

Citizens' Coalition Against the Plutonium Fast-Breeder Program

Plutonium Action Network - Kyoto

Suite 103, 22-75 Tanaka Sekidencho, Sakyo-ku, Kyoto, 606 Japan

Tel. +81-75-701-7223 Fax. +81-75- 702-1952

September 25, 1992

His Excellency
Patricio Aylwin
Palacio de La Moneda,
Santiago
CHILE



His Excellency:

Enclosed is an information briefing packet regarding the **Japanese plutonium shipment** that is to potentially pass by your country's waters sometime this fall from France on its way to Japan. The shipment will contain 1 ton of plutonium, enough nuclear weapons capable material to create over 120 nuclear bombs. The material is also highly toxic. Many countries en route have already raised official objections to this shipment passing near their waters.

There will be an international forum taking place October 4-6th in Tokyo on Sea Shipments of Japanese Plutonium. It is co-sponsored by Citizens' Nuclear Information Center (CNIC) in Tokyo and Nuclear Control Institute of Washington D.C. This forum will provide an excellent opportunity for obtaining further information regarding these shipments. CNIC in Tokyo has sent invitations for the forum to your embassy in Tokyo.

For further information about Japanese plutonium shipments, please contact the above address or:

Citizens' Nuclear Information Center
1-59-14-302, Higashi-nakano, Nakano-ku, Tokyo 164, Japan
Tel. +81-3-5330-9520 Fax. +81-3-5330-9520

(If you wish to obtain a video copy of two excellent programs on this issue by BBC and ABC at tape and mailing cost, please write to the above address.)

Yours sincerely,

Aileen Mioko Smith (Em)
Aileen Mioko Smith
Director, Plutonium Action Network-Kyoto

P.S. This packet is also being sent to your embassy in Tokyo.

Citizens' Nuclear Information Center

1-59-14-302 Higashi-nakano, Nakano-ku, Tokyo 164, Japan
Tel. +81-3-5330-9520 Fax. + 81-3-5330-9530

Nuclear Control Institute

1000 Connecticut Avenue, Suite 704, Washington D.C. 20036, U.S.A.
Tel. +1-202-822-8444 Fax. +1-202-452-0892

Asia-Pacific Forum on Sea Shipments of Japanese Plutonium: Issues and Concerns

A Forum Sponsored by Citizens' Nuclear Information Center (CNIC)
and Nuclear Control Institute (NCI)
October 4th - 6th, 1992

OVERVIEW:

A three day forum is being convened which will bring together government officials and parliamentarians, environmental activists, and regional security specialists from a number of nations in the Asian-Pacific region which are en route of the Japanese plutonium shipments.

The forum will explore the risks associated with the first one-ton shipment of highly toxic, weapons-usable plutonium that is scheduled to be transported by sea this fall from France to Japan. Following a series of briefings, delegates from the countries that are en route of the shipment will state their concerns. The forum will conclude with a discussion and a resolution which will reflect and summarize the concerns of the participants.

Embassies of countries which are en route will be invited to observe the proceedings, as will representatives of the Japanese government and nuclear industry. Regional, Japanese, and foreign press will also be invited to attend. A press conference and meetings with Diet members and Science and Technology Agency (STA) officials will take place on the third day.

BRIEFINGS (October 4, 1992)

- *Does Japan Need Plutonium?*** Dr. Jinzaburo Takagi, Director, CNIC
- *What Risks do Plutonium Sea Shipments Pose for Public Health and Safety?***
Prof. Al Wallace, Rensselaer Polytechnic Institute
- *Impact of Japan's Plutonium Program on Global Proliferation and Nuclear Terrorism***
Paul Leventhal, President, NCI.
- *Liability and Law of the Sea Ramifications***
Prof. Jon Van Dyke, Univ.of Hawaii Law School
- *Impact of Japan's Plutonium Program on Regional Stability and Nuclear Development***
Prof. Andrew Mack, Australian National Univ.

**PRESENTATION OF CONCERNS FROM COUNTRIES WHICH ARE EN ROUTE THE
JAPANESE PLUTONIUM SHIPMENTS (October 4, 1992)**

| | |
|---|---|
| President Bernard Dowiyogo | Republic of Nauru |
| Governor Lorenzo I. DL Guerrero | Commonwealth of the Northern Mariana Islands |
| Senator Marilyn Manibusan | Guam |
| Eleanor M. Gonzalez Board Director & Treasurer, Nuclear Free Philippines Coalition | Republic of the Philippines |
| Congressman I Hae Chan | Republic of Korea |
| Lopeti Senituli Director, Pacific Concerns Resource Center | Dominion of New Zealand |
| Anung Karyadi Nuclear Campaigner, WALHI | Republic of Indonesia |

DISCUSSION AND RESOLUTION (October 5, 1992)

What are the available legal, political and popular responses? Discussion will include briefing of statements issued by other governments and citizen organizations en route objecting to the shipments, concerns expressed at this forum, and an assessment of the Abercrombie Amendment now pending in the U.S. Congress as a legislative and regulatory model for en-route nations to bar entry of Japanese plutonium shipments, etc.

CONCLUSION

- *Science and Technology Agency
- *Discussion and submitting of forum resolution and petition.
- *Discussion with Diet members

Citizens Nuclear Information Center is located in Tokyo and collects and analyzes a wide range of information both domestic and international regarding nuclear power plants. (Director: Dr. Jinzaburo Takagi)

Nuclear Control Institute located in Washington D.C. is dedicated to stopping the spread and reversing the growth of nuclear arms and the proliferation of plutonium. (President: Paul Leventhal)

Citizens' Nuclear Information Center

1-59-14-302 Higashi-nakano, Nakano-ku, Tokyo 164, Japan

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**SUMMARY OF REACTIONS FROM VARIOUS COUNTRIES ALONG THE
POTENTIAL JAPANESE PLUTONIUM SHIPMENT ROUTES** (To date: 1992• 25•
September)

Governments, nations, and organizations that have issued resolutions expressing concern, refusing passage in their waters, or asked for re-routing of the Japanese plutonium shipment

- State of Hawaii, Governor, 21 May
- Western Governors' Association (U.S. governors of 21 western states), 23 June
- Republic of South Africa Environment Ministry, 7 July
- ANC 7 July
- South Pacific Forum (15 nations), 9 July
- French Green Party, 18 August
- Indonesia National Atomic Energy Agency (BATAN) Minister, Transport Ministry, 22 August. Minister of Environment and Population, 28 August., Foreign Ministry, 17 September
- Malaysia. Marine Department, 29 August. Foreign Ministry, 14 September. Science Technology and Environment Ministry, 17 September.
- Argentina Group of national parliamentarians, 2 September.
- Brazil Comissao Nacional de Energia Nuclear (CNEN), 2 September.
- Chile National Resources Ministry, 10 September.
- Singapore Foreign Ministry, 19 September.

Countries where the issue has been taken up in the media extensively.

- Guam •Belau •Australia •Indonesia •Portugal •Philippines •Northern Mariana Islands
- Republic of South Africa •Hawaii •New Zealand •Chile •Hong Kong

Environmental protection and anti-nuclear organizations actively taking up the issue in/by the following places:

- Philippines •South Korea •Indonesia • Republic of South Africa
- Pacific Concerns Resource Center (PCRC)

Governments and countries that have responded to the Japanese citizens' post card campaign

- Hawaii •Northern Mariana Islands •Tonga •Mauritius •Republic of South Africa •Tuvalu
- Venezuela •Micronesia

Embassies in Japan that have asked for briefings or information from CNIC

- Kiribati •Zaire •Thailand •Italy •Philippines •Sudan

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Japanese Plutonium Shipments

This Month's Update

Issued: 25 September 1992

ESCORT VESSEL SHIKISHIMA HAS TROUBLE

Akatsuki Maru, Japan's plutonium carrier left Yokohama port in Japan bound for France on 24 August accompanied by its escort vessel the Shikishima.

It was learned on 4 September that the Shikishima returned to Yokohama port without explanation. Japan's Maritime Safety Agency (MSA) and also the Science and Technology Agency (STA) declined to comment on why the largest MSA patrol vessel had returned to port. Japanese TV media showed the Shikishima berthing at the Yokohama pier. During the several days that ensued, great numbers of workers were on board apparently carrying out repair work. The Japan Times reported on 6 September that, "An official at Ishikawajima-Harima Heavy Industries, which built the specially designed patrol ship, indirectly admitted that the ship is in trouble." The vessel left Yokohama port again several days later.

JAPAN DOES NOT HAVE NEED FOR PLUTONIUM SHIPMENT

Japan already has a cumulative surplus of plutonium, a cushion sufficient to meet Japan's actual plutonium requirements for three years. Therefore, the imminent shipment scheduled for this fall from France to Japan is not necessary. The plutonium cannot leave the port of Cherbourg until France has granted an export license for the shipment. Under current regulations, France must certify that the exported plutonium will be put to "immediate use" in the country of destination.

The French newspaper *Liberation* took up this issue of need in an extensive article dated 9 September. It reported on an open letter sent on 4 September by Citizens' Nuclear Information Center of Tokyo and Nuclear Control Institute of Washington D.C. to the French Minister of Industry, Dominique Strauss-Kahn, stating that, "We believe the export license should not be approved because our own analysis indicates that Japan has an adequate supply of plutonium at this time and for the foreseeable future. Japan's declared need for the plutonium is based on incomplete and highly questionable data that were recently released by Japan's government-owned Power Reactor and Nuclear Fuel Development Corporation (PNC). We believe the French Government is legally obligated under European and French policies to scrutinize Japan's plutonium inventory in

order to avoid contributing to large, surplus stores of this weapons-usable nuclear material."

FRENCH GREEN PARTY ISSUES RESOLUTION AGAINST JAPANESE PLUTONIUM SHIPMENT

The French "Les Verts" issued its statement on 18 August.

