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Honorable Spencer Abraham
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Review of MOX Shipment from Japan to Great Britain

Dear Secretary Abraham:

We are writing to you concerning the pending consideration by the Department of Energy ("DOE") of a "subsequent arrangement" under the Agreement for Cooperation Between the United States and Japan Concerning Peaceful Uses of Nuclear Energy (the "Agreement"). This proposed subsequent arrangement would grant U.S. approval for a shipment from Japan to Great Britain of mixed uranium-plutonium oxide fuel ("MOX") containing U.S.-origin plutonium. Given the tragic events of September 11, we believe that assessments of the terrorism threat and proliferation risk must be prepared before any decision is made with respect to the proposed transfer. Ultimately, given the current situation, we believe transport of MOX containing weapons-usable plutonium is unjustified.

The shipment in question involves MOX fuel containing approximately 255 kilograms of U.S.-origin plutonium in eight unirradiated MOX fuel assemblies. This fuel was fabricated in Great Britain by British Nuclear Fuels PLC ("BNFL") and transported in 1999 via commercial vessels to Takahama Power Station, Unit 4, operated by the Kansai Electric Power Company ("KEPCO"). It was subsequently discovered that quality control data for the fuel had been falsified by BNFL employees. This resulted in KEPCO's rejection of the fuel and a demand that the fuel be returned to BNFL.

The Agreement did not foresee shipment of separated plutonium and/or MOX from Japan to Europe. Thus, the return of MOX to BNFL is not covered by the long-term consent arrangements embodied in the Agreement, and such return can only be carried out pursuant to a subsequent arrangement considered and approved in accordance with Section 131 of the Atomic Energy Act of 1954, as amended, 42 U.S.C. § 2160 (the "Act"). Before entering into a subsequent arrangement, the Secretary of Energy must obtain concurrence of the Secretary of State and consult with the Secretary of Defense and Nuclear Regulatory Commission (the "NRC"). Notice of a proposed subsequent arrangement must be published in the *Federal Register*, "together with a written determination of the Secretary of Energy that such arrangement will not be inimical to the common defense and security." A proposed subsequent arrangement involving the transfer of plutonium must also be submitted to Congress for review before taking effect.

Prior to September 11, DOE was circulating a proposed subsequent arrangement for agency review. In connection with the proposed subsequent arrangement, it also appears that Japan and Great Britain had submitted a transportation security plan to the U.S. Government outlining security measures for the transfer. A September 6, 2001, NRC staff memorandum addressing this matter states that the transport "Security Plan had been approved by the Executive Branch, subject to any significant change in the threat environment." That memorandum goes on to state that the request for NRC concurrence with the subsequent arrangement "does not raise any unusual policy considerations" and recommends Commission approval of the subsequent arrangement.

Obviously, a significant change in the threat environment applicable to transport of plutonium and other nuclear materials has occurred as a result of the September 11 attacks. DOE itself has taken steps to halt or restrict various types of domestic nuclear shipments, including shipments of fissile materials. Also, security has increased at DOE facilities where nuclear materials are stored. Administration action on the subsequent arrangement appeared to be nearing conclusion before September 11, but the dramatically changed threat environment now dictates that the entire process leading to *Federal Register* publication and the submission of the subsequent arrangement to Congress be stopped and reassessed.

The Act contemplates that, in appropriate circumstances, the Executive Branch will prepare, prior to approval of a subsequent arrangement, two critical documents assessing the proliferation and security aspects of a proposed transfer of plutonium. First, Section 131 of the Act contemplates that the Secretary of State "shall" prepare a Nuclear Proliferation Assessment Statement ("NPAS") when he determines that a subsequent arrangement "might significantly contribute to proliferation." Second, Section 133 of the Act, 42 U.S.C. § 2160c., contemplates that the Secretary of Defense "shall" prepare a "written assessment of the risk and a description of the actions the Secretary of Defense considers necessary to upgrade physical security protection measures," when the Secretary of Defense determines that "the export or transfer might be subject to a genuine terrorist threat."

To our knowledge, neither a NPAS nor a Defense Department risk assessment has been prepared in connection with the proposed return of MOX to BNFL. Given the changed security situation since September 11, we believe that preparation of both of these documents is essential prior to any determination by the Secretary of Energy as to whether or not this proposed transfer is inimical to national security. The threat of the theft or diversion of plutonium for use in nuclear devices, as well as the threat of attack for the purposes of creating a radiological event, must be thoroughly analyzed before the United States puts its stamp of approval on any shipment of U.S.-origin weapons-usable plutonium.

Preparation of a NPAS is particularly important given current circumstances. The theft of material containing 255 kilograms of plutonium would be an attractive target for those seeking to obtain nuclear weapons materials. A NPAS is needed in order to determine if seizure of this shipment could permit any state or terrorist group to "further any military or explosive purpose." While Japanese officials continue to claim that plutonium of the type which is contained in the MOX fuel on this shipment cannot be used in nuclear weapons, the U.S. Government well understands that this material is weapons-usable and that diversion of it would present a clear proliferation risk.

A Section 133 assessment is likewise imperative. Since a new threat of terrorism clearly exists, this risk assessment is needed to determine the level of the threat and additional steps that have to be taken to counter such threat during the trans-oceanic transfer of the plutonium in question, or the need not to proceed with the transfer if it is found that the threat cannot be effectively countered. Preparation of this risk assessment is closely tied, moreover, to the transportation security plan and provisions in that plan. A new transport security plan must be requested from the Japanese and British authorities, and the United States should withhold comment on that new plan until such time as the risk assessment has been completed by the Secretary of Defense and his recommendations for upgrading security considered.

The Agreement requires that plutonium shipments from Europe to Japan be accompanied by an armed escort vessel. A shipment of plutonium in 1991 from France to Japan was escorted by a purpose-built armed Japanese coast guard ship, but the transport plan for the 1999 MOX shipment allowed for downgraded security measures. The United States approved the transport plan for that shipment even though it provided only for two lightly-armed freighters escorting each other with both carrying MOX fuel. In connection with this new proposal to ship MOX from Japan to Europe, which is not covered by the 1999 transport plan, a clear step to upgrade physical protection would be, at a minimum, to utilize the security measures envisaged for plutonium transfers when the Agreement went into effect, *i.e.*, deployment of a dedicated, heavily armed, fast Japanese coast guard or naval escort vessel for this shipment.

In light of the considerations outlined above, we request that you immediately communicate with the other departments and agencies involved in reviewing the subsequent arrangement, and notify them that you do not plan to go forward unless and until the implications of the events of September 11 are taken fully into account in a new transport security plan, a NPAS and a written risk assessment under Section 133 of the Act.

We look forward to hearing what steps you will take in addressing the new security concerns presented by the proposed transport of plutonium from Japan to Europe.

Sincerely,

Tom Clements
Executive Director
Nuclear Control Institute

Damon Moglen
Senior Campaigner
Greenpeace International

cc: Hon. Colin Powell
Hon. Donald Rumsfeld
Hon. Condoleezza Rice
Hon. Richard Meserve