





[5 March 2009]

APPEAL

Japan's Plutonium Program is Uneconomic, Unsafe, is a Detriment to Japan's Energy

Program, and Fosters Proliferation

Japan Should Terminate its Plutonium Fuel (MOX) Shipments from Europe to Japan and Cease Placing En Route Countries at Risk

On March 6 2009, a shipment of approximately 1.7 metric tons of weapons-usable plutonium contained in 65 assemblies of MOX (mixed plutonium and uranium oxide) fuel is scheduled to depart the port of Cherbourg, France bound for Japan on British-flagged vessels. This will be the world's largest transport of plutonium ever undertaken. The fuel, made from plutonium separated from Japanese spent fuel, which was shipped to France for reprocessing, is to be used at the nuclear power plants of three Japanese electric utilities, Kyushu, Chubu, and Shikoku Electric Power Companies.

Japan's unsafe, uneconomic and failed plutonium program

This shipment is part of Japan's failed attempt to utilize plutonium in its nuclear power program. The original program was to commercialize plutonium-producing fast breeder reactors around 1970, operate a full commercial-scale reprocessing plant, and use MOX fuel in commercial nuclear power plants designed originally to use uranium fuel.

However, to date, commercialization of the fast breeder has been delayed 10 times (a total delay of 80 years) with target date for commercialization set back to 2050. The commercial start up of the recently constructed 2.3 trillion yen Rokkasho reprocessing plant has been delayed 16 times so far, and its future is uncertain due to serious technical problems with the plant. The MOX program, which was supposed to have begun a decade ago in 1999 has been chronically delayed.

Today, after more than 50 years of development and a waste of vast sums of money, Japan's plutonium program produces no electricity, lights not a single light bulb. Millions of signatures have been gathered in Japan to date opposing this unsafe, uneconomic, and failed program.

Shipment threatens the security, safety, and environment of en route countries

Japanese electric utilities persist in pursuing its troubled MOX fuel utilization program. If begun, many more shipments will follow as Japan holds about 38 tons of plutonium in Europe, continuing to put en route countries at risk.

The Japanese ministry in charge of the safety of this MOX fuel transport (MLIT) states, "The Japanese Ministry of Transport, Land, and Infrastructure is not the party which is fully in charge of this transport." It goes on to say, "The primary party responsible is the [Japanese] electric utilities. We've told them time and time again that they should put more effort into the safety of sea transports, just like they put into the safety of their nuclear power plants." MLIT con-

cludes that the effort by Japanese electric utilities is not sufficient. (Quote: Section Chief Masato Mori, 13 February 2009 at Diet member briefing. Mr. Mori is the official responsible for the transport cask safety at MLIT.)

In 1992, 1.5 metric tons of plutonium was transported from France to Japan for use in Japan's prototype fast breeder reactor, Monju. Dozens of countries raised concerns about this shipment and were ignored. Two MOX fuel shipments from Europe to Japan which followed in 1999 and 2001 were also heavily protested by en route States, but the protests were ignored. Not one atom of the plutonium in those shipments has been used in Japan due to nuclear power plant accidents, data falsification scandals, and Japanese local opposition to MOX fuel use.

Twenty Japanese national Diet members, including prominent members of the leading opposition party signed a letter addressed to MLIT on 26 February 2009, stating that the shipment should not go forward without meeting Japanese government regulations. Disregarding this and the Ministry's own concerns, MLIT rushed through the approval that night (26th) just hours after the initial 15 signatures were submitted.

Now in 2009, the en route countries face the same concerns and remain unaddressed by France and Japan:

- •There is no emergency contingency plan made in consultation with maritime authorities of en route states. The shipment lacks an adequate liability and compensation regime, and there is no commitment to salvage the material if it goes overboard.
- •The MOX shipment's transport casks are only required to withstand the following in sequence: a 9-meter drop, 800 degree Celsius fire for 30 minutes, immersion underwater at 15 meters for 8 hours, followed by immersion under water for 200 meters for 1 hour, without a nuclear chain reaction ("criticality") occurring (Regulations Concerning Sea Transport and Storage of Hazardous Materials, Clause 81). The Japanese government's standards are based on the IAEA's Regulations for the Safe Transport of Radioactive Material. They do not envisage long-distance sea transport. If an accident were to occur en route, considering the nature of past accidents, these standards would not be expected to ensure the safety of the cargo. Much hotter fires of much longer duration than 30 minutes could occur. Further, much of the journey will be through seas deeper than 2,000 meters.
- •The MOX fuel, fabricated by the state owned French company Areva NC, will be transported by two lightly armed British-flagged cargo ships, the Pacific Heron and Pacific Pintail. Escorting each other from France to Japan over thousands of kilometers of open sea, security for the journey will be considerably less extensive than that provided for the plutonium fuel over the two nights of March 4 and 5 for the 20-kilometer land trip between the reprocessing site in La Hague and the Cherbourg port.

The plutonium and uranium in the MOX fuel are US-obligated material, having been separated from fresh fuel supplied by the US and irradiated in Japanese reactors. The United States government undertook a secret review of the security plan for this transport. For future shipments en route countries should request the Obama administration to review the security plan in a more transparent manner, with full Congressional oversight. This will reveal that it is deficient from a safety and security perspective and that subsequent shipments should not be undertaken.

Proliferation

The IAEA uses a figure of 8kg plutonium as capable of being used for a nuclear weapon and IAEA safeguards define fresh MOX fuel as "direct use" material for nuclear weapons, with accompanying necessity for stringent physical-protection measures.

Areva is misrepresenting the proliferation threat posed by commercial plutonium contained in this shipment. On 2 March, the Platts trade newsletter reported our letter sent to IAEA Director General Mohamed ElBaradei calling on ElBaradei to "remind Areva and the governments involved in the upcoming shipment of the security risks their nuclear programs pose to the world (Platts Nuclear News Flashes, Monday, March 2, 2009).

APPEAL

Japan's Plutonium Program is Uneconomic, Unsafe, is a Detriment to Japan's Energy Program, and Fosters Proliferation.

We call on the Japanese Government and Electric Utilities to Terminate this and Future Plutonium (MOX) shipments and Cease from Placing En Route Countries at Risk.

We Appeal to Countries Potentially on the Route of this and Future MOX Fuel Shipments to Join Us in Calling for the Termination of these Shipments which Put en Route Countries' Safety and Security at Risk.

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The three possible routes for the shipment are around the Cape of Good Hope and through the South Pacific, around South

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Regional organizations which have protested past Japanese nuclear shipments include CARICOM (Caribbean Community), ACP (African, Caribbean and Pacific Group of states, SIDS(Small Island Developing States), and PIF (Pacific Islands Forum), and South American Countries.