CARIBBEAN CONSERVATION ASSOCIATION ISSUES RESOLUTION AGAINST JAPANESE PLUTONIUM SHIPMENT

The Caribbean Conservation Association in a resolution dated 28 August stated we "DO FORMALLY RESOLVE TO:

- Call on the governments of the Caribbean independently and Caricom States jointly to take urgent steps and implement measures, including legislation, to prohibit the movement and passage of shipments of all hazardous materials and especially plutonium, irradiated nuclear fuel and nuclear waste through the territorial and economic zone waters of the Caribbean.
- Call on the governments of the region to request that Japan, the United Kingdom and France terminate all acts and plans to separate plutonium and transport irradiated nuclear fuel, plutonium and nuclear waste across international or national waters or boundaries.
- Call on the governments of the Caribbean to use the forum of the United Nations and any other relevant body to prohibit the movement of these materials.

ARGENTINA, BRAZIL, CHILE, INDONESIA, MALAYSIA, SINGAPORE: OBJECTIONS RAISED REGARDING JAPANESE PLUTONIUM SHIPMENTS (See related articles.)

HIGH JAPANESE GOVERNMENT OFFICIAL STATES: PLUTONIUM TRANSPORT SHIP "WILL NOT BE PASSING THROUGH THE MALACCA STRAITS"

After extensive objections lodged by the Indonesian and Malaysian governments, a high official of the Japanese government announced on 21 September (reported in evening edition of the Asahi) that the Japanese plutonium transport ship will not be passing through the Malacca Straits. Asahi reported, "The official stated this in connection with increased opposition by the governments of Malaysia, Indonesia etc. which are located along the Straits." Asahi also stated, "The (Japanese) government's policy is not to disclose the route of the shipment whatsoever, and therefore it will not be informing the countries along the Malacca Straits that the shipment will not be passing through the Straits."

JAPANESE FEDERATION OF BAR ASSOCIATIONS ISSUES RESOLUTION OPPOSING JAPANESE PLUTONIUM SHIPMENT

The national Japanese Federation of Bar Associations issued its resolution against the imminent plutonium shipment in early September.

Citizens' Nuclear Information Center

1-59-14-302 Higashi-nakano, Nakano-ku, Tokyo 164, Japan

News Briefing

August 24, 1992

Contact: Yurika Ayukawa
Jinzaburo Takagi
81-3-5330-9520 (tel)
81-3-5330-9530 (fax)

JAPANESE PLUTONIUM CARRIER DEPARTS JAPAN FOR FRANCE IN SPITE OF DOMESTIC AND INTERNATIONAL PROTEST

Japan's plutonium carrier the Akatsuki-maru left Yokohama harbor early this morning, bound for France where it will be loaded with over one metric ton of plutonium to be shipped to Japan. The shipment is part of Japan's controversial nuclear energy program in which 45 tons of plutonium will be transported from Europe to Japan starting this year.

Citizens' Nuclear Information Center (Director: Jinzaburo Takagi) of Tokyo protests the departure of the plutonium carrier for France, and, Japan's plutonium use policy.

Background:

Domestic and international protest has raised safety, security and proliferation concerns. The program has come under major criticism because it entails the creation of tremendous quantities of plutonium at a time when the major nuclear powers are struggling with the issue of how to manage the huge quantities of plutonium coming from dismantled nuclear weapons.

•Plutonium is so toxic that 1 gram can cause cancer in tens of thousands of people.

•24,000 years is necessary for plutonium's radioactivity to be halved.

The shipment which will contain enough weapon-strength plutonium to create more than 120 nuclear warheads, is to be escorted from France to Japan by a single Japanese Maritime Safety Agency Coast Guard cutter. The journey will cover over 16,000 miles and cross both Atlantic and Pacific Oceans. The shipment will pass the vicinity of over 60 countries.

The United States must give final approval to the transport plan before the plutonium shipment can take place because the plutonium to be shipped originates from uranium supplied by the United States Department of Energy. The uranium was used as fuel in Japanese nuclear power plants, and the nuclear waste shipped to France for reprocessing.

Protest in Japan:

Japanese citizens objecting to their country's accumulation and use of plutonium are protesting their government's policy, launching a nationwide post card and media campaign abroad (including a full page ad in the New York Times in June) to inform governments and peoples abroad of the dangers of plutonium accumulation.

CNIC and Washington-based Nuclear Control Institute announced today the co-sponsoring of an international conference on the Japanese plutonium sea shipment issue in Tokyo October 4th - 6th. The conference will provide a forum for the concern that has been raised internationally regarding this shipment.

International Protest:

International protest has been mounting over the past several months. The South Pacific Forum, a group of 15 Pacific nations, at its July meeting unanimously passed a communique urging Japan to consult fully with Forum countries regarding the shipments, and that the shipments be made in accordance with the highest international safety and security standards. (Member nations are Australia, Cook Islands, Fiji, Kiribati, the Marshall Islands, Micronesia, New Zealand, Nauru, Niue, Papua New Guinea, the Solomon Islands, Tonga, Tuvalu, Vanuatu, and Western Samoa.)

Concern has been expressed and inquiries made regarding the shipment by countries such as Malaysia, Spain, Mauritius, Guam, American Samoa and Northern Marianas. And, at the May meeting of the Asia-Pacific Parliamentarians Union, representatives of several member states also expressed concern but Japanese delegates refused to discuss the issue.

South Africa stated July 7th that it would bar ships carrying plutonium for Japan's nuclear reactors from sailing within 200 miles of its coast. Environment Minister Louis Pienaar stated, "We are fully aware of the dangers that these cargoes pose to the environment." He said Japan had made no approaches to South Africa about the shipments. The ban was reported by Reuters in a wire service story headlined, "South Africa Bars Deadly Fuel From Coastal Waters." (July 7th.)

The international press reported today that the Indonesian government has officially lodged their opposition to the Japanese government regarding the sea shipment of plutonium through their waters. The International Herald Tribune had reported as early as July that Emil Salim, Indonesia's Minister of State for Population and Environment urged Japan to avoid congested straits and shipping lanes in Southeast Asia, and keep shipment as far as possible from land.

Governor Thurston K. Siba of the state of Kosrae of the Federated States of Micronesia wrote to CNIC in May that, "...we are extremely concerned about the plans to transport 50 tons of plutonium from Europe to Japan. The potential for accident to occur with the handling, shipping or hijacking of this most toxic and deadliest of material can not be overemphasized." President Dowiyogo of the Pacific island state of Nauru is quoted by the Courier Mail of Australia to have proposed that any nation shipping toxic substances across the Pacific be liable for any damages that result. This position became the policy of the South Pacific Forum in July.

The governments of Italy, Kiribati, Philippines, Sudan, Thailand, Venezuela, and Zaire have asked CNIC for further information on the imminent shipments. Environmental groups, organizations concerned with nuclear weapons issues, and peace groups in various nations en route such as South Korea, the Philippines, Indonesia, South Africa and the Pacific have been protesting and sending action alerts to further inform the public about the dangers of the shipment.

In the United States Hawaii's Governor John Waihee issued a statement about the shipment in June saying, "I am not satisfied that adequate safeguards are in place to protect human, animal life and the general environment..... I don't think they (the U.S. Federal Administration) understand that the ocean connects, feeds, and supports all island people."

Governor Waihee states that the State of Hawaii's concerns include:

Quote

- (1) inadequate environmental review of the transportation plan
- (2) lack of independent testing of the transporting casks
- (3) no provision to notify Hawaii or other local jurisdictions when the ship passes through our waters

- (4) not knowing whether Hawaii, or other Pacific Islands, have been designated as safe havens or emergency ports, and under what conditions safe havens may be sought
- (5) no plan for notification or training of local personnel in case of an incident.

The Japan government's Science and Technology Agency announced this spring that it will not inform countries en route of the shipments about contingency plans for possible emergency port calls. Also, neither the Japanese nor the Bush Administration has as yet addressed the liability issue.

The IMO (International Maritime Organization) is currently investigating the safety of the casks which are to carry the plutonium. In March of this year international maritime safety experts reported that the casks would not be capable of sustaining maximum credible accident conditions at sea.

Concern in the U.S.:

There is concern within the U.S. Congress about the safety of the plutonium shipments. The currently pending bill of the Comprehensive National Energy Policy Act includes an amendment introduced by Representative Neil Abercrombie (D-Hawaii) which, according to a Washington Post article this June, "would bar from U.S. ports any plutonium-bearing ship bound for Japan whose containers fail to meet standards set by the U.S. Nuclear Regulatory Commission, standards that Japan in all likelihood cannot meet."

U.S. Senate non-proliferation leader John Glenn on August 12th called on the Bush administration to reverse its policy of condoning commercial uses of plutonium. The author of the Nuclear Non-Proliferation Act stated, "The proposed shipments will present new risks to the environment, new risks of terrorism, and new risks of weapons proliferation." He added that these risks are needless "since there is no compelling economic justification for the commercial use of plutonium in Japan or any other country." Glenn said that plutonium use only makes economic sense as a nuclear fuel if uranium is scarce and expensive --exactly opposite from current conditions.

Glenn outlined the above concerns in a letter to the U.S. General Accounting Office (GAO) which will investigate the proposed shipments at the Senator's request. Glenn stated, "Our goal should not be to encourage foreign commercial uses of bomb material."

The Western Governor's Association in the U.S. issued a resolution in June stating that, "The (plutonium) transport vessel and shipment casks must meet independently

verifiable standards to withstand maritime accidents including collision, fire and sinking.... Materials that cannot be transported safely should not be transported." The Association include governors from Washington, Oregon, California, Nevada, Alaska, Hawaii, Montana, Wyoming, Utah, Arizona, Colorado, New Mexico, Idaho, North Dakota, South Dakota, Nebraska, Kansas, Minnesota, American Samoa, Northern Mariana, and Guam.

