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Department of Energy
Washington, DC 20585

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Office of the Secretary
U.S. Nuclear Regulatory Commission
Mail Stop 0-16C1
Washington, D.C. 20555-0001
Attention: Rulemakings and Adjudications Staff

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Dear Staff:

Enclosed are the Department of Energy's comments in response to your request for public comment on the National Resources Defense Council's Petition for Rulemaking (Docket No. PRM-50-90; NRC-2008-0279).

Sincerely,

Dennis M. Miotla, Deputy Assistant Secretary
for Nuclear Power Deployment
Office of Nuclear Energy

Enclosure

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SECY-02

Natural Resources Defense Council (NRDC): Receipt of Petition or Rulemaking
(Docket No. PRM-50-90; NRC-2008-0279)

This document contains Department of Energy (DOE) comments in response to the Nuclear Regulatory Commission's (NRC) request for public comment on a petition for rulemaking, Docket No. PRM-50-90.

NRDC submitted a petition to NRC for a rulemaking regarding the civilian use of highly enriched uranium (HEU) in the United States and exports of HEU by NRC licensees. NRDC's petition requested that NRC institute a rulemaking proceeding to amend NRC regulations governing domestic licensing of production and utilization facilities and special nuclear material (10 C.F.R. Parts 50 and 70 and other applicable regulations) to: (1) establish a date after which NRC will no longer license the civilian use of HEU; and (2) establish a date after which NRC will no longer license the export of HEU.

DOE shares NRDC's concerns regarding the risks of diversion stemming from the civilian use of HEU and leads the effort to minimize HEU use in reactors both in the United States and worldwide. It is DOE's view that these DOE and broader U.S. Government efforts, in conjunction with the current regulatory framework, are already addressing in an effective manner the national security threat posed by the availability of HEU for civilian use.

Through the Global Threat Reduction Initiative (GTRI), DOE supports the conversion of domestic and international civilian research reactors and isotope production facilities from the use of HEU fuel to low enriched uranium (LEU) fuel. HEU, as opposed to LEU, is usable in weapons of mass destruction (WMD). DOE's reactor conversion efforts result in permanent threat reduction because the use of WMD-usable HEU is minimized or eliminated from the civilian nuclear fuel cycle. As part of the GTRI Program, DOE also assists reactor operators with feasibility studies and safety analyses required for regulatory approval to convert reactors, procure LEU replacement fuels, develop and qualify new fuel types, and develop targets and processes for the production of the medical isotope molybdenum-99 (Mo-99) with LEU. Minimizing the use and export of HEU is central to DOE's global threat reduction mission, and by working in close coordination with NRC, other Federal agencies, and private civilian reactor sites both domestically and across the globe, DOE is making important strides toward achieving this goal.

While the rulemaking changes proposed in the NRDC petition would be one way to address our shared concern over the civilian use of HEU, DOE's position is that the existing regulatory framework, in conjunction with ongoing efforts by DOE and other Federal agencies to minimize commercial HEU use and export, is already effectively addressing this situation, given that suitable LEU replacement fuel is not yet available for critical DOE research projects and for the production of essential medical isotopes (as discussed below). In addition, DOE believes that it is important to continue our current policy of vigorously pursuing reduction of enrichment of uranium for use in civilian

research reactors and isotope production facilities to below 20 percent, rather than utilizing an intermediate uranium-235 concentration between 20 and 40 percent. To convert research reactors on an interim basis to an intermediate enrichment level would require two separate conversions and would significantly lengthen current and planned conversion efforts.

Additionally, DOE is concerned that proposed changes to the NRC regulations governing use of HEU could impact the availability and transport of HEU fuel used by DOE facilities. Although DOE facilities are generally not subject to NRC licensing regulations, some DOE facilities use HEU fuel manufactured at NRC-licensed facilities. Thus, changes to the NRC regulations governing HEU use by NRC licensees could impact DOE's ability to procure HEU fuel for DOE facilities, many of which carry out critical research missions for which a suitable LEU replacement fuel is not yet available.

The NRDC recommendation to limit the export of HEU is an important goal, also shared by DOE. At this time, however, a regulatory change that would establish a date after which NRC would no longer license commercial exports of HEU would impact the availability of Mo-99 for use by the medical community. The United States does not produce this isotope domestically. The isotope is supplied primarily by a Canadian company that relies on U.S. exports of HEU targets specifically for the production of the isotope. In connection with license approvals of exports of HEU to Canada for medical isotope production, the Executive Branch obtains government-to-government assurances from Canada that the intermediate and ultimate consignees are required to use the HEU solely to produce medical isotopes and physical protection meeting international standards is required. Until an LEU based domestic supply of Mo-99 can be developed, or until the Canadian reactor can convert to use LEU targets, limiting the export of HEU for this purpose would jeopardize the Nation's supply of this important isotope.

As mandated by the Energy Policy Act of 2005 (Public Law 109-168), the National Academy of Sciences (NAS) is currently conducting a study to determine, among other things, the feasibility of procuring supplies of medical isotopes from commercial sources that do not use HEU. DOE expects a final report from NAS in the fall of 2008, and until the findings of the report are released, a recommendation that NRC ban the export of HEU by a date certain is premature.

Rulemaking Comments

From: Cramer, Barbara [BARBARA.CRAME@nuclear.energy.gov]
Sent: Thursday, September 25, 2008 2:45 PM
To: Rulemaking Comments
Cc: Pantaleo, John
Subject: Comments on NRDC's Petition for Rulemaking (Docket No. PRM-50-90; NRC-2008-0279)
Attachments: Scan - NRC letter.pdf

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From: "Cramer, Barbara" <BARBARA.CRAMER@nuclear.energy.gov>
To: rulemaking.comments@nrc.gov
CC: "Pantaleo, John" <JOHN.PANTALEO@nuclear.energy.gov>
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