



U.S. Department of Energy
Office of Inspector General
Office of Audit Services

Audit Report

Recovery of Highly Enriched Uranium Provided to Foreign Countries

DOE/IG-O638

February 2004



Department of Energy

Washington, DC 20585

February 9, 2004

MEMORANDUM FOR THE SECRETARY

FROM:

Greg Friedman
Gregory H. Friedman
Inspector General

SUBJECT:

INFORMATION: Audit Report on "Recovery of Highly Enriched Uranium Provided to Foreign Countries"

BACKGROUND

As part of its 1950s-era Atoms for Peace program, the United States provided nuclear technology to foreign nations for peaceful applications in exchange for their promise to forego development of nuclear weapons. The program provided foreign countries with research reactor technology and highly enriched uranium (HEU) needed to fuel civilian nuclear reactors. Initially, the U.S. leased HEU to foreign countries with the explicit provision that the spent fuel be returned for treatment and disposal in the U.S. preventing its use in a weapons program. In 1964, the U.S. changed its policy and began selling HEU materials to foreign countries without requiring the return of spent fuel.

In May 1996, in an effort to reduce the threat of nuclear weapons proliferation, the Department of Energy initiated a program to recover foreign research reactor spent fuel containing HEU produced in the U.S. Based on the stated criteria, the program addressed only about 30 percent of the U.S.-produced HEU, which had been provided to foreign countries.

The program, now known as the Foreign Research Reactor Spent Nuclear Fuel Acceptance Program (Acceptance Program), is funded primarily by foreign nations that possess HEU originally produced in the U.S. The objective of the audit was to determine whether the Department's program is maximizing recovery of HEU.

RESULTS OF AUDIT

As of August 2003, the Department was likely to recover only about half of the approximately 5,200 kilograms of HEU covered by the Acceptance Program. Moreover, there was no effort to recover an additional 12,300 kilograms of HEU dispersed to foreign countries which was not included in the Acceptance Program. In part, the effectiveness of the recovery efforts was constrained because Acceptance Program participation was voluntary. Further, many countries viewed the program as costly or



disruptive. We also noted that, within the Department's organizational structure, responsibility for HEU recovery resided solely with the Office of Environmental Management, even though that office's primary mission was environmental cleanup, rather than non-proliferation activities. At the time of our audit, large quantities of U.S.-produced HEU were out of U.S. control. The Department's success in recovering the HEU is a critical component of the effort to prevent diversion of the material for use in nuclear weapons.

Given the heightened national security concerns of a post-9/11 environment, we recommended that the Under Secretary for Energy, Science and Environment work with the Administrator, National Nuclear Security Administration (NNSA), to determine whether aspects of HEU recovery could be more effectively managed by NNSA, whether the Acceptance Program should be expanded to include all outstanding HEU produced in the U.S. and dispersed to foreign countries, and whether improvements to the program could be made to encourage greater foreign participation. Finally, we recommended that a prompt decision be made regarding which program office should have the responsibility for the ultimate disposal of the recovered HEU.

The Office of Inspector General has addressed non-proliferation issues in a number of recent reviews. For example, in our report on *Accounting for Sealed Sources of Nuclear Material Provided to Foreign Countries* (DOE/IG-0546, March 2002), we concluded that the Department could not fully account for sealed sources – which contain small amounts of nuclear or radiological material – on loan to foreign countries.

MANAGEMENT REACTION

The Under Secretary for Energy, Science and Environment agreed with the conclusions of the report and indicated that he has directed changes in how the Department manages the Acceptance Program. A working group of Department and NNSA representatives has been formed to address outstanding issues. Specifically, the Department plans to place a priority on accepting eligible material from reactors and countries where the material – whether HEU or low enriched uranium – may pose environmental or proliferation risks. This emphasis is intended to ensure that such risks are reduced first, while providing continuing support to reactors still used for important medical and other research work throughout the world.

The NNSA's Associate Administrator for Management and Administration also commented on our report. NNSA concurred with the recommendations and agreed that the Acceptance Program would be more effective at recovering HEU if it was expanded beyond its current scope.

Establishment of the multi-program working group within the Under Secretary's office is, in our view, an important first step in resolving concerns about the Acceptance Program and reducing related proliferation risks. To ensure a successful outcome, the working group should establish specific milestones for the completion of its work and should

clearly delineate program office roles and responsibilities. Both the Department's and NNSA's comments are included in their entirety as Appendix 3 of the report.