Concern still remains within the U.S. government regarding the security of the shipment. The U.S. Department of Defense in a statement issued in 1987 had stated that "even if the most careful precautions are observed, no one could guarantee the safety of the cargo."

U.S. Vice-Presidential candidate Senator Al Gore in a June 17th speech about a Comprehensive Test Ban to stop the production of weapons-grade fissionable material, highly enriched uranium, and plutonium made clear his views about the Japanese and French nuclear programs. He states, "I believe that ultimately the civil nuclear energy programs of France and Japan will come under review, as voters in those countries become aware of the reality that they will be living with vast quantities of reprocessed plutonium. The sooner this happens, the better. By leaving a United States-Russia agreement open for others, we can emphasize the need to block further accumulation of bomb grade material anywhere for any reason."

Japan beginning to reassess its plutonium policy:

Japanese utilities have not been keen on the government's plutonium use policy. And there are now some dissenting voices within Japan's nuclear industry. Those who believe that a change of policy is needed point out that perhaps Japan should not have a policy at this time of creating large quantities of plutonium .

The New York Times reported on August 3rd that, "Facing growing criticism from abroad, Japanese Government officials say they have begun rethinking the nation's ambitious nuclear energy plans... (S)ince the collapse of the Soviet Union and the dismantling of large numbers of nuclear weapons, experts have warned that a glut of plutonium could pose major environmental problems and security threats. (I)n private Bush Administration officials have been saying for months that they want Tokyo to find a way to extricate itself."

In July, the Japanese Government's Science and Technology Agency created an advisory panel to reassess Japan's mid-term nuclear program. This panel will probably include a reassessment of Japan's plutonium plans.

CITIZENS' NUCLEAR INFORMATION CENTER (CNIC), TOKYO

X

AN OPEN LETTER SENT
TO THE GOVERNMENTS OF NATIONS AND TERRITORIES
ALONG POTENTIAL ROUTES FOR SEA SHIPMENTS OF JAPANESE PLUTONIUM

Algeria, Democratic and
Popular Republic of
American Samoa (U.S.)
Angola, People's Republic of
The Argentine Republic
Azores Islands (Portugal)
Barbados
Belau
Benin, Republic of
Brazil
Brunei--State of
Brunei Darussalam
Canary Islands (Spain)
Cameroon, Republic of
Cape Verde, Republic of
Chagos Archipelago (U.K.)
Chile
China, People's Republic of
Columbia
Congo, Republic of
Curacao (Netherlands)
Dominica, Commonwealth of
Dominican Republic
Ecuador
Egypt, Arab Republic of
Equatorial Guinea
Ethiopia
Falkland Islands (U.K.)
Fiji, Republic of
France
French Polynesia (France)
The Gabonese Republic
Galapagos Islands (Ecuador)
The Gambia
Ghana
Greece
Grenada
Guadeloupe (France)
Guam (U.S.)
Guinea, Republic of
Guinea-Bissau, Republic of
Haiti
Hawaii (U.S.)
India
Indonesia, Republic of
Isla de Coca (Costa Rica)
Italy
Ivory Coast--Republic of
Cote d'Ivoire
Jamaica
Kiribati
Liberia, Republic of
Libya--Socialist People's
Libyan Arab Jamahiriya
Madagascar, Democratic
Republic of
Malaysia
Maldives
Marshall Islands,
Republic of the
Martinique (France)
Mauritania, Islamic
Republic of
Mauritius
Micronesia, Federated
States of
Midway Islands (U.S.)
Morocco, Kingdom of
Mozambique, Republic of
Namibia, Republic of
Nauru, Republic of
Nigeria, Federal Republic of
Northern Marianas Islands,
Commonwealth of the (U.S.)
Oman, Sultanate of
Panama, Republic of
The Philippines
Portugal
Puerto Rico,
Commonwealth of (U.S.)
St. Christopher (U.K.)
St. Lucia
St. Vincent & the Grenadines
Sao Tome & Principe
Saudi Arabia
Senegal, Republic of
Seychelles, Republic of
Sierra Leone
Singapore, Republic of
Solomon Islands (U.S.)
Somali Democratic Republic
South Africa, Republic of
Spain
Sri Lanka, Democratic
Socialist Republic of
Sudan, Republic of the
Taiwan--Republic of China
Thailand
Togo, Republic of
Tonga, Kingdom of
Tunisia
Tuvalu
United Kingdom
Uruguay
Wake Island (U.S.)
Western Samoa
Venezuela, Republic of
Vietnam
Virgin Islands (U.S.)
Yemen, Republic of
Zaire, Republic of

Nuclear body urges better safety

IAEA concerned about stocks, transportation of plutonium

VIENNA (AP) The International Atomic Energy Agency on Monday called for a worldwide convention to address growing concerns over the safety of nuclear power.

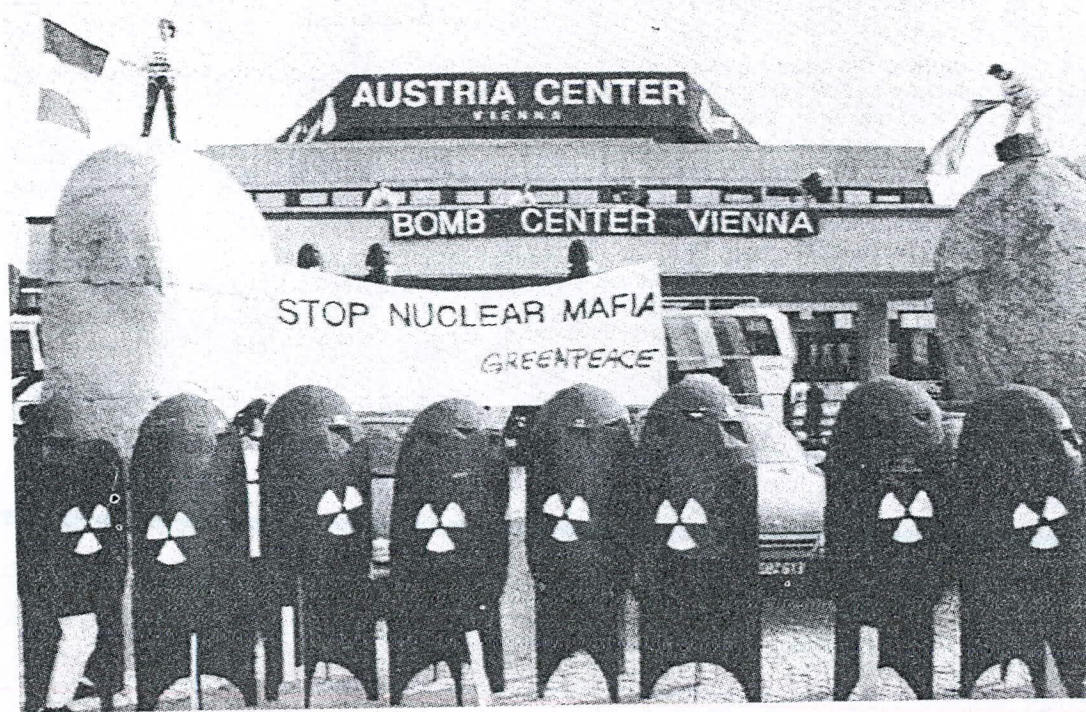
Conferees from several nations expressed fears that increasing stocks of the nuclear fuel plutonium pose an international danger, especially as a ton of plutonium is about to be shipped from France to Japan.

However, a formal discussion on the plutonium issue was taken off the agenda of the weeklong conference at the insistence of the United States and some other countries, according to IAEA sources who requested anonymity.

IAEA Director General Hans Blix told reporters Friday that unidentified member countries were not ready for a comprehensive review of the plutonium issue at the meeting, which began Monday.

But the plutonium question was addressed by several delegates and French delegation chief Philippe Rouvillois called it "a delicate problem."

U.S. chief delegate Ivan Selin, head of the Nuclear Regulatory Commission, called for



ACTIVISTS OF THE ENVIRONMENTAL group Greenpeace protest with banners and nuclear bomb dummies against production and increasing stocks of weapons-grade plutonium and its transportation Monday in front of Vienna's Austria Center, where the annual conference of the International Atomic Energy Agency opened. AP PHOTO.

"an international nuclear safety convention to assure minimum levels of safety in all plants, wherever they may be."

He said such a convention, to be meaningful, should be

confined to civilian nuclear power plants and consist of general principles.

But Selin counseled against establishing an international regulatory body to implement it because "nuclear safety is

inherently a national responsibility, which cannot be delegated."

Several countries have raised objections to the planned transportation aboard a Japanese ship of

about 1 metric ton of plutonium from Cherbourg, France, to Japan.

Kanzo Tanigawa, chairman of Japan's Atomic Energy Commission, said Japan would take "various physical protection measures to ensure security of the nuclear material, and intends to take all the necessary steps to ensure the safe and reliable implementation of this transportation."

IAEA officials said the plutonium was recovered from spent Japanese fuel elements at the La Hague reprocessing plant in France. The nuclear fuel originated in the United States.

They said the plutonium cargo will be sealed in Cherbourg and transportation will take place under the so-called safeguards control mechanism of the agency.

"The stocks of plutonium will increase both from dismantling of weapons and from the reprocessing of spent nuclear fuel," Blix told delegates. "Should new international measures be taken to ensure and verify the peaceful use or storage of this material? Should 'international plutonium storage' again be on the agenda?"

