural uranium hexafluoride (UF6). FBP recovers, processes and then DOE barters the Excess Uranium Transfers to the commercial nuclear fuel supply chain through FBP. This reclaimed bartered resource has provided over 50% of the payroll in recent years to conduct D&D operations at the Portsmouth OH site.*

*** As an integral part of the U.S. National Non-proliferation mission NFS is the only active commercial plant that can downblend HEU into LEU (4.95%) for the U.S. Government. It requires a Category I U.S. NRC license to carry out such an elevated enrichment mission.*

Legislation requires DOE to assess whether there is an adverse material impact on the domestic industry—not just the production portion of the industry. Industry includes more than just the primary producers. The industry also includes consumers, processors, traders, brokers, users and other service providers such as companies that provide drilling, transportation, decontamination and decommissioning (D&D) services. It is not possible to have sales without consumers and brokers and traders also play a role in sales. Production cannot occur without the services providers. A production facility must set aside funds to cover D&D and convince NRC that these funds are adequate to cover the costs. These entities have a significant stake in the industry and their interests should also be considered.

The U.S. utility fuel buyers/consumers have a particularly large interest in the outcome of the Secretarial determination. Not only may DOE's actions affect the prices they pay but they could also have another impact. Currently DOE funds the D&D of the former enrichment sites from two sources: the barter of excess uranium and the D&D fund created from utility and government contributions. DOE has determined that these funds are inadequate and has proposed collecting additional funds from the users of the enriched uranium produced. If

DOE is successful the funds not provided by the barters would come from the consumers, mostly U.S. electricity providers. Even if the barters are only delayed due to a reduction in funding, D&D costs would rise substantially and require significant additional funds.

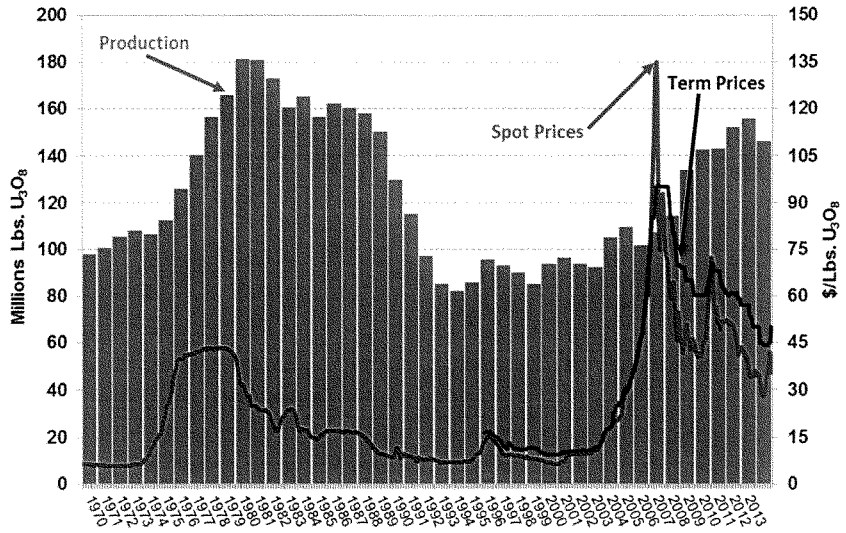
Uranium Market Prices

As reiterated in prior comments, the uranium price has fallen from its abnormal peak in 2007 due to overly optimistic expectations of miners resulting in too much expansion, particularly in Kazakhstan, and the loss of demand due to Fukushima. This inelasticity of supply is the reason (partially offset by the ending of HEU deliveries), not DOE inventory sales that caused an adverse position for those suppliers that did not lock in prices through long-term contracts during the high-price cycle. In 2014 world production fell modestly for the first time since 2006 (see figure 1) and consequently prices rose somewhat. However most of this reduction was due to production problems not voluntary cutbacks to adjust supply. As shown in figure 1, production tends to increase rapidly in response to higher prices but it takes a long time for decreases in production to occur when prices fall. Note that prices increased rapidly from a little over $21 in 2005 to a peak of $135 in 2007, only to fall back to $59 by mid-2008 and about $28 in mid-2014. Yet production continued to grow through 2013. For those unhedged producers to be able to recover, production must fall farther and/or demand must increase. In the short term the only significant increase in demand must come from the restart of operations for Japanese reactors, which is outside producer control and taking longer than expected. Yet despite the need to rationalize primary production, expansions continue:

- Kazatomprom announced that production in 2015 will again increase, adding 1.6 million pounds.
- Cameco stated in its February 9, 2015 Management discussion that its planned production for 2015 is expected to be 2.5 million to 3.7 million pounds higher than in 2014.
- Information from this same document indicates the other owners of the Cigar Lake project are planning to produce an additional 2.6 to 3.9 million pounds from Cigar Lake. (*Total 2015 Project outlook is 6-8 million pounds—on an overall plan to reach 18 million pounds per year by 2018*)
- Husab plans to begin mining by mid-year and processing ore by the end of the year or early next year.

These increases exceed the DOE planned sales. The point is that primary uranium production continues to expand even in the currently depressed market. Some of this expansion comes from companies also mining in the United States that continue to blame depressed prices on DOE inventory sales.

Figure 1 Price Impact on World U_3O_8 Production

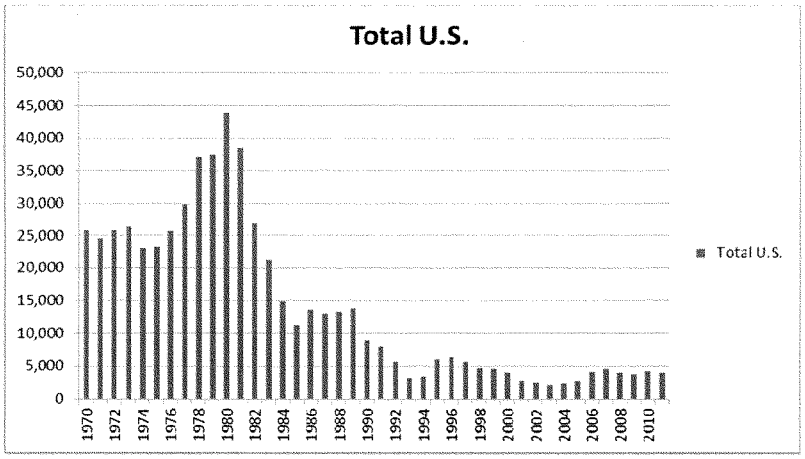


Production at Existing Facilities & Employment Levels

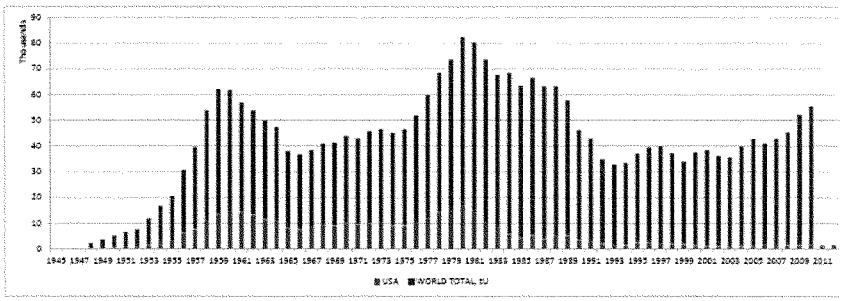
Uranium

There are several issues related to production and employment to which FBP wishes to comment. First, ERI discusses the impact of market prices on U.S. uranium production but does not address the impact of the DOE inventory sales on US producer sales volume. ERI states U.S. production has risen since the start of the DOE uranium inventory barters but despite this increase in production since 2009, the decline in market prices has affected the actual and planned production of some U.S. operations. ERI does not indicate the applicable period for which this statement applies. Therefore, NAC calculates…

> *U.S. production has averaged about 3% of world production over the past 11 years.* ***Thus if U.S. producers maintain the same market share for any increased production due to a total elimination of DOE inventory sales, U.S. production would increase by only 220,000 pounds or 4.5%. This is certainly not an adverse material impact today nor will it be in the future.***