Attachment

**cc: Deputy Secretary
Administrator, National Nuclear Security Administration
Under Secretary, Energy, Science and Environment
Deputy Administrator for Defense Nuclear Nonproliferation
Deputy Assistant Secretary for Integration and Disposition
Assistant Secretary, Office of Environmental Management**

RECOVERY OF HIGHLY ENRICHED URANIUM PROVIDED TO FOREIGN COUNTRIES

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PROGRAM LIMITATIONS

Background

In the 1950s, as part of the Atoms for Peace program, the U.S. provided nuclear technology to foreign nations for peaceful applications in exchange for their promise to forego development of nuclear weapons. A major element of this program was the provision of research reactor technology and the Highly Enriched Uranium (HEU) needed to fuel the reactors. After irradiation, the used fuel elements are referred to as spent nuclear fuel (SNF). Over the years, the U.S. has continued this program with modifications as summarized below:

- Prior to 1964, the U.S. leased HEU to countries operating research reactors with explicit provision for the return of the SNF to the U.S. After 1964, the U.S. began to sell this material to the foreign nations. However, the U.S. continued to accept, temporarily store, and chemically treat the SNF.
- In 1978, to further reduce the danger of nuclear weapons proliferation, the U.S. initiated the Reduced Enrichment for Research and Test Reactors program. This program sought to reduce the use of HEU in civilian programs by promoting the conversion of foreign and domestic research reactors from HEU fuel to low enriched uranium fuel. Under this program, the U.S. continued to accept SNF for disposition.
- Between 1988 and 1996, the U.S. did not accept HEU SNF, with the exception of limited shipments made under urgent-relief circumstances. However, in 1996, the Department again began to accept and manage foreign research reactor SNF and target material containing uranium enriched in the U.S. The current program, which is managed by Environmental Management's Office of Transportation, is approved to accept foreign research reactor SNF that is currently being stored or that is expected to be generated for a ten-year period ending in May 2006. The program is funded, to a large extent, by countries that participate in the program.
- According to Environmental Management officials managing the current Acceptance Program, there are no plans to extend the current program to address HEU recovery beyond May 2006 given Environmental Management's core mission priorities.

Recovery Efforts

In January 1993, the Nuclear Regulatory Commission reported that 51 countries possessed a total of about 17,500 kilograms of U.S.-produced HEU materials. The audit disclosed, however, that despite Department efforts, only about 15 percent of this amount is likely to be recovered. The Acceptance Program was designed to recover HEU contained in target materials and foreign research reactor SNF – about 5,200 kilograms. As of October 2003, the Department reported that 22 countries had returned about 1,100 kilograms. Moreover, based on country-by-country estimates provided to the Office of Inspector General by Acceptance Program officials at the receiving sites and at Headquarters, we concluded that the Department is likely to recover only about one half of the 5,200 kilograms covered by the program.

In addition, substantial quantities of U.S.-produced HEU in foreign countries are not addressed by the Acceptance Program. For example, fuel used in fast reactors and other special-purpose reactors is, by definition, excluded from the program. According to National Nuclear Security Administration (NNSA) and Environmental Management officials, no program currently exists to address and recover the remaining 12,300 kilograms of HEU. In fact, in at least a few countries, efforts are underway to recover material defined as falling within the purview of the Acceptance Program, but not to recover other U.S.-produced HEU. For example, France and Germany have about 1,450 kilograms of HEU material that fall within the parameters of the existing program. However, they have approximately an additional 9,470 kilograms of U.S.-produced HEU for which there is no recovery program. While HEU in countries with governments friendly to the U.S. is, obviously, considered less of a proliferation risk, there appears to be no discernable rationale, in this case, for attempting to recover some, but not all, of the material. In this regard, non-proliferation experts within NNSA told us that all of the HEU – not just the portion covered by the Acceptance Program – represents a security concern to the United States.

During our review, we also learned that the Department, under a separate program administered by NNSA, is funding recovery of HEU produced and exported by Russia to 15 different countries. In fact, in one country, the Department is paying to recover Russian-produced, but not U.S.-produced, HEU.

Participation and Program Responsibility

The success of the Acceptance Program has been hindered because participation is voluntary and many countries have chosen not to participate. The Department identified 33 countries with spent nuclear fuel elements containing HEU that would be eligible for recovery under

the Acceptance Program. However, 12 of the countries are not expected to fully participate in the program and these non-participating countries, listed in the table below, account for about one half of the HEU eligible for recovery.