Plutonium ship secretly sets sail for Europe

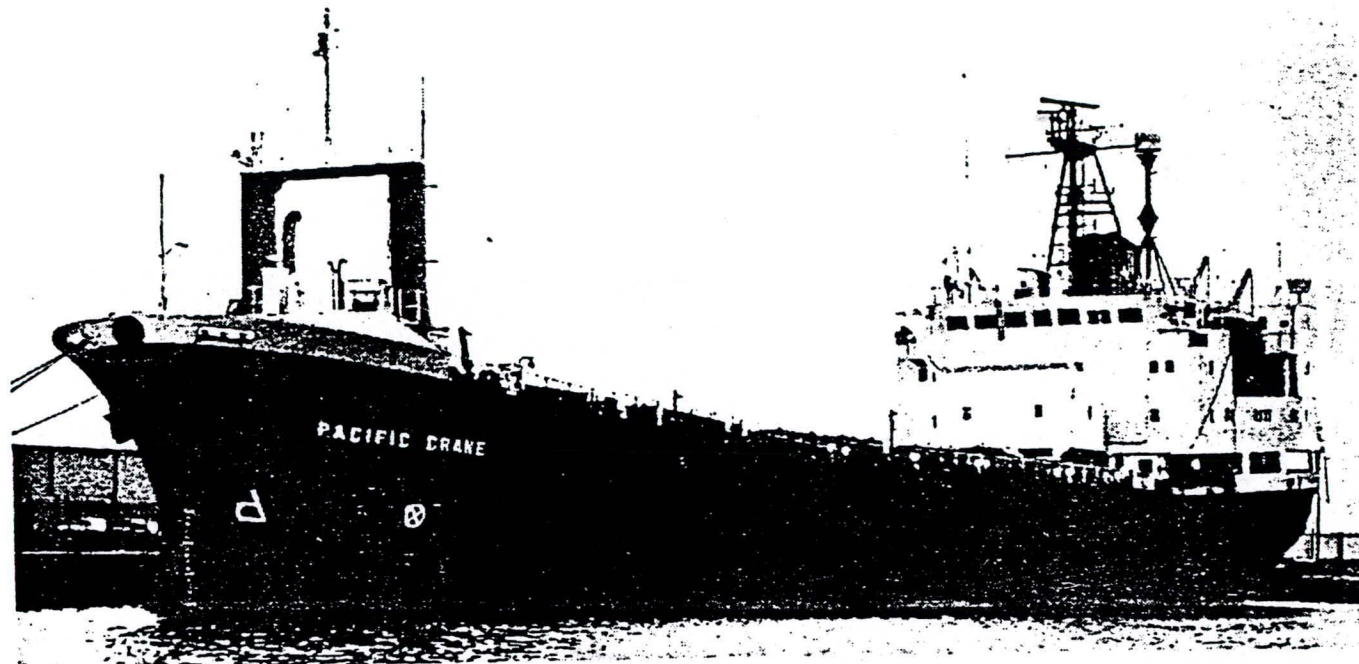
Michael Cross

A WORLDWIDE campaign of protest has failed to stop the embarkation of the first of a series of convoys to ferry tonnes of plutonium from Europe to Japan.

The plutonium ship, the Akatsuki Maru, formerly the Pacific Crane, left its Yokohama berth secretly at dawn last weekend, its name and port blanked out to hide its identity. The environmental pressure group Greenpeace says it is on its way to France to pick up 1 tonne of plutonium extracted from spent nuclear fuel at the Cap La Hague reprocessing plant. It will return to Japan by a secret route accompanied by a purpose-built armed escort, the Shikishima.

The plutonium will fuel Japan's prototype fast-breeder reactors and conventional commercial nuclear power stations as part of Tokyo's long-term strategy of closing the nuclear fuel cycle by recycling spent fuel.

The shipments, which over the next 20 years are likely to ferry as much as 30 tonnes of plutonium from Cap La Hague and its British equivalent at Sellafield, have aroused international protest. The governments of Indonesia and South Africa have banned the convoys from their waters until the Japanese authorities can prove that the plutonium containers can withstand accidents or attacks by terrorists. Earlier this month, Senator John Glenn urged the US government to use its powers to stop the



Secret voyage: Japan insists plutonium shipments will be safe

shipments. "There is no compelling economic justification for the commercial use of plutonium in Japan or in any other country," he said.

Opponents of the shipments say they increase the risk of plutonium falling into the hands of terrorists or unstable governments, which could use it to build nuclear weapons. They also claim the containers would not withstand a major fire, or sinking in deep water. Greenpeace describes the Akatsuki Maru as a "floating Chernobyl".

Campaigners have also revealed that the

ship's registered owner, a company in Tokyo called Sea Bird, has assets of only 400 000 yen (less than £2000). This raises the question of who would be responsible in the event of an accident. □

Plutonium escort suddenly returns to Yokohama port

A ship escorting a vessel that will carry plutonium to Japan has suddenly returned to port without explanation, it was learned Friday.

A Tokyo television station reported that the Shikishima, a 6,500-ton patrol ship belonging to the Maritime Safety Agency, was in port.

It had accompanied the Akatsuki Maru, which left Yokohama on Aug. 24 to travel to France, where it will collect reprocessed plutonium and transport it to Japan.

Tokyo Broadcasting System showed the Shikishima berthing at a Yokohama pier, with a number of workers apparently carrying out repair work.

The MSA declined to comment on the matter when contacted by The Japan Times. The Science and Technology Agency also declined to comment.

An official at Ishikawajima-Harima Heavy Indus-

tries, which built the specially designed patrol ship, indirectly admitted that the ship is in trouble.

It is not known when the patrol ship returned to Yokohama.

The repair work was apparently directed by MSA officials, TBS reported.

The MSA declined to either clarify whether the patrol ship returned to Yokohama or to reveal the ship's whereabouts, citing the sensitive security factors involved in the mission.

It was not clear whether the 4,800-ton freighter Akatsuki Maru is continuing its voyage alone.

The Shikishima, the largest MSA patrol vessel, is armed with a twin 35mm antiaircraft cannon and a 20 mm Gatling-type gun.

It carries two helicopters and is capable of a top speed of 25 knots.

ASAHI SHIMBUN
SEPT. 21, 1992
evening edition (English translation)

HIGH JAPANESE GOVERNMENT OFFICIAL STATES:
PLUTONIUM TRANSPORT SHIP "WILL NOT BE PASSING THROUGH
THE MALACCA STRAITS"

A (Japanese) high government official made clear on September 21st that the Japanese plutonium transport ship will not be passing through the Malacca Straits. The official stated this in connection with increased opposition by the governments of Malaysia, Indonesia etc. which are located along the Straits.

The high official gave as a reason for avoiding the Straits of Malacca dangers of highjacking because of piracy etc. The official stated that due to avoiding the Straits, the distance of the voyage will be lengthened considerably. The (Japanese) government's policy is not to disclose the route of the shipment whatsoever, and therefore it will not be informing the countries along the Malacca Straits that the shipment will not be passing through the Straits.

'92/9/21
ASAHI (evening edition)

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|---|---|
| 「マラッカ海峡通らず」 プルトニウム輸送船 政府高官 | フランスからプルトニウムを輸送する日本の輸送船の航路について政府高官は二十一日、輸送船はマラッカ海峡を通過しないと明らかにした。マレーシア、インドネシアなど予想される航路の沿岸諸国政府が反対姿勢を強めていることに関連して述べたものだ。 |
| プルトニウム輸送船を避ける理由として、海賊が出没するなどの核ジャックの危険があること、同海峡を避けることから、航路はかなり迂回になることと語った。政府は輸送船の航路を一切公表しない方針で、マラッカ海峡を避けることによる沿岸諸国に通告するつもりはないと述べた。 | |

JAPANESE
ORIGINAL
OF
ASAHI
'92.9.21
Article
(evening
edition)

プルトニウム輸送船
領海通過に反対表明

インドネシア

【ジャカルタ23日＝大野博人】インドネシア原子力庁のジャリ・アヒムサ長官はこのほど、国营アンタラ通信のインタビューで、日本へのプルトニウム海上輸送について、ルートについてはまだ知らされていないが、「インドネシアの領海を通ることは反対する」と述べた。

同長官は、「安全性は高く、放射能がもれることはないと思う」としながらも、マラッカ海峡が狭いことや、海域に多くの島が点在していることなどを反対の理由としてあげている。

Indonesian officials state objections to Japan's plutonium shipment plan

JAKARTA (Kyodo) The head of Indonesia's National Atomic Energy Agency (BATAN), Transportation Ministry officials and an environmentalist group oppose a Japanese plan to ship plutonium to Japan through Indonesian waters, the official Antara news agency reported Saturday.

Djali Ahimsa, head of BATAN, said that although the plutonium containers meet high safety standards, he would still object to the plan if the ship passes through Indonesian waters.

Japan has said that the containers are safe enough to carry the plutonium from France this autumn. Japan plans to use the plutonium to fuel power plants.

He warned that 1,000 kg of plutonium can make 200 nuclear warheads. He also said

Aug. 24. 92 JAPAN TIMES

that plutonium, if it contaminates the environment, can cause cancer.

"Based on the facts, if BATAN is asked to make its opinion about the plutonium shipping, then it will resolutely state its objection," Ahimsa told Antara.

A Transportation Ministry official said the ministry will investigate the possibility that the ship will pass through

the Strait of Malacca.

"We have to pay serious attention to the plan. It is clear we do not want to be polluted if an unexpected accident takes place," ministry spokesman Sukardi said.

The Strait of Malacca is between Indonesia's Sumatra island and the Malaysia Peninsula, near Singapore, and is one of the busiest waterways in the world.

Plutonium Ship Barred From Malaysian Waters

KUALA LUMPUR (Kyodo) — Malaysia has banned a Japanese freighter transporting plutonium from France from entering its waters in the Strait of Malacca, a Kuala Lumpur newspaper reported Saturday.

The English-language Star quoted Marine Department Director Ghazali Abu Hassan as saying the ship has been denied permission to sail in local waters of the strait which separates the peninsula of Malaysia and the Indonesian island of Sumatra.

Maritime enforcement agencies have been alerted to watch out for the 4,800-ton Akatsuki Maru which left Yokohama on Aug. 24 for France to carry back reprocessed plutonium for Japan's prototype fast-breeder reactor.