USA Uranium Mining/Milling Production

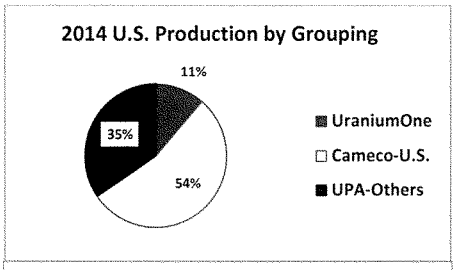


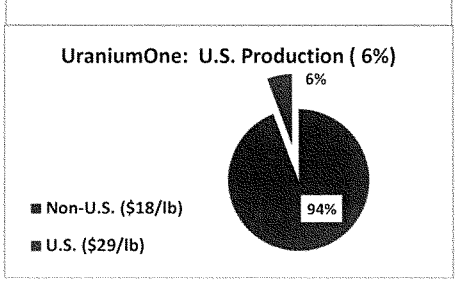
USA Uranium Mining/Milling Production compared to the Total Worldwide Production

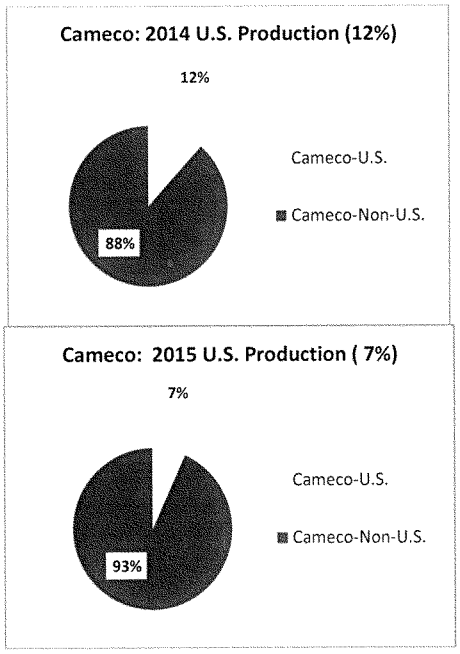
Second, the UPA states that "UPA encourages the Department to work with uranium producers to facilitate the entry of the material into the market, as was done under the Megatons to Megawatts Agreement. Uranium producers can feed the material into long-term contracts, which will ease some of the pressure in the short-term when the market is oversupplied and there is little near-term demand from utilities." **This implies that the sales are acceptable if they are sold through uranium producers but unacceptable if sold through a non-producer**. The logic appears to imply 1) that uranium producers are the only entities that can or will deliver this uranium through pre-existing contracts and 2) that somehow this will reduce the near-term market supply (as this is the only way in which there would be an easing of pressure).

As to the first point, this is absolutely untrue. Traxys stated in its response to DOE's RFI on Excess Uranium Management that "approximately 90% of the quantities contracted to be purchased by Traxys has now already been committed to be sold to utility customers under forward delivery contracts and NOT in the spot market".

As to the second point, a U.S. producer that has existing contracts either 1) has the required uranium in inventory to meet its delivery requirements; 2) plans to obtain the material from existing production; or 3) plans to purchase the uranium on the market. If the producer is unwilling to add to its current inventory or reduce its non-U.S. production, there would be no benefit to U.S. producers other than obtaining some profit from the DOE inventory sales. If the purchase results in an offset of U.S. production, U.S. production would be reduced. If the purchase replaces a purchase that otherwise would have been made from the market there is a loss in demand. Thus the only way DOE/FBP selling to a U.S. producer could benefit the market (for U.S. producers) would be if the purchaser has non-U.S. production and is willing to reduce that production by the quantity purchased. The producers that have international production have demonstrated a tendency for the opposite- lowering U.S. production while increasing non-USA production.







FBP observes that 2/3 of the 2014 U.S. production came from 2 international companies that have business models that will continue to expand non-U.S. production over U.S. production. In the case of Uranium One, now owned by Rosatom, their $18/lb. cash cost to produce in Kazakhstan is only 60% of the $29/lb. cost to produce in the U.S. Cameco U.S.'s share is also under pressure to continue to decline because Cigar Lake, the #1 corporate priority is to ramp up production to 18 million pounds per year (Cameco share = 50%) from 5M-6M/yr rate in 2015. Therefore, any additional near-term market share resulting from decreased DOE transfers will not directly increase those U.S. projects' production.