Austria	Iran	Japan	Pakistan
Belgium	Israel	Mexico	South Africa
France	Jamaica	Netherlands	United Kingdom

According to Acceptance Program officials, countries that choose not to return the HEU are generally concerned about cost and disruptions to their nuclear programs. In some cases, for example, countries would need to take certain reactors off line to recover and return the HEU. Also, wealthier nations are required to help fund the Acceptance Program.

Additionally, the responsibility for the Acceptance Program falls to the Office of Environmental Management, even though the goals and objectives of the program appear to be outside Environmental Management's core mission of cleanup and closure of contaminated sites. In this regard, Environmental Management's February 2002 *Top-to-Bottom Review* indicated that the program's success required a "laser-like focus" on its core missions. The report also stated that Environmental Management should stop supporting efforts aimed mainly at expanding the mission work of other Department programs and redeploy, streamline, or cease activities not directly supporting an accelerated, risk-based cleanup and closure program.

During our review, we also spoke with officials from NNSA, which is responsible for enhancing U.S. national security by protecting or eliminating nuclear weapons and weapons-useable nuclear material or infrastructure. More specifically, one of NNSA's responsibilities is directing development and coordination of the Department's positions, policies, and procedures relating to international arms control and non-proliferation treaties, nuclear transfer and supplier control, and international nuclear safeguards policies and programs. However, NNSA does not have a program to address the recovery and control of the remaining HEU. According to a senior NNSA non-proliferation official, recovery of HEU (but not its ultimate disposal) is within NNSA's area of expertise.

National Security Risk

If the Department is unable to recover a more significant percentage of HEU produced in the U.S. and dispersed to other countries, there may be a greater risk that some of these materials will be diverted – by groups or governments hostile to the U.S. – for use in nuclear weapons. We noted that at least 56 kilograms of U.S.-produced HEU was, over the course of the Atoms for Peace and follow-on programs, exported to four countries that are now considered "sensitive" and which are not participants in the recovery program. Given heightened concerns about issues affecting our national security, we concluded that the Department should take appropriate measures to ensure that, to the maximum extent practical, HEU produced in the U.S. is recovered.

RECOMMENDATIONS

We recommend that the Under Secretary, Energy, Science and Environment work with the Administrator, NNSA, to determine:

1. Whether aspects of HEU recovery could be more effectively managed by NNSA;
2. Whether the Acceptance Program should be expanded to include all outstanding HEU produced in the U.S. and dispersed to foreign countries;
3. Whether improvements to the program can be made to encourage greater foreign participation; and,
4. Responsibility for the ultimate disposal of HEU in the U.S.

MANAGEMENT REACTION

The Under Secretary for Energy, Science and Environment agreed with the conclusions reached in the report and indicated that he has directed changes in how the Department manages the Acceptance Program. A working group of Departmental and NNSA representatives has been formed to address outstanding issues. Specifically, the Department plans to place a priority on accepting eligible material from reactors and countries where the material – whether HEU or low enriched uranium – may pose a risk from an environmental or proliferation standpoint. This emphasis is intended to ensure that potential risks are reduced first, while providing continuing support to reactors doing important medical and other research work throughout the world.

Related to the specific recommendations, the Department agreed that, given the Office of Environmental Management's focus on site cleanup and closure, the Acceptance Program may be a better fit within another program. Appropriations have been made to the Office of Civilian Radioactive Waste Management for program transfer. Discussions also have been held with NNSA regarding program placement issues. In addition, Departmental staff has been directed to identify steps to: 1) accelerate the return of currently eligible fuel, and 2) accept additional material under this or another program. Finally, program staff has been working with the State Department to identify and prioritize how shipments of eligible material, especially HEU from sensitive areas, can be expedited.

NNSA's Associate Administrator for Management and Administration also provided comments to the report. NNSA concurred with the recommendations and agreed that the Acceptance Program would be more effective at recovering HEU if it was expanded beyond its original scope. NNSA also indicated a willingness to accept responsibility for the overseas portion of HEU recovery.

Both the Department's and NNSA's verbatim comments have been included as Appendix 3.

AUDITOR COMMENTS

Management's comments are responsive to the intent of the report's recommendations. Establishment of the working group within the Under Secretary's office is, in our judgment, an important first step in resolving concerns about the Acceptance Program and reducing related proliferation risks. To ensure a successful outcome, the working group should establish specific milestones for the completion of its work and should clearly delineate program office roles and responsibilities.