Aug. 31, '92. ASAHI

Sept. 1, '92. MAINICHI

Malaysia adds voice to calls opposing plutonium shipment

KUALA LUMPUR (AFP-Jiji) — Kuala Lumpur has echoed Indonesian calls opposing passage of a Japanese cargo of plutonium that may pass through the strait dividing Sumatra and the Malaysian peninsula.

"We feel that we should not take a risk," a Malaysian Marine

Department spokesman said Saturday, nearly one week after a Japanese ship left Yokohama port along a secret route to fetch one ton of reprocessed weapons-grade plutonium from France.

Japan's plan to import some 30 tons of plutonium from France and Britain by 2010 for use in its fast breeder nuclear reactors has prompted an international outcry among environmental movements.

"The danger of a nuclear catastrophe cannot be ruled out in the event of an accident in the sea," said Mohamed Idris, coordinator of the Third World Network based in Malaysia's northern Penang state, on Sunday.

The Marine Department has alerted all sea enforcement agencies to watch out for the ship.

The Third World Network, a group linking environmental groups in Asia, Europe and Latin America, said it was alerting its members to pressure their governments not to allow passage to any such ship.

The Japanese-registered Akatsuki Maru left Yokohama last Monday, reports said.

The Indonesian Forum for Environment (Walhi) called on the Jakarta government to refuse the ship entry into the busy strait, a vital link between the Far East and Europe.

Indonesia's National Atomic Power Agency (Batan) had earlier opposed the voyage through the Strait of Malacca, and the government's directorate for sea communications said it was reviewing the planned route of the Japanese vessels.

Plutonium Passage

JAKARTA (Kyodo)—Four countries belonging to the Association of Southeast Asian Nations are trying to work out a common position concerning the possible transit of a Japanese ship carrying plutonium off their coasts, according to news reports Wednesday.

Indonesia, Malaysia, Singapore and the Philippines are worried that the Akatsuki Maru, which left Yokohama on Aug. 24 to pick up radioactive material extracted in Britain and France from spent nuclear fuel, will return via the narrow and busy Strait of Malacca. Sep. 3, '92 Daily Yomiuri

Nations mull plutonium ship route

JAKARTA (Kyodo) Four Southeast Asian countries are discussing how to deal with the situation if and when a Japanese vessel carrying plutonium passes near their coasts, news reports said Wednesday.

Indonesia, Malaysia, Singapore and the Philippines are trying to hammer out a common position toward the route of the Akatsuki Maru, which is to transport plutonium from Britain and France that was reprocessed from Japan's spent nuclear fuel.

Indonesia's Population and Environment Minister Emil Salim noted that the ship, which left Yokohama Aug. 24, is expected to pass through the narrow, busy Strait of Malacca on its return trip.

Local environmental and nongovernmental groups have voiced objections to the route

Sept. 3, '92 JAPAN
TIMES

Jakarta plutonium fear rises after liner sinking

(P) (N)
 JAKARTA (Kyodo) A collision Sunday in the Malacca Strait that resulted in a cruise ship going down has sparked even sharper objections in Indonesia over the possibility that a Japanese ship will carry plutonium through the waterway.

The Akatsuki Maru will carry highly toxic plutonium from France to Japan this autumn. Its route, a secret, may include the Malacca Strait, which is one of the busiest commercial waterways in the world.

The ship left Yokohama Monday for Europe just one day after a collision in the strait between a Taiwanese fishing trawler and the Royal Pacific cruise ship.

The Indonesian Environmental Forum issued a statement saying the Akatsuki Maru has four route alternatives, two of which are through the Malacca Strait.

"Therefore, we must keep on guard against the presence of the Akatsuki Maru (in the strait)," the statement said.

The group urged the Association of Southeast Asian Nations countries, especially Indonesia, Malaysia and Singa-

pore, which supervise the strait, and the Philippines to ban the ship from using it.

The forum referred to the 1975 accident of the Showa Maru, the Japanese oil tanker that leaked a large amount of crude oil into the strait.

According to the statement, 30,000 ships pass annually through the strait, which is straddled by hundreds of islets between the Malay Peninsula and Sumatra.

Budi Santoso, an official of the Transportation Ministry's shipping and navigation directorate, told Kyodo News Service the strait would provide the shortest route for the Akatsuki Maru.

Santoso said no ships can be banned from the strait because it is an international route.

But he said the same sort of accident that befell the Royal Pacific could strike any ship using the strait.

"The risk of a ship carrying plutonium is too big," Santoso said.

He said the Akatsuki Maru will possibly go through Lombok Strait near Bali and sail in waters close to the Philippines before going to Japan.

Plutonium ship urged to avoid busy strait

JAKARTA (Kyodo) The Indonesian minister of environment and population, Emil Salim, has asked that a Japanese ship due to carry plutonium from France steer clear of the Strait of Malacca, Antara news agency reported Friday.

Salim said traffic in the Strait of Malacca is so heavy that it is better for the ship, the Akatsuki Maru, to take other sealanes to avoid the possibility of a collision while carrying the highly toxic material.

The Strait of Malacca, located between Sumatra and the Malay Peninsula, is one of the busiest commercial waterways in the world.

Japan has already discussed using the strait for plutonium shipments and will submit its "next plan" to the Indonesian government, Salim said in Bali, according to Antara.

"Indonesia hopes the Japanese government will take the suggestion into consideration," Salim said.

The Akatsuki Maru left Yokohama Monday for France to pick up the plutonium — one day after a collision between the Royal Pacific, a Greek-registered cruise liner, and a Taiwanese fishing boat in the Strait of Malacca.

The Royal Pacific sank, leaving two of its more than 500 passengers dead and seven missing.

Japan has kept the route of the Akatsuki Maru secret. It has said the plutonium containers meet standards for safety.

Caribbean Conservation Association

Savannah Lodge The Garrison St. Michael Barbados Telephones (809) 426-5373, 426-9635

Telefax: (809) 429-8483 Cables: CONCARIB Barbados

A regional organisation for the preservation and development of the environment and
the conservation of the cultural heritage

Asociación para la Conservación del Caribe

una organización regional para la preservación y desarrollo
del ambiente y para la conservación del patrimonio



Association Caraïbe pour l'Environnement

association régionale pour la protection et la mise en valeur
du patrimoine naturel et culturel

Resolution of the Caribbean Conservation Association
Friday, August 28th 1992,
Hilton Hotel , Port-of-Spain

The organizations and individual members of the Caribbean
Conservation Association assembled in Port-of-Spain on the
occasion of the 26th Annual General Meeting

EXPRESSING grave concern that the Caribbean Sea is part of the
likely route for shipments of plutonium from Europe to Japan.

CONSIDERING THAT plutonium is one of the most long-lived and
radiotoxic elements, its separation, transport and use threaten
the environment, human health and the gene pool.

CONSIDERING THAT these shipments will endanger the nations,
peoples, and environment of the Caribbean region.

GIVEN THAT the nations of the Caribbean have no capacity to
prevent and or respond to the dangers of radioactive
contamination.

GIVEN THAT individual nations are taking action to ban plutonium,
irradiated nuclear fuel and high level nuclear waste shipments
from their waters and airspace.

DO FORMALLY RESOLVE TO:

CALL ON the governments of the Caribbean independently and
Caricom States jointly to take urgent steps and implement
measures, including legislation, to prohibit the movement and
passage of shipments of all hazardous materials and especially
plutonium, irradiated nuclear fuel and nuclear waste through the
territorial and economic zone waters of the Caribbean.

CALL ON the governments of the region to request Japan, the
United Kingdom and France terminate all acts and plans to
separate plutonium and transport irradiated nuclear
fuel, plutonium and nuclear waste across international or national
waters or boundaries.

CALL ON the governments of the Caribbean to use the forum of the
United Nations and any other relevant body to prohibit the
movement of these materials.

AND PLEDGE to mobilize other NGOs to work against the production
and movement of these materials.

---End---

Mr. Adolph Schoevers President Mr. Embert Charles Vice-President Mr. Rodrigue Aristide Treasurer Dr. Len Ishmael Secretary

Dr. David Smith Mrs. Cecilia de Blohm Dr. Peter Reeson Dr. Adrian Fraser

Representatives of: Government of Jamaica Government of Anguilla Government of Trinidad and Tobago Government of U.S. Virgin Islands

Mr. Calvin Howell Executive Director

Plutonium Action - Hiroshima

News Release

**For Immediate Release: August 24, 1992
FROM HIROSHIMA, JAPAN**

CONTACT: SATOMI OBA 082-828-2603
KAORU HIRAKI 082-274-1437
(HIROSHIMA CITY, JAPAN)

WE OF "PLUTONIUM ACTION- HIROSHIMA" STRONGLY OPPOSE THE PLUTONIUM SHIPMENT WHICH WILL DISTURB WORLD PEACE AND ORDER AND CONTAMINATE THE ENVIRONMENT.

WE STRONGLY PROTEST THE DEPARTURE TODAY OF THE PLUTONIUM CARGO SHIP AKATSUKI-MARU AND SHIKISHIMA IN SPITE OF CITIZENS' PROTEST AND A LOT OF FEAR AND DOUBT OF THE NATIONS EN ROUTE.

PHOTOGRAPHS OF OUR PLUTONIUM SHIPMENT
PROTEST HELD IN FRONT OF THE HIROSHIMA
ATOMIC BOMB MEMORIAL AUGUST 21ST WILL BE
DELIVERED TO THE FOREIGN CORRESPONDENTS'
CLUB OF TOKYO OFFICE FOR YOUR USE BY 9:30
P.M. TONIGHT.

(PLUTONIUM ACTION-HIROSHIMA IS A CITIZENS' GROUP OF HIROSHIMA
OPPOSED TO JAPAN'S PLUTONIUM USE POLICY AND NUCLEAR POWER)

France asked to block nuclear shipment

Sept. 12 - 92. JAPAN TIMES
Japanese and U.S. antinuclear groups have written to France's minister of industry, asking him to refuse to issue a license allowing plutonium to be transported to Japan, the head of the Japanese group said Friday.