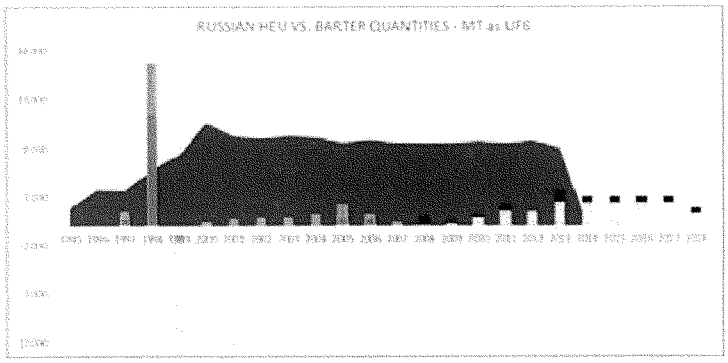
Furthermore, FBP selected Traxys based on competitive offers received from a broad cross section of industry participants, including producers. **The Traxys selection allowed FBP to provide the resulting "best value" to the government, and thereby the U.S. Taxpayer.** Additionally, it diversified the uranium supply and avoided exacerbating the Concentration of Supply trend that domestic uranium buyers for nuclear power plants faced.

Third, the UPA also suggests that DOE "prohibit barter contracts that commence before or extend after the time period covered by a Secretarial determination". The UPA states that since Traxys has sold substantially all of the DOE material for the next two years (2015-2016) under forward delivery contracts, this "practice is very damaging to our industry". The UPA position is very difficult to understand. In previous statements (Brief of Amici Curiae,

Uranium Producers of America and National Mining Association, page 3, "The Ux Consulting study observed that the Department could readily mitigate the impact to domestic fuel suppliers from its proposed inventory sales if (1) it made long-term sales;....") the UPA has encouraged DOE to sell its excess uranium inventory on the term market not the spot market. Furthermore in this same document, the UPA says DOE should reform how this material enters the market by selling to uranium producers so they can feed the material into their term contracts. They do not elaborate on why selling the uranium to fulfill uranium producer versus Traxys term contracts is very damaging to the industry.

Lastly, DOE is required by law to make a Secretarial determination every two years and DOE is not allowed to sell any uranium unless that Secretarial determination concludes there is no material adverse impact on the domestic industries. Thus the legal framework precludes DOE from selling under long-term contracts. Therefore any buyer that wants to sell this material under a term contract must be willing to accept the price and supply risk that replacement material may need to be obtained on short notice. This is a substantial risk that Traxys has been willing to absorb and which has mitigated the market impact. It should be noted that Traxys is not guaranteed that any barter material will be available. Instead based upon Traxys' response to the RFI they entered into purchase contracts, over and above the DOE-FBP-Traxys purchase quantities, to provide the assurance buyers required to assure supply under long-term contracts—something that DOE and/or FBP cannot provide.

Why did DOE increase the uranium disposition going into 2014—2021 timeframe? The ending of the Russian HEU deliveries under the Government-to-Government/Megatons-to-Megawatt deal in Dec 2013.



The U.S. Taxpayer's $325M Investment was held "off-market" for 10 Years (See Yellow Bars)

The US government agreed to pay $157 million for the uranium that Russia had delivered in 1995 and 1996 and to amend the agreement to give Russia an amount of natural uranium equal to the uranium content in the LEU it delivered under the HEU deal beginning in 1997. This turned the US-Russian HEU agreement for the purchase of LEU into an agreement for the purchase of enrichment only. LEU deliveries
resumed for a while, but in late 1998, Russia suspended deliveries again, because it was still

unable to sell the uranium that it got back and was not allowed to import it for its own use. At the time, the export of the natural uranium to Russia was prohibited, so the material was sitting, unused at USEC's facilities. This second crisis
for the HEU deal was resolved in March 1999, when the US government paid Russia another $325 million for the uranium content of the 1997 and 1998 LEU deliveries under the agreement. In addition, three Western mining and fuel services companies (owned primarily by non-US interests: Cameco, Cogema (now AREVA) and NUKEM (now Cameco) signed a long term contract with the Russian government giving them the option to purchase a substantial portion of future uranium deliveries under the HEU deal. This led to them reaping hundreds of millions of dollars while the U.S. taxpayer had agreed to without this ~11,000 MTU of UF6 off of the commercial market. This is the natural UF6 that DOE has been finally bringing to the commercial market from 2009 until present as part of their Excess Uranium Disposition program—funding the barter D&D services at the Portsmouth site in Ohio.

