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FOR: The Commissioners

FROM: L. Joseph Callan /s/
Executive Director for Operations

SUBJECT: ASSISTANCE TO THE U.S. DEPARTMENT OF ENERGY'S FISSILE MATERIALS DISPOSITION PROGRAM

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PURPOSE:

To provide a status report to the Commission on U.S. Nuclear Regulatory Commission assistance to the U.S. Department of Energy's (DOE **EXIT**'s) plutonium disposition program and to inform the Commission of the staff's intent, unless otherwise directed by the Commission, to comment on DOE's plutonium-disposition site-specific environmental impact statement (EIS), rather than participate as a "cooperating agency."

BACKGROUND:

On March 11, 1995, President Clinton announced that 200 metric tons of U.S. weapons-grade fissile materials had been declared surplus to U.S. nuclear defense needs. The President's action demonstrated U.S. commitment to the policies and objectives of the January 1994 "Joint Statement between the United States and Russia on Nonproliferation and Export Control Policy." As reflected in the "Joint Statement" and the September 1993 "Nonproliferation and Export Control Policy," issued by President Clinton, the objectives of the U.S. nonproliferation program are to: (1) secure nuclear materials in the former Soviet Union; (2) ensure safe, secure, long-term storage and disposition of surplus fissile materials; (3) establish transparent and irreversible nuclear reductions; (4) strengthen the nuclear nonproliferation regime; and (5) control nuclear exports.

In response to President Clinton's Nonproliferation and Export Control Policy, DOE initiated a program (hereafter, Disposition Program) in 1994, to address the storage and disposition of weapons-usable fissile materials. In the same timeframe, DOE requested NRC support for DOE activities related to the Disposition Program. In September 1995, NRC signed a reimbursable agreement with DOE to recover full costs for NRC efforts related to the Disposition Program by charging the license fee rate in effect at the time of the performed work. With the agreement in place, NRC recovers direct salary and benefits, travel, and an appropriate share of the Agency overhead costs. Information on NRC activities conducted under this agreement was reported in SECY-96-008, dated January 5, 1996.

In December 1996, DOE issued the "Storage and Disposition of Weapons-Usable Fissile Materials Final Programmatic Environmental Impact Statement" (PEIS), followed by issuance of a related Record of Decision (ROD) on January 14, 1997. DOE's January ROD, provided in [Attachment 1](#), considers a dual approach for the disposition of the excess weapons plutonium, whereby some or all of the plutonium would be immobilized in glass or ceramic material for subsequent disposal in a geologic repository and the remainder converted into mixed oxide (MOX) reactor fuel in a once-through fuel cycle (no reprocessing). The reactor option includes the use of MOX fuel in existing U.S. commercial power reactors or possibly Canadian Deuterium Uranium reactors, in Canada, in the event of appropriate agreements between Russia, Canada, and the United States. DOE has also formally advised NRC that the reactor option does not preclude the potential use of the Fast Flux Test Facility, in Hanford, for burning the plutonium.

It is expected that DOE will take three fundamental steps to implement the ROD: 1) prepare the follow-on, site-specific EIS for surplus plutonium disposition, as a tiered analysis from the published PEIS; 2) publish a related decision on site selection; and 3) seek Congressional action for the overall funding of the Disposition Program and for needed legislative changes, including provisions for NRC to oversee/regulate some or all DOE facilities selected for the Disposition Program.

The follow-on EIS will determine the specific DOE sites for the following activities of the Disposition Program: 1) disassembly and conversion of surplus weapons plutonium pits; 2) immobilization of the resulting plutonium oxide; and 3) MOX fuel fabrication. Staff understands that DOE will be requesting Congress to authorize NRC to regulate the MOX fuel fabrication and will plan for NRC regulatory oversight of the other activities in the course of the "NRC External Regulation of DOE" program.

DISCUSSION:

After DOE briefed the Commission on January 27, 1997, the Commission requested that ". . . the staff, together with DOE, should explore ways of clarifying the respective responsibilities and future activities of the two agencies related to plutonium disposition, within the framework outlined in the NRC/DOE umbrella MOU recently signed by Chairman Jackson and former Secretary O'Leary and/or under the reimbursable agreement (DE-AI01-95MD10203) involving plutonium disposition" (Staff Requirements Memorandum (SRM) 970023, dated February 11, 1997). In response to the SRM, a modified reimbursable agreement, "Technical Support for the Preparation and Review of Licensing and Compliance Documents," DE-AI01-97MD10203, was recently signed by DOE and NRC and is provided in [Attachment 2](#).