The Citizen's Nuclear Information Center of Japan and the Nuclear Control Institute of the U.S. believe Japan has an adequate supply of plutonium, Jinzaburo Takagi said.

The groups urged the French government to examine the situation in Japan thoroughly and to release complete information about Japan's plutonium inventory.

Data compiled by the Japanese government and the International Atomic Energy Agency is currently kept secret.

The plutonium has been extracted from spent Japanese nuclear fuel in a French factory. The government plans to bring it to Japan as fuel for a fast breeder nuclear reactor.

The two groups criticized a report by the government-affiliated Power Reactor and Nuclear Fuel Development Corp. on the country's pluto-

onium inventory.
They claim Japan has a surplus of 1.4 tons of plutonium, sufficient to meet requirements for three years. The corporation's report says the country has a surplus of only 400 kg.

Takagi said Japan plans to import plutonium to cover expected losses at reprocessing plants in this country.

However, Takagi denied suggestions that Japanese government might use the substance for nuclear weapons.

The two groups plan to open a three-day forum Oct. 4 to discuss the shipment with government officials and environmentalists from the U.S. and from Asian countries on the ship's route.

The ship, the Akatsuki Maru, left Yokohama Aug. 24.

Women issue protest

A group of some 110 women have issued a statement protesting a planned shipment of plutonium from France to Japan.

The statement was drafted during an all-women's symposium on the issue in Tokyo Friday.

"If people really want to conserve the environment, they should start by establishing a society without plutonium," Yumi Kikuchi, a spokesman for the group Niji no Hebi, said at a news conference after the meeting.

"I believe that we can stop the shipment," said Mayumi Oda, another leader of the group.

France Urged Not to Export Plutonium

A Japanese citizens group has urged France not to authorize the export of a ton of plutonium to Japan this year because Japan already has enough plutonium to last three years. Sept. 12. 92. ASAHI

NuclearFuel



A biweekly report from the editors of *Nucleonics Week*

August 31, 1992

JAPANESE, FRENCH REACHING AGREEMENT TO ALLOW PU SHIPMENT TO PROCEED

France and Japan expect soon to conclude a diplomatic agreement spelling out how Japan plans to use roughly one metric ton (MT) of fissile plutonium it is requesting be exported from France, officials of both countries said last week. The text, described as a "verbal note" in which Japan is to justify its need for the Pu, has been under negotiation for months, sources said.

Every country receiving Pu from France must supply such official certification before each export license is issued. Sources said the French Ministry of Foreign Affairs has sought to apply the same requirement to Japan. But Japan has argued that its 1988 programmatic agreement with the U.S. allows it to recycle the Pu as necessary and precludes any need for further justification.

The imminence of the Pu shipment, however, apparently convinced Tokyo to yield to the French request. "There is no problem between France and Japan," a Japanese diplomatic source reported last week. "The agreement is concluded."

The Pu, recovered from Japanese spent fuel via reprocessing in France, is expected to be shipped this fall in a refitted spent fuel transport vessel, the newly baptized *Akatsuki Maru* (Rising Sun), which left Yokohama harbor early August 24. The U.S. approved Japan's transportation plan for the shipment in early August (see related story, page 11).

The U.S. has a say in the further use of the Pu because it was produced using U.S.-enriched uranium.

The planned transport is the target of criticism from a variety of institutions led by Greenpeace International and the Nuclear Control Institute (NCI), as well as by some U.S. politicians, notably Sen. John Glenn (D-Ohio) (NF, 17 Aug., 12). Those critics stressed the danger of long-distance shipments of Pu, which Greenpeace called "one of the most deadly radiotoxic substances in existence," as well as their opposition to Japan's plans to use a growing quantity of Pu in its nuclear power plants.

The verbal note, signature of which was described last Thursday as imminent, formalizes Japan's request for return of the Pu and will be the basis for delivery of an export license, French authorities said. France and Japan also have a broader formal agreement for nuclear cooperation, renewed in 1990 for 27 years (NF, 16 April '90, 16).

Except for small amounts of Pu transferred to Switzerland and, in 1984, to Japan—the latter under military escort—Pu transfers from La Hague have been within the European Community. All forms of transportation have been used, a French official said, but most of the Pu has been shipped by road.

The verbal note, sources said, must certify that the exported Pu will be put to "immediate use" in the country of destination. French nuclear export policy requires Japan, as well as other countries, to specify the precise end use of the exported Pu, including fabrication and utilization schedules.



Miyazawa Assures Pacific Isles About Plutonium Shipment

WASHINGTON (Kyodo)—Prime Minister Kiichi Miyazawa has assured South Pacific island nations that Japan has adopted the "highest international safety and security standards" for its shipment of plutonium from Europe.

Miyazawa offered his assurance in a July 27 letter to the 15-nation South Pacific Forum, according to Greenpeace, an international environmental group.

Addressing concerns expressed by the South Pacific island countries on the plutonium shipment plan, Miyazawa said Japan is prepared to provide "necessary information and explanation" on the safety measures taken.

"The government of Japan will ensure that the shipment will be made in accordance with the highest international safety and security standards and in a manner which satisfactorily addresses all possible contingencies," Miyazawa said.

The plan, which involves shipping plutonium reprocessed in France and Britain from Japanese spent nuclear fuel, has raised concern among nations located along likely shipping routes.

The South Pacific Forum, in an

annual meeting held on July 9 in the Solomon Islands, urged Japan to "fully" consult with its member countries regarding the shipment.

A Japanese-registered freighter, the Akatsukimaru, left Japan on Monday en route to France for the first shipment.

The Japanese government, which has assigned an armed escort ship to protect the cargo vessel, has not released details of the routes involved for security reasons.

Indonesia Warns Plutonium Ship

JAKARTA (Kyodo)—Indonesian Minister of Environment and Population Emil Salim has urged the Japanese ship due to carry plutonium from France to Japan to steer clear of the Strait of Malacca, the official Antara news agency reported Friday.

Salim said the traffic along the Strait of Malacca is so heavy that it is better for the ship, the Akatsukimaru, to take other sea lanes to avoid the possibility of a collision while carrying the highly toxic material.

The Strait of Malacca, located between Sumatra island and the Malay Peninsula, is one of the busiest commercial waterways in the world.

Japan has already discussed using the passage for the plutonium shipments and will submit its "next plan" to the Indonesian government, Salim said Thursday in Bali, according to Antara.

"Indonesia hopes the Japanese government will take the suggestion into consideration," Salim said.

The Akatsukimaru left Yokohama on Monday for France to pick up the plutonium—one day after a collision between the Royal Pacific, a Greek-registered cruise liner, and a Taiwanese fishing boat in the Strait of Malacca. The Royal Pacific sank, leaving two of its more than 500 passengers dead and seven missing.

Japan has kept the route of the Akatsukimaru secret. It has said the plutonium containers meet high safety standards.

An Indonesian official at the directorate of shipping and navigation of the Transportation Ministry said earlier this week that the Strait of Malacca is a "very possible route" for the plutonium ship because it is the shortest route to Japan.

The Indonesian Environmental Forum (Walhi), the country's largest nongovernmental organization on envi-

ronment, in a statement earlier this week urged the Indonesian government and other members of the Association of Southeast Asian Nations to ban the ship from passing through the region's waters.

It also warned that the Strait of Malacca is "narrow and dangerous" and recalled the large oil spill there in 1975 by the Showamaru, a Japanese oil tanker.

Aug. 29, '92 Daily Yomiuri

Japan using comic strip to allay plutonium fears

HONOLULU (AP) — Japanese officials are using a cartoon fact sheet to try and allay concerns in Hawaii and other parts of the world about a planned shipment of plutonium from Europe to Japan later this year.

The cartoon sketches feature an inspector in a hard hat and the captions outline International Atomic Energy Agency safety tests the casks holding the radioactive metal reportedly have passed.

Takaya Suto of Japan's Foreign Ministry outlined the program at a news conference Friday. He said the information on safety aspects of the shipment from France to Japan, scheduled

Sept. 6, 92. MAINICHI
for late November, had previously been confidential.

Suto showed rough drawings of the specially designed 5,000-ton ship Asasuki Maru, which is on its way to France. He also showed drawings of the special casks which will each hold one ton of powdered plutonium oxide for transport.

The plutonium is for use in power plant reactors.

The sketches show the casks can withstand a 25-cm fall and five times their weight.

The casks can also withstand exposure to a 800-degree Celsius fire for 30 minutes, the handout showed.

Chile to Reject Entry of Japanese Plutonium Ship

SAO PAULO (Asahi Shimbun)—A Chilean government official said his country would reject entry of the Japanese plutonium transport ship Akatsuki Maru into its territorial waters, it was reported Thursday.

National Resources Minister Luis Alvarado said that although his country would "ask that the transport of the highly toxic material be carried out following all international standards," it would not allow the ship to traverse Chilean waters if it cuts by the Cape Horn at the southern tip of South America.

Although no official course has been disclosed for the ship when it returns from France carrying plutonium to be used for Japan's first fast-breeder reactor, environmentalists and government officials in other South American countries such as Brazil and Argentina have raised concern. Sept. 11, 92. ASAHI

Stop plutonium ship, say groups

WASHINGTON (AP) — Anti-nuclear groups battling Japanese plans to stockpile plutonium are appealing to France to block shipment to Japan of the potent, weapons-usable substance.

A joint letter asking France's industry minister to delay an export license for the first of a series of planned ocean shipments of plutonium from Europe to Japan was delivered to French embassies in Tokyo and Washington, the U.S. Nuclear Control Institute and the Japanese Citizens' Nuclear Information Center said Tuesday.

"Japan already has three times more plutonium than it needs to meet its annual requirements" for electric power, said the letter to French minister Dominique Strauss-Kahn.