Appendix 1

PRIOR AUDIT REPORTS

Office of Inspector General

- *Accounting for Sealed Sources of Nuclear Material Provided to Foreign Countries* (DOE/IG-0546, March 2002). The Office of Inspector General reported that the Department could not fully account for the sealed sources of nuclear material loaned to foreign countries. Specifically, the Department did not maintain a database of sealed sources loaned to foreign entities, which would identify their current location and condition. Furthermore, it found that available information was inconsistent as to whether the U.S. continued to own certain sources or whether the Department was responsible for their final disposition. Tracking and accounting for sealed sources and other nuclear materials is important in order to (1) ensure that nuclear materials are used only for peaceful purposes; (2) help protect nuclear materials from loss, theft, or other diversion; (3) comply with international treaty obligations; and (4) provide data to policymakers and other government officials. While requirements set up by the Atomic Energy Commission called for the Nuclear Materials Management and Safeguards System to track sealed sources, these requirements were not enforced. In addition, international agreements, negotiated with countries receiving our material, do not allow for continuing monitoring and tracking of nuclear material after export, or provide for the necessary safeguards over all sealed sources.
- *International Materials Protection, Control and Accountability Nonproliferation Initiative* (DOE/IG-0603, June 2003). The Office of Inspector General reported that the Department may not be maximizing the performance of the International Materials Protection, Control and Accountability (IMPC&A) program as a result of several continuing problems that may diminish its overall effectiveness. Notably, a significant portion of program funding was expended and accumulated in the U.S. rather than being used directly to reduce or ameliorate proliferation risks in the former Soviet Union. These issues persisted because the Department had not established a formal, risk-based approach to allocating program funding and had not developed specific, quantifiable performance measures. Without the successful implementation of needed improvements, ongoing non-proliferation initiatives could be jeopardized.
- *Nuclear Material Protection, Control, and Accounting Program* (DOE/IG-0452, September 1999). The Office of Inspector General reported that the Department lacked assurance that IMPC&A resources were used to fund upgrades on a prioritized basis and that installed upgrades were functioning as intended.

General Accounting Office

- *Nuclear Nonproliferation: U.S. Efforts to Help Other Countries Combat Nuclear Material Smuggling Need Strengthened Coordination and Planning* (GAO-02-426, May 2002). The General Accounting Office reported that since the early 1990s, there have been numerous reports of illicit trafficking in many types of nuclear materials worldwide. According to the International Atomic Energy Agency, nuclear materials include nuclear source material, such as natural uranium, depleted uranium, thorium, plutonium, and uranium enriched in the isotopes U²³³ or U²³⁵. Plutonium and highly enriched uranium—known as weapons usable material—are considered to pose the greatest proliferation risk because they are used to produce nuclear weapons. Additionally, the report stated that detecting actual cases of illicit trafficking in weapons-usable nuclear material is complicated because one of the materials that is of greatest concern in terms of proliferation—highly enriched uranium—is among the most difficult materials to detect due to its relatively low level of radioactivity.
- *Nuclear Nonproliferation: U.S. International Nuclear Materials Tracking Capabilities Are Limited* (GAO/RCED/AIMD-95-5, December 1994). The U.S. relies primarily on the NMMSS to track the nuclear materials exported to foreign countries. However, this system does not have all the information needed to track the specific current location (facility) and status of all nuclear materials of U.S. origin that are supplied to foreign countries. The system does not contain this information primarily because the amounts, types, and reliability of data contained in the NMMSS depend largely on the data required to be reported under international agreements for peaceful nuclear cooperation, as well as on foreign countries' and U.S. and foreign facilities willingness to report complete and accurate data.

Appendix 2

OBJECTIVE

The objective of the audit was to determine whether the Department is maximizing recovery of highly enriched uranium (HEU) produced in the U.S. and dispersed to foreign countries.

SCOPE

The audit was performed between February and October 2003 at the Savannah River Site in Aiken, South Carolina, and the Office of Environmental Management (EM) and National Nuclear Security Administration (NNSA) Headquarters in Washington, D.C. The scope of the audit covered Environmental Management's and NNSA's efforts to manage and recover HEU produced in the U.S. and dispersed to foreign countries from May 1996 through October 2003.