Long-Term Viability & Health

Uranium

UPA argues that the 2013 EIA data on uranium expenditures shows "the average cost to mine uranium in the United States is $67.10 per pound (includes expenses for land, exploration, drilling, production, and reclamation) far above the spot market price of $36.50 (as of January 19, 2015). Even when excluding expenses for land, exploration, and reclamation, the average direct production cost of $47.41 per pound still exceeds current market prices." If U.S. producers have average costs as high as asserted by the UPA (even at $47.41), eliminating all DOE sales would not allow U.S. production to compete or achieve profitability until the next decade. In other words, other producers with lower costs could provide sufficient production to meet the demand without any U.S. production. If average U.S. production costs are as high as claimed by the UPA, no reduction in DOE sales is sufficient to allow them to succeed. This analysis was conducted using NAC's standard approach (as described in the attachment to the FBP submittal of January 22, 2015) but replacing NAC's estimated forward costs with $47.41 for all U.S. producers.

U.S. uranium producers publish information which is useful in determining the potential impact of the DOE inventory sales on U.S. uranium producers in 2014. The following table provides a summary of this information.

Owner	Property	Production (lbs U_3O_8)	Cash Costs ($/lb U_3O_8)	Total Costs ($/lb U_3O_8)	Realized Price ($/lb U_3O_8)	Sales (lbs U_3O_8)	Revenue ($ millions)
Uranium One	Willow Creek	563,100	29.00	60.38[a]	32.50[b]	535,800	18.30
Cameco	Crow Butte	600,000	36.83[c]		47.53[e]	600,000	28.52[d]
Cameco	Smith Ranch	2,100,000	28.14[c]		47.53[e]	2,100,000	99.81[d]
Energy Fuels	White Mesa	942,632		37.45[g]	57.19	808,700[h]	46.25
UR Energy	Lost Creel	547,992	19.73	34.49	51.22	517,800	26.52
Uranerz	Nichols Ranch	199,000		35.50	57.00	175,000	9.98
Uranium Energy	Hobson	35,000[f]				0	0
Mestena[d]	Alta Mesa	0[f]				0	0
Total		4,987,810				4,737,300	229.4

a) Total of reported operating and depreciation costs divided by the production
b) Reported revenue divide by production
c) Total reported for payroll, purchases, taxes, royalties, etc. divided by reported production
d) All production is assumed to have sold at the average price
e) Average reported sales price for all Cameco sales, prices for individual properties are not reported
f) Estimated but must be very small based on the reported values from other companies and the total reported by DOE
g) Calculated by dividing cost of sales by sales volume
h) Calculated by dividing revenue by the reported average price

Uranium One has a strategy of selling largely at the spot price and the revenue per pound shown in the above table shows an average 2014 price very close to the average monthly spot price ($33.15).

Cameco reports that its portfolio includes a mix of fixed-price and market-related contracts, which is targeted to have a 40:60 ratio. According to Cameco this is a balanced and flexible approach that allows them to adapt to market conditions and put a floor on realized price, reduce volatility of future earnings and cash flow, and deliver the best value to shareholders over the long term. In its February 2014 Management discussion and analysis, Cameco states that for 2014 each $5 per pound change in the Ux spot and long-term indicator would change revenue by $67 million. Projected sales volume was reported as 31 to 33 million pounds. Assuming the middle of the range, Cameco was expecting to experience a $2.09 per pound change in price for each $5 per pound change in both the spot and term indicators.

Uranium Energy Corporation also has a strategy of selling at the prevailing spot price. According to a company presentation, they are highly leveraged to the price of uranium. The last year UEC published any usable cost information was in its fiscal year 2013 (ending July 31, 2013). The reported cost of sales was $38.37 per pound U3O8. In September 2013 UEC announced that it would align its operations to market conditions. One of the actions taken was to slow the pace of mining at Palangana. The spot price at the end of September 2013 was $35 per pound. This indicates a price likely above the market price even with no DOE sales.

The remainder of the U.S. production appears to be based on defined prices with little or no tie to spot prices.