"It is clearly time for France to ask questions" about Japan's plutonium holdings, it said, urging public disclosure of the Japanese plutonium inventory.

Sept. 10, 92. MAINICHI

The Washington Times

PAGE A2 / WEDNESDAY, JULY 8, 1992 ★★

S. Africa closes waters to plutonium shipments

JOHANNESBURG, South Africa — The government said yesterday it would bar ships carrying plutonium for Japan's nuclear reactors from sailing within 200 miles of South Africa's coast.

Environment Minister Louis Pienaar said the route for the shipments from Europe had yet to be finalized and that Japan had made no approaches to South Africa about them.

"The South African government is in contact with the Japanese government to make sure that if the Cape [of Good Hope] sea route is chosen, such ships will not enter South Africa's economic zone, which extends 200 miles from the coast," he said.

South African conservationists say Japan plans to ship the plutonium via the Cape of Good Hope after being barred from using the Panama Canal. Japan wants the plutonium, the raw material of nuclear warheads, for its fast-breeder nuclear energy program that will create more fuel than it uses.



John Waihee
Governor

NEWS RELEASE

Executive Chambers
Contact:
Carolyn Tanaka
(808) 586-0043

STATEMENT BY GOVERNOR JOHN WAIHEE ON THE PROPOSED SHIPMENT OF PLUTONIUM FROM EUROPE TO JAPAN

I am deeply concerned about the growing controversy over proposed plutonium shipments from Europe to Japan. I am not satisfied that adequate safeguards are in place to protect human, animal life and the general environment.

At the insistence of Senator Inouye, the State Department recently briefed my staff on the issue. Unfortunately more questions were raised by those briefings than were answered. The Federal Administration appears to have given much more thought to possible terroristic action than they have to the environment. I don't think they understand that the ocean connects, feeds, and supports all island people. In the name of national security, the program is cloaked in secrecy and we don't even know if Hawaii is a possible emergency port, or not.

I strongly support Congressman Neil Abercrombie's provision on stricter standards for casks transporting the plutonium, although there appears to be considerable opposition to the provision. We are working with our congressional delegation on this issue.

The State's concerns include: (1) inadequate environmental review of the transportation plan; (2) lack of independent testing of the transporting casks; (3) no provision to notify Hawaii or other local jurisdictions when the ship passes through our waters; (4) not knowing whether Hawaii, or other Pacific Islands, have been designated as

More...

Page 2

safe havens or emergency ports, and under what conditions safe haven may be sought; (5) no plan for notification or training of local personnel in case of an incident.

Such information, guidelines and procedures already exists for the transporting of radioactive materials by land on the continental United States. The people of the Pacific certainly deserve no less.

#30#

Activists Seek to Blockade Plutonium Shipments to Japan

By Thomas W. Lippman
Washington Post Staff Writer

As the day nears for the first seaborne shipment of plutonium for Japan's ambitious nuclear power program, weapons proliferation watchdogs and environmental activists have mounted a large-scale campaign to try to stop it.

Arguing that the planned transoceanic shipments from France to Japan of 30 tons of the basic ingredient of nuclear weapons is unnecessary as well as dangerous, they are aiming much of their effort not at Tokyo but at Washington. Because the plutonium is de-

rived from nuclear fuel supplied by the United States, Washington's approval of the shipping plan is required.

So far there is no sign that the Bush administration will back away from, or is even reevaluating, a 1988 agreement permitting Japan to ship the plutonium.

"There are people who wonder about the need for so much plutonium, but people who work on this issue feel that the measures the Japanese have taken are adequate," a senior State Department official said. "We have no major dispute with them over the program of the transportation. We are not reviewing or second-guessing the agreement we signed."

Nonetheless, the Defense Department is less than enthusiastic about shipments of nuclear bomb material that could be hijacked or seized by terrorists. A 1988 technical analysis by the Pentagon rated the shipment method proposed by Japan as the least desirable alternative. But administration officials and nonproliferation specialists say the Pentagon has deferred to the overall Bush administration policy of cooperating with Japan.

In Congress, there are new signs of concern about the plutonium program. The extensive energy bill that the House approved by a huge margin last month included an amendment by Rep. Neil Abercrombie (D-

Hawaii) that would bar from U.S. ports any plutonium-bearing ship bound for Japan whose containers fail to meet standards set by the U.S. Nuclear Regulatory Commission, standards that Japan in all likelihood cannot meet.

The amendment would impose on sea shipments the same packaging and safety restrictions required for air shipments under a provision in the 1987 budget act. While this would effectively keep the plutonium from U.S. waters, Japan could still ship the material by an eastward route, around Africa, if the Bush administration continues to ap-

(See PLUTONIUM, A33, Col. 1

June 7, 1992 THE WASHINGTON POST

Activists Seek to Block Plutonium Shipments

PLUTONIUM, From A27

prove. Abercrombie said his intention was "not to halt shipment of plutonium," but to ensure that no "floating Chernobyl" puts in at U.S. ports, especially Honolulu. Japanese officials say the first shipment of plutonium, at least, is not going to make any stops on its way from France, by whatever sea route is chosen.

Even so, the amendment, along with a possible rise in the United States of anti-plutonium sentiment stirred up by activists, could presage a severe strain in U.S.-Japan relations.

Japanese officials are committed to using plutonium as a source of commercial energy. Because Japan does not have reprocessing plants, it has been hoping to obtain plutonium by extracting it from nuclear fuel bought from the United States and reprocessed at facilities in France and Britain. Before the plutonium can be shipped, Washington must approve the route, security arrangements and emergency plans.

Japan is the only nation known to be undertaking a large-scale program to ship plutonium or use it as commercial fuel. Between 1970 and 1980, it made 13 shipments—eight by air, five by sea—of plutonium reprocessed at a British facility from uranium fuel of British origin, according to Japanese documents obtained by the Nuclear Control Institute.

With the first shipment from France scheduled for this fall, the environmental activist group

Rep. Neil Abercrombie (D-Hawaii) said his amendment is intended "not to halt the shipment," but to ensure that no "floating Chernobyl" puts in at U.S. ports.



Greenpeace and the Washington-based Nuclear Control Institute have intensified a campaign to block it. They argue that it is unsafe and unnecessary and would open the door to worldwide commercial traffic in one of the most dangerous and toxic substances on Earth.

The Japanese plan to ship about a ton of plutonium at a time, meaning each shipment would contain enough of the material to make more than 100 nuclear bombs. The first cargo of plutonium is to be transported in a two-ship convoy: the freighter Pacific Crane, guarded by a lightly armed Japanese coast guard cutter.

Plutonium is a byproduct of the controlled chain reaction in the fuel assemblies of nuclear power plants. The technology exists for using plu-

tonium as a power plant fuel, but U.S. policy is to reserve plutonium for military purposes, not to introduce it into the commercial cycle. Because the United States has a huge stockpile of plutonium, none is currently produced in this country; spent nuclear fuel is officially treated as waste to be disposed of, not a resource to be saved for its plutonium content.

Resource-poor Japan, however, has made the opposite choice. It is planning to import 30 tons of plutonium from Europe while planning to build its reprocessing plant for future needs. Japan is heavily dependent on nuclear power.

"We really believe resources should be used effectively," said Takao Kuramochi, a first secretary at the Japanese Embassy. Even

though there is a worldwide glut of uranium, he said, "uranium resources are not unlimited. If we can recover plutonium from spent fuel, we can use uranium resources 50 to 60 times more effectively."

As for concerns about nuclear proliferation, he said Japan "will not possess plutonium beyond the amount required to run the plants. For Japan this is a very serious exercise. We will make every effort to ensure safe transportation. We recognize our responsibilities."

Paul Leventhal, president of the Nuclear Control Institute, argued that Japan is certain to build up a large surplus, partly because it plans to produce plutonium and partly because Japanese power plants, privately owned, will be reluctant to make expensive technical adjustments to use a type of fuel they do not need.

"The mere acquisition of large amounts of this is seeding the world with the means of its destruction," he said. "What we are talking about is global commerce in atom bomb material."

The Nuclear Control Institute and Greenpeace have been writing to every country along possible shipping routes, warning of potential danger from accidents, shipwrecks or terrorist attacks. Their material includes a 1990 New York Times article by retired admirals Stansfield Turner and Thomas Davies saying "it is difficult for us to imagine a more tempting target. Seized by terrorists, plutonium would be a valuable commodity for sale to states seeking entry into the nuclear club, and it would be a powerful instrument for political blackmail."

INDON. OBSERVER 15 MAY 1982

Indonesia

Environmental Group Walhi:
**RI Waters Off
 Limit for Plutonium
 Shipments to Japan**

(IO) - The Indonesian Forum for the Environment (Walhi) urged the government Thursday not to allow the use of Indonesian waterways for the transportation of plutonium.

Executive Director, MS Zulkarnaen, said that Britain and France plan to ship plutonium-239 to Japan via the Straits of Malacca, which are part of Indonesian waters.

He said that leakages of the highly-toxic chemical could result if the ships were hit by typhoons, which frequent the straits, thus posing a risk to the Indonesian people and environment.

Plutonium is highly poisonous, with human exposure to one milligram proven to cause lung cancer.

It is a byproduct of the nuclear wastes, Uranium 234 and 235. Plutonium, once it becomes a gas, has an extremely long life span.

If the government agrees to the use of Indonesian waters, Japan will pay virtually any price demanded, Zulkarnaen said.

He said that in 1973, for example, one gram of 90-percent pure plutonium-238 was worth US\$ 1250 per gram.

Zulkarnaen said that the deal involves at least four tons of the material being shipped to Japan from France. Four shipments annually are needed for Japanese plans to construct a 600-mega-watt nuclear power plant in Tokai Mura.

Walhi has written to President Soeharto, Chief of the Armed Forces (ABRI), General Try Sutrisno, the Intelligence Coordinating Agency (Bakin) and Minister of Transportation

Anzwar Anas in an effort to stop the government agreeing to allow the use of Indonesian waters.

