

NNSA NEWS

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Brooks Statement on Plutonium Disposition

WASHINGTON, D.C. - Today, Linton F. Brooks, administrator of the National Nuclear Security Administration (NNSA), testified before the House Armed Services Subcommittee on Strategic Forces on plutonium disposition and the U.S. Mixed Oxide Fuel Facility. The following is his opening statement:

Statement of Ambassador Linton F. Brooks

Under Secretary for Nuclear Security and Administrator,

National Nuclear Security Administration

U.S. Department of Energy

Before the

House Armed Services Committee

Subcommittee on Strategic Forces

July 26, 2006

INTRODUCTION

Mr. Chairman and other Members of the Committee, thank you for the opportunity to discuss the surplus weapons plutonium disposition program on behalf of the Department of Energy (DOE). I will address the Department's plans to dispose of U.S. surplus weapons plutonium and to assist Russia in disposing of its surplus weapons plutonium as part of a bilateral nonproliferation agreement. This

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program falls under my responsibility as the head of the National Nuclear Security Administration.

Following my statement, Charlie Anderson, Principal Assistant Deputy Secretary of Energy for Environmental Management, will address the Department's plans for disposing of its larger inventory of special nuclear material, and how U.S.-Russian plutonium disposition program fits into this overall strategy. Lastly, my colleague from the Department of State, Ambassador Michael Guhin, will discuss in greater detail the status of diplomatic efforts to support disposition of Russia's plutonium.

The Department of Energy currently has approximately 50 metric tons of surplus weapons and non-weapons plutonium. In addition, the Department has approximately 26 metric tons of surplus highly enriched uranium (HEU) that does not currently have a disposition path. This highly enriched uranium is part of a larger inventory of surplus HEU that will either be blended down for disposition in light water reactors or retained for use in Navy nuclear propulsion plants. Although this hearing does not cover uranium directly, finding a disposition path for that HEU is a necessary component of an overall materials disposition strategy, as Mr. Anderson will describe.

These surplus materials, which are no longer required for national defense or programmatic purposes, are stored at multiple locations, including the Savannah River Site, Hanford, Los Alamos National Laboratory, Lawrence Livermore National Laboratory, the Pantex Plant, and the Y-12 National Security Complex. Since these materials could be used to make a nuclear weapon or a "dirty bomb," the Department spends hundreds of millions of dollars each year to ensure that these materials are stored safely and securely.

U.S.-RUSSIAN PLUTONIUM DISPOSITION PROGRAM

One way in which DOE will dispose of a large amount of its surplus special nuclear material is through the U.S.-Russian plutonium disposition program - the U.S. government's largest nonproliferation program. As part of the Plutonium Management and Disposition Agreement signed by the United States and Russia in 2000, both countries committed to dispose of 34 metric tons each of their surplus weapons plutonium. Disposing of 34 metric tons of Russian plutonium, which is enough material for thousands of nuclear weapons, will permanently reduce the threat that this material can be stolen or diverted. The United States and Russia will both dispose of their plutonium by irradiating it as fuel in nuclear reactors to produce electricity. Once the plutonium has been irradiated in a reactor, it has been converted to a form that can no longer be used in a nuclear weapon. The agreement also envisions both countries disposing of additional plutonium beyond the initial 34 metric tons.

To dispose of our plutonium in the United States, the Department will construct three facilities at the Savannah River Site in South Carolina to fabricate the plutonium into mixed uranium-plutonium oxide fuel, or MOX fuel: a MOX Fuel Fabrication Facility, a Pit Disassembly and Conversion Facility, and a Waste Solidification Building. The Pit Disassembly and Conversion Facility will disassemble the plutonium cores of surplus nuclear weapons, also known as pits, and convert the resulting plutonium metal to an oxide form. The plutonium oxide will then be transferred to the MOX Facility for fabrication into nuclear reactor fuel. The Waste Solidification Building will process liquid waste streams from both the MOX Facility and the Pit Disassembly and Conversion Facility that cannot be handled by the existing site infrastructure.

MOX fuel technology is well established and mature. The design of the U.S. MOX Facility is based on proven processes used in Europe since the 1960s - specifically French technology currently in use at the MELOX and LaHague facilities. MOX fuel is currently being used in more than 30 reactors worldwide.

ROLE OF MOX IN NONPROLIFERATION