Although NAC believes the ERI derived impact of DOE inventory sales on market prices of $2.80 per pound was too high, even assuming the ERI value, the spot price in 2014 would have

averaged only $35.95 per pound ($33.15 + $2.80). Any unhedged producer with costs above this value was not viable even if DOE sales totally disappeared. Thus those producers could have only been impacted by the DOE inventory sales to the extent they continued to produce and sell, even when their production was noncompetitive. Uranium Energy had costs higher than $35.95 and did not make any sales; therefore they could not have been impacted by DOE sales. Uranium One had costs higher than $35.95 but continued to produce and sell. Therefore it had a theoretical impact of $1.5 million (535,800 pounds sold x $2.80 per pound impact) due to DOE sales. Cameco did sell forward but a portion of the price it receives is tied to the spot and term market indicators. The breakdown of the impact of each price change is not disclosed nor is the exact sales. Assuming all production was sold and that both spot and term prices were reduced by $2.80 per pound, the impact on Cameco would be $1.17 per pound ((2.8/5) x 2.09) for the 2.7 million pounds sold. This would equate to $3.2 million.

Several companies produced more uranium than they sold in 2014. If one assumed all of this (250,500 pounds) would have been sold, if the spot price were $2.80 per pound higher, instead of being held for future deliveries, then the result would be an additional impact of $0.7 million. Theoretically one of the economic properties could have expanded beyond the level of its 2014 production adding an additional impact. However the three possibly competitive properties all expanded significantly and there is no indication a slight increase in price would have encouraged additional production. **The total 2014 revenue for the U.S. production industry is about $229 million; therefore using the most impactful assumptions results in a total impact of $5.4 million or 2.4%. This is certainly not an adverse material impact.**

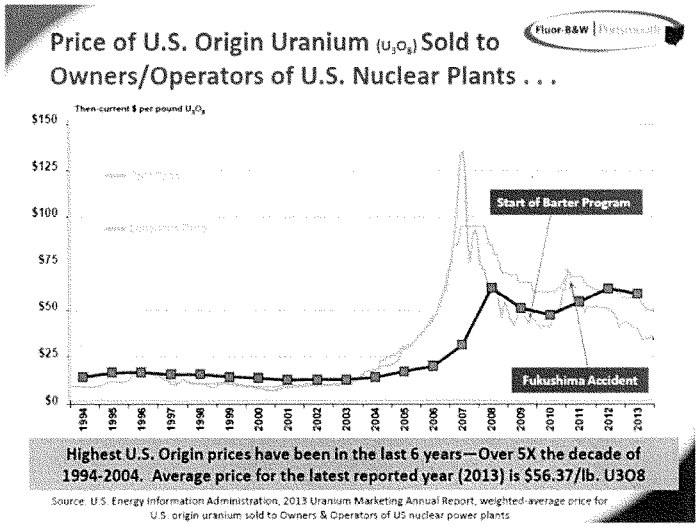
Realized Prices

The U.S. uranium mining industry is realizing much higher than spot prices for its sales. ERI's figure 4.13- Realized Uranium Prices of Companies with U.S. Production needs to be updated. The figure shows the average price received by UR Energy for its Lost Creek sales at around $47 when the company publicly reports a price of $51.22 per pound for 2014. ERI does not show the sales price for Uranerz which publicly reported a 2014 sales price of $57.00 per pound. Uranium One just released its information for 2014. With these changes all of the U.S. producers, except the two producers that decided not to lock in high prices in earlier markets, are realizing prices well above current spot prices. Based on reported 2014 production, it appears that less than 15% of U.S. production is effectively unhedged, even lower than the 30% cited by ERI.

The 2014 data is shown below:

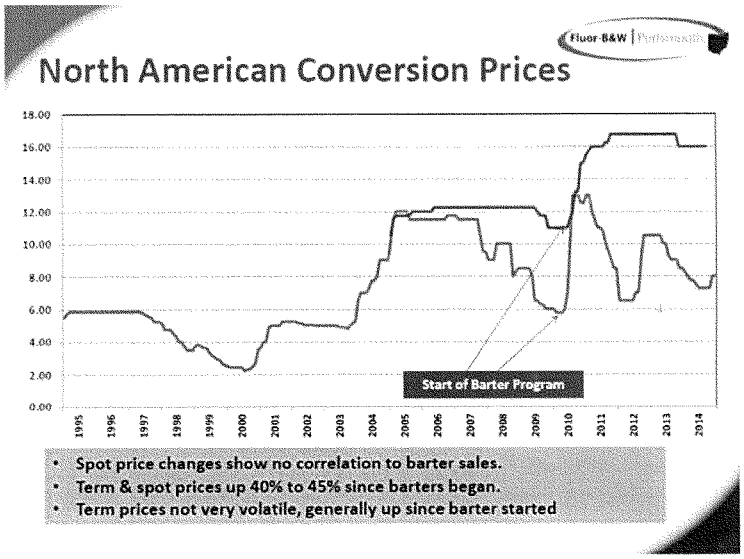
	Company	Property	2014 Production (lbs. U_3O_8)	Average 2014 Sales Price $/lb U_3O_8
Now Owned by ARMZ	Uranium One (U1)	Willow Creek	563,100	32.50
U.S. Subsidiary of Cameco	Cameco	Crow Butte	600,000	47.53
	Cameco	Smith Ranch	2,100,000	47.53
Balance of UPA Member Companies/Production Centers	Uranium Energy	Hobson (Palangana)	35,083	NA
	Energy Fuels	White Mesa	942,632	57.19
	Mestena	Alta Mesa	0	NA
	UR Energy	Lost Creek	547,992	51.22
	Uranerz	Nichols Ranch	199,000	57.00
		Total	4,987,810	