METHODOLOGY

To accomplish the audit objective, we:

- Researched applicable Federal and Departmental regulations, guidance, and standards;
- Reviewed prior Office of Inspector General and General Accounting Office audit reports related to the audit objective;
- Interviewed EM and NNSA personnel at Department Headquarters, the Savannah River Site, and the Idaho Operations Office;
- Researched data regarding the universe of HEU produced in the U.S. and dispersed to foreign countries; and,
- Analyzed the Department's programs designed to address non-proliferation goals with respect to HEU produced in the U.S. and dispersed around the world.

The audit was conducted in accordance with generally accepted Government auditing standards for performance audits and included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. Accordingly, we assessed internal controls and performance measures established under the *Government Performance and Results Act of 1993* related to the management and recovery of U.S.-produced HEU. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. In performing this audit, we did not rely on computer-based data.

We held an exit conference with representatives from the Office of the Under Secretary and the Office of Environmental Management on February 4, 2004.



The Under Secretary of Energy
Washington, DC 20585

February 2, 2004

MEMORANDUM FOR GREGORY H. FRIEDMAN
INSPECTOR GENERAL

FROM: ROBERT G. CARD 

SUBJECT: Comments on Draft Audit Report on "Recovery of
Highly Enriched Uranium Produced in the U.S. and
Dispersed to Foreign Countries"

Thank you for the opportunity to comment on the above-referenced draft report. The draft report was reviewed by several programs under my cognizance, including the Office of Environmental Management, the Office of Nuclear Energy, Science and Technology, the Office of Civilian Radioactive Waste Management, and the Office of Environment, Safety and Health.

I have directed changes in how the Department manages the Foreign Research Reactor (FRR) Spent Nuclear Fuel (SNF) Acceptance Program, which was the primary focus of the draft report. A working group of DOE and National Nuclear Security Administration (NNSA) representatives has been formed to address outstanding issues. While the Acceptance Program has been successful, I believe we should place priority on accepting eligible material from reactors and countries where the material—whether high enriched uranium (HEU) or low enriched uranium (LEU)—may pose a risk from an environmental or proliferation standpoint. This emphasis will ensure we reduce potential risks first, while continuing to support reactors doing important medical and other research work throughout the world. We are working closely with NNSA and the Department of State to better focus Program priorities and resources.

Your report also recommended I consider four specific issues:

1. Whether aspects of HEU recovery could be more effectively managed by NNSA.

We believe broad external diplomatic, policy and regulatory constraints imposed upon the Acceptance Program, and not more narrow management issues, impose the most significant barriers to enhancing programmatic success. These issues, including international relations among eligible countries and the United States, and requirements of the National Environmental Policy Act, to name only two, would exist regardless of where the Program is housed. That said, we do agree that given the Office of

Appendix 3 (continued)

Environmental Management's (EM's) focus on site cleanup and closure, the Acceptance Program may be a better fit within another DOE program. In the FY05 Budget, appropriations have been made to the Office of Civilian Radioactive Waste Management for program transfer. We have been discussing program placement issues with NNSA, will be reaching a final decision soon.

2. Whether the Acceptance Program should be expanded to include all outstanding HEU produced in the U.S. and dispersed to foreign countries.

Despite the challenges modification of the current Acceptance Policy would face, return of other HEU may be a laudable goal, and should be considered. I have directed my staff to begin work immediately to identify what steps can be taken now to accelerate return of currently eligible fuel, and what would be required to accept additional material under this or another program.

3. Whether improvements to the program can be made to encourage greater foreign participation.

At my direction, Program staff has been working with the State Department to identify and prioritize how we can expedite shipments of eligible material, especially HEU, from sensitive areas. During the next year we will be formally contacting each eligible country (through diplomatic cable) encouraging them to participate if they have not already decided to do so. We would be happy to consider any specific recommendations to improve foreign participation in the Program.

4. Whether responsibility for ultimate disposal of HEU should remain with the Office of Environmental Management.

The Office of Civilian Radioactive Waste Management is responsible for developing a geologic repository, where SNF of several different types will eventually be disposed. As stated for issue 1, DOE is examining program placement and management options for the Acceptance Program. For the FY05 budget cycle, appropriations have been made to the Office of Civilian Radioactive Waste Management.

Thank you for the opportunity to comment. If you have any further questions, please contact Ms. Jessie Hill Roberson, Assistant Secretary for Environmental Management, at (202) 586-7709.