The previous agreement was modified primarily to: (1) extend the expiration date, (2) reflect a new statement of work, and (3) provide for an appropriate level of funding. The modified reimbursable agreement will enable NRC to continue to recover its full costs (including salary and benefits, but

not the full-time equivalents (FTEs)) for technical support to DOE in assisting the Office of Fissile Materials Disposition in its implementation of the technologies selected by the ROD.

Considering the broad scope of the ROD implementation program, DOE decided not to provide specific details in the modified reimbursable agreement regarding NRC's support. Instead, as stated in Attachment B of the modified agreement, under "Scope of NRC Work," DOE will issue task orders related to specific needs that will result from developments supporting DOE's ROD. Staff has requested a meeting with DOE, as soon as practical, to discuss the tasks anticipated under the modified agreement.

To date, DOE has submitted only one formal task order under the reimbursable agreement. Under this task, NRC is to evaluate regulatory implications of the collocation of a licensed operation (MOX fuel fabrication), and non-licensed operations (pit disassembly and conversion, and plutonium immobilization), at the Fuels and Materials Examination Facility in Hanford. It is anticipated that NRC's response to the task order will be provided by September 30, 1997.

Informally, DOE has asked for NRC support regarding the "Nuclear Materials Stabilization Task Group," established by DOE to perform a trade-off analysis on alternative methods of storage for plutonium metals and oxides, pending disposition. Also, it is possible that DOE will issue a task order related to the DOE strategy for obtaining MOX fuel fabrication and irradiation services, which involves licensing and other matters under NRC's purview. A description of DOE's proposed approach is provided in Attachment 3. A Commission briefing on this subject is currently scheduled for September 17, 1997.

In addition, in a letter dated May 19, 1997, provided in Attachment 4, DOE requested NRC's comments on several issues related to a draft Notice of Intent (NOI). NRC's preliminary response to DOE is provided in Attachment 5. The objective of the NOI was to invite interested parties to participate in the preparation of the new EIS by commenting on its scope, content, and relevant environmental issues. In this regard, DOE requested clarification on whether NRC's participation in the EIS process will be as a "commenting agency" or a "cooperating agency." During the preparation of DOE's PEIS, which was published in December 1996, NRC's role was as a "commenting agency." If NRC's role were to change to a "cooperating agency," NRC would formally participate in preparing the EIS. This could create the appearance that NRC was prematurely judging issues that would be more appropriately addressed in the subsequent licensing process. In keeping with its role as a "commenting agency," NRC's functions are limited to providing comments on the draft EIS developed by DOE. In the capacity of a "commenting agency," NRC avoids the potential conflicts of interest that may subsequently arise from NRC's potential regulatory and licensing authority over the alternatives selected in DOE's ROD. The role of a "commenting agency" also reduces the resource burdens on NRC in terms of FTEs. In conclusion, staff intends, unless otherwise directed by the Commission, to continue the more limited role of a "commenting agency" rather than a "cooperating agency."

RECOMMENDATION:

Unless the Commission directs otherwise, within ten working days of the date of this paper, the Office of Nuclear Material Safety and Safeguards staff will provide a response to DOE indicating that NRC will continue in the role as a "commenting agency" in the context of DOE's plutonium- disposition site-specific EIS, rather than participating as a "cooperating agency."

RESOURCES:

NRC activities to support mutually agreed upon task orders will be conducted on a limited basis within the funding level provided by the attached reimbursable agreement. DOE will reimburse NRC for the full costs associated with activities conducted under the reimbursable agreement, so that the cost will not be borne by NRC licensees. However, DOE will not be transferring any FTEs to NRC and, at this time, staff does not plan to request any additional FTEs for fiscal years 1998 and 1999.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections. The Office of the International Programs concurs on this Commission Paper. The Office of the Chief Information Officer has reviewed this Commission Paper for information technology and information management implications and concurs on it. Additionally, the Office of the Chief Financial Officer has reviewed this Commission Paper for resource implications and has no objections.

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Attachments: 1. DOE - Record of Decision, 01/14/97
2. Interagency Agreement , 07/02/97
3. PAS - DOE-Office of Fissile Mtrls. Disposition, 07/17/97
4. DOE ltr. from Mr. J. David Nulton to Mr. T. Sherr, 05/19/97
5. NRC's ltr. from Mr. T. Sherr to DOE, 07/11/97