Note: The total production in the table is slightly higher than reported by EIA (4,905,909 preliminary 2014 data), probably due to the lower precision reported for the Crow Butte and Smith Ranch production.



Conversion

ERI overstates the impact of DOE inventory sales on the Metropolis Works production costs because of erroneous assumptions as to the portion of costs that are fixed and variable. Very little support for these assumptions is provided. ERI assumes a unit cost to produce 8.9 million kgU of $15 per kgU and that fixed costs are either 100% or 80% of total costs. Even assuming all labor costs are fixed this is substantially high and this is largely the cause of the over estimation of the impact of DOE sales on production costs. Based on the estimated loss in volume, ERI then calculates the effect of lower volume on production costs and concludes that cost of production increases by $1.10 per kgU due to a change in production from 8.9 to 8.3 million kgU. NAC has performed an analysis that estimates costs for labor, electricity, other energy, utilities, external charges, raw materials and consumables, taxes and fees, depreciation and general and administrative expenses. **Based on this analysis the effect of dropping production from 8.9 to 8.3 million kgU per year would be only $0.73 per kgU or a little less than 5%. The impact of going from 8.9 to 8.4 million kgU per of production would be $0.60 per kgU or 4% (compared to ERI's estimate of $0.90).**



REFERENCES:

1. Energy Resources International: 04 - ERI Analysis – February 20, 2015

2. Fluor-B&W Portsmouth: 15 - Comment from Fluor B&W Portsmouth Attachment A REDACTED

3. Fluor-B&W Portsmouth: 16 - Comment from Fluor B&W Portsmouth Attachment B REDACTED

The related documents can be found on DOE's website at:

- http://www.energy.gov/ne/downloads/excess-uranium-management .

My comments will reference these 3 References excerpts from Fluor-B&W Portsmouth's latest submittals to the Department of Energy's Request for Public Information that was due January 22, 2015 and the Department's follow up Notice of Public Comments that was due April 6, 2015.

FBP utilized NAC International (NAC) who provides energy consulting, information services and spent fuel management technologies to utilities, government agencies, producers, fuel vendors and financial institutions worldwide. Founded in 1968 as a nuclear services company NAC's offices span the globe—Atlanta Corporate Headquarters; London; Moscow. Please see Reference #15 and #16 for NAC's input utilized by FBP within this submittal.

Thank you for the opportunity to submit written testimony on behalf the more than 1800 employees and subcontrators at Fluor B&W Portsmouth.

Energy Resources International Market Analysis Reports

2014 Review of the Potential Impact of DOE Excess Uranium Inventory on the Commercial Markets

The report can be found online at this link -
http://www.energy.gov/sites/prod/files/2014/05/f15/ERI%20Market%20Analysis.pdf

Quantification of the Potential Impact on Commercial Markets of DOE's Transfer of Natural Uranium Hexafluoride During Calendar Years 2011, 2012, and 2013

The report can be found online at this link –
http://energy.gov/sites/prod/files/ERI_2142_07_1001_DOE_Potential_Market_Impact_Dec2010.pdf

Quantification of the Potential Impact on Commercial Markets of Introduction of the Enrichment Services Component of DOE Low Enriched Uranium Inventory During Calendar Year 2013

The report can be found online at this link –
http://energy.gov/sites/prod/files/2013/03/f0/DOE%20-%20Potential%20Market%20Impact%20CY2013%20-%20SWU%20Transfer%20-%20PUBLIC%20DOCUMENT.pdf