Appendix 3 (continued)

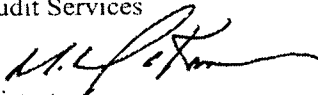


Department of Energy
National Nuclear Security Administration
Washington, DC 20585



DEC 04 2003

MEMORANDUM FOR Frederick D. Doggett
Assistant Inspector General
for Office of Audit Services

FROM: Michael C. Kane 
Associate Administrator
for Management and Administration

SUBJECT: Comments on Recovery of HEU Draft Report

NNSA appreciates the opportunity to review the Inspector General's (IG's) draft Report, "Recovery of Highly Enriched Uranium Produced in the U.S. and Dispersed to Foreign Countries." While the report is primarily directed towards the Office of Environmental Management, it does raise policy questions that NNSA needs to consider.

Initially, the U.S. leased Highly Enriched Uranium (HEU) to foreign countries with the explicit provision that they return the spent fuel, which could be used to produce nuclear weapons, for treatment and disposal in the U.S. However, after 1964, the U.S. changed its policy and began selling HEU materials to foreign countries without requiring the return of spent fuel.

In order to reduce the danger of nuclear weapons proliferation, in May 1996, the Department initiated a program (Acceptance Program) to recover foreign research reactor spent fuel containing HEU produced in the U.S. The program was approved to accept spent nuclear fuel and target material that was irradiated in foreign countries through May 2006. The program is funded primarily by foreign nations that possess HEU originally produced in the U.S.

We understand that the objective of this audit was to determine whether the Department is maximizing recovery of HEU that is produced in the U.S. and dispersed to foreign countries. We further understand that the IG has concluded that as of this past August, the Department was likely to recover only about half of the ~5,200 kilograms of HEU covered by the Acceptance Program. More importantly, in the minds of the IG auditors, there is no effort to recover an additional 12,300 kilograms of HEU produced in the U.S.--and dispersed--since the 1950s. The IG does note that Acceptance Program participation is voluntary and many countries view the program as costly or disruptive--which is hindering



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the recovery efforts. Additionally, the IG noted that the responsibility for HEU recovery resides with the Office of Environmental Management, even though the office's primary mission is environmental cleanup, not nonproliferation.

Some of our programs have commented that the measure of success should not be the amount of HEU that is recovered, but, rather, the amount of HEU that has been taken out of circulation. As an example, the programs cited the Belgians having decided to send their HEU to France for down blending rather than returning the HEU to the U.S. We consider this a success. The whole point of having a ten-year program was to give people a chance to find their own solutions to their nuclear fuel problem so that we wouldn't have to take their fuel indefinitely. There are additional comments that we will provide to the IG under separate cover.

NNSA is aware that the Office of Environmental Management (EM) will be providing comments, separately, to the draft report. EM has been kind enough to provide some comments to NNSA that we believe should also be captured within our response.

- While the program is funded primarily by foreign nations that possess HEU originally produced in the U.S., EM commented that they do charge management and acceptance fees to reactors in high-income economy countries, which partially offset operations and interim management costs. However, the ultimate cost of disposal (in Yucca Mountain or another repository) will be borne by the United States, and is unknown (but will likely dwarf any fees that they may be charging now).
- Regarding the comment about the program residing within EM, EM wants to point out that their programmatic responsibility extends only to certain fuel, both HEU and LEU, eligible for acceptance under the FRR SNF Acceptance Policy.
- EM may take a different position than NNSA's related to the overseas portion of the HEU recovery being handled by NNSA and EM being responsible for the disposal. There are certainly indications that the Under Secretary is considering a replacement of the program, which adds credence to the recommendations that the Administrator and the Under Secretary make the policy decision on placement, management, scope and breadth of the program.
- We are aware, and believe that EM believes the same, that the placement/management of the program is not an optimal fit within the new EM structure.

Appendix 3 (continued)

3

NNSA did inform EM, as indicated above, that we believe NNSA should take over the overseas portion of the HEU recovery. In fact, the Administrator has stated that we, NNSA, should move out expeditiously on trying to improve the take back program. Therefore, we believe that the recommendations should be reordered in the following manner:

- Recommendations 1 and 4 should be directed towards the Administrator and the Under Secretary, Energy, Science and Environment;
- Recommendations 2 and 3 should be directed towards NNSA, specifically the Deputy Administrator for Defense Nuclear Nonproliferation.

In any regard, we agree that the key decisions reside with the Administrator and the Under Secretary. Those decisions will have a direct impact on placement of recommendations 2 and 3.

Should you have any questions regarding this response, please contact Richard Speidel, Director, Policy and Internal Controls Management, at 202-586-5009.

cc: Assistant Secretary for Environmental Management, EM-1
Deputy Administrator for Defense Nuclear Nonproliferation, NA-20

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