It has also written to British Prime Minister John Major and the United Nations.

The danger of terrorist attacks on the alternative route through the Middle East had led the governments involved to ship the chemical via South Africa and through the Straits of Malacca.

Walhi is cooperating with other environmental groups in Singapore, Malaysia and the Philippines, as well as Greenpeace Japan, and Friends of the Earth in France, to stop the plan going ahead.

Originally the chemical was to be flown to Japan, but it was decided that this was unsafe and costly.

"Walhi opposes any form of nuclear wastes in Indonesia, because of the potential danger posed to the people and environment," he said.

The group also opposes the government's plan to construct the Gunung Muria nuclear power plant in Central Java.

Earth Summit

Zulkarnaen also said that five Walhi members will attend June's Earth Summit in Rio.

Replying to an *Indonesian Observer* question on the prospects of the Earth Summit, he said that nations continued to fight over various issues, stopping effective measures to save

the environment.

"This makes me very sad," he said.

"Indonesia, for example, is scared of criticizing France's nuclear testing, because France will then hit out at Indonesia's logging of rainforests."

He was positive about United States President George Bush's recent announcement to attend the summit, as would encourage other nations to follow suit.

Walhi -

*Indonesian Forum
 for the
 Environment*

Asia Warns Japan on Plutonium Shipments

By Michael Richardson
International Herald Tribune

SINGAPORE — Countries in Asia and the Pacific, alarmed at the possibility of an environmental disaster, want Japan to use an ocean route that is well away from population centers when it begins shipping highly toxic plutonium from Europe later this year, officials said Monday.

Emil Salim, the Indonesian minister of state for population and environment, said Indonesia had urged Japan to avoid congested straits and shipping lanes through Southeast Asia. Japan, he said, should use ocean routes as far as possible from land.

Japan plans to ship 30 tons of plutonium from Britain and France over the next 10 years as fuel for its nuclear power industry.

Diplomats said that some South Pacific island nations, at a meeting this week, were expected to voice concern about any Japanese use of the Pacific Ocean for plutonium shipments.

Heads of government from Australia, New Zealand, Papua New Guinea and Pacific islands in the South Pacific Forum will begin annual talks in Honiara, capital of the Solomon Islands, on Tuesday.

Thurston Siba, governor of Kosrae Province in Micronesia, a forum member, said, "The potential for accidents to occur with the handling, shipping or hijacking of this most toxic and deadliest of materials cannot be overemphasized."

Environmental groups in Asia said that all shipments should be canceled because of the risk of terrorist attacks or an accident.

A single microgram of plutonium, smaller than a speck of dust, can cause cancer if inhaled or swallowed, scientists say. They noted that a crude nuclear bomb can be made with less than 15 kilograms (33 pounds) of plutonium.

Japanese officials have said that one ton of plutonium, reprocessed in France using spent fuel from Japanese nuclear power plants, is to be sent back to Japan by sea sometime between September and December.

The timing and route of the voyage are being kept secret. A specially built plutonium fuel carrier will be escorted by a Japanese Coast Guard ship.

Japanese officials have said that both vessels were designed to make the long voyage without a port call.

Both the United States and Australia have said they are satisfied with safety precautions being taken.

■ Domestic Shipment

The first domestic shipment of plutonium for Japan's first fast-breeder reactor began Monday amid tight security. The Associated Press reported from Tokyo.

Members of groups opposed to the shipment and to nuclear power plants in general protested near the gate as four trucks carrying plutonium left from a reprocessing plant in Tokai-mura, about 110 kilometers (70 miles) northwest of Tokyo.

About 4.3 tons of a fuel mixture of plutonium and enriched uranium were being shipped to Tsuruga, 335 kilometers (209 miles), west of the capital, sources said.

JAT 7-7-92, p 2

*International
Herald Tribune*

The note, however, covers only the specific material to be exported and excludes any Pu already in Japan. "It is not France's business" to investigate Japan's own Pu inventory, an official said, observing that is the job of the IAEA, which closely monitors Pu use but keeps the figures confidential.

French officials said that Paris requires "effective utilization" of the exported Pu in the recipient country; storage per se is "not allowed" as a basis for Pu transfer. However, buffer storage, for example, at a fabrication plant awaiting manufacture of fuel elements may be considered a legitimate use of the material, he said.

Japan's Power Reactor & Nuclear Fuel Development Corp. (PNC) has said it will use the roughly one MT of fissile Pu (Puf) as fuel in three research reactors—the Joyo and Monju breeders and the Fugen advanced thermal reactor—over the next few years (NF, 3 Aug., 6). PNC and its governmental oversight agency, the Science & Technology Agency (STA), say they need to have the material in hand by December in order to begin manufacturing a second fuel load for the 280-MW Monju fast reactor, due to start operation next spring. French and Japanese experts argue that a certain amount of material should be shipped at one time to avoid multiplying shipments of Pu. The 1984 shipment to Japan contained 189 kg of Puf.

Even before the 1984 shipment questions were raised in the U.S. about Japan's immediate need for Pu return, given the general desire to minimize Pu stocks in non-nuclear-weapons states. Japanese officials said in mid-1983 that

PNC, which at the time was having difficulty operating its pilot reprocessing unit at Tokai Mura, wanted to avoid dipping into its own stockpile of separated Pu—then around 800 kg—because the stockpile was intended for emergency use (NF, 4 July '83, 3).

PNC said last month that its stockpile had dwindled to 400 kg Puf by the end of March 1992 as Pu was used to fabricate Monju's first core and would sink further with completion of the initial Monju load. PNC said it would have practically no Pu left by next spring.

In any case, another French official pointed out, even once the Foreign Affairs Ministry has the diplomatic note in hand, the Pu will not leave France without a formal export license delivered by the French administration. While the diplomats' business is official declarations, this official said, civil servants from a variety of ministries and agencies examine each nuclear export license application under the microscope, using all sources of information available to them—official and unofficial.

Based on that examination, this official said, there is little doubt the Japanese export license will be granted. "The French administration is satisfied" that "the need (for the Pu this fall) is really justified," he said.

Washington-based NCI and Tokyo-based Citizens Nuclear Information Center (CNIC) question PNC's Pu supply and demand figures and the assumptions behind them, notably the production rate of the Tokai Mura plant, which has worked well during the past couple of years. NCI President Paul Leventhal argues that some 500 kg of Pu that PNC says is tied up in critical assemblies could be recovered for use in the research reactors instead.

Leventhal said that he and CNIC Director Jinzaburo Takagi will complete a joint analysis this week of Japanese Pu supply and demand data that, he claimed, would demonstrate that PNC does not need the October shipment. The groups, he said, will argue that PNC's assumption of a 5% Puf recovery rate at Tokai Mura is "unrealistic," given the reprocessing plant's past operating history, and that the Japanese company's projection of Monju's Pu needs is based on a "wholly unrealistic" capacity factor of 100% for the prototype breeder.

Leventhal also said that his institute "anticipates calling on Japan to settle this matter (of need) once and for all" by authorizing the IAEA to release confidential statistics on Japan's Pu inventories.—Ann MacLachlan, Paris

Governor asks feds what to do in case of plutonium disaster

Says secrecy measures may hurt CNMI safety concerns

by Rafael H. Arroyo

Governor Lorenzo I. DL Guerrero, alarmed over the risks of having a shipment of plutonium from France to Japan pass through Pacific waters, wrote the US State Department asking how the CNMI should react in the event of any untoward incident.

This was despite the assurances made by State Department officials that full security measures are to be undertaken in the scheduled transportation of the metric-ton shipment.

Guerrero was somewhat concerned about the secrecy of the operations being readied for the shipment which, he claims, leaves the CNMI in the dark as to how it will protect its citizens from a possible regional disaster.

Plutonium shipment necessarily entails security and secrecy since such a substance is both valuable and very difficult for most nations to acquire.

This makes the planned shipment an attractive target for piracy or terrorist attack. As such, it was believed that contingency plans are hatched in utmost secrecy.

"As governor, it is my duty to assure the safety of Commonwealth residents and our ocean environment. Besides watching for our own safety needs, the Commonwealth aims to be helpful," Guerrero said.

He raised a good number of questions all anchored on how

the CNMI should react to possible disasters that may be brought about by the shipment.

"Is any harbor in the CNMI designated for emergency port calls? If we are to be a port of call, let us prepare properly. What procedures should we follow if the ship needs assistance? If there is an accident, how might we contain a spill and best protect ourselves? Should our local law enforcement officials be prepared to assist in the event of terrorist incidents?" the governor asked.

Most of the uranium fuel used in Japan's commercial nuclear power reactors was purchased from the US thereby giving the federal government jurisdiction over any transactions involving that nuclear material in any form.

Plutonium is a byproduct of the uranium reactor fuel when burned and can be used to make nuclear weapons.

By the terms of the 1987 US-Japan Nuclear Cooperation Agreement, the US allows Japan to ship the burned-up or spent fuel from its reactors to France and Britain, where the plutonium is extracted in pre-processing plants. The US then allows Japan to retrieve any plutonium it wants back.

Some plutonium is already being reprocessed in Japan and several new fuel-cycle facilities, including commercial reprocessing and uranium enrichment plants, are due to start operating.

However, Japanese authorities

believe that demand for plutonium fuel will continue to outstrip indigenous production capacity.

Japan is the biggest customer for big reprocessing plants in France and Britain.

"Japan's plutonium shipment will not be a one-time affair. Three to four shipments a year are planned over 30 years. During this period, beginning this autumn, Japan plans to ship 150 tons of the substance to use as fuel in types of civilian nuclear power reactor. It has to move by surface ship as submarine shipment is not considered," Governor Guerrero said.

Concern over the shipment created an uproar when Washington Representative Juan N. Babauta earlier sought the help of U.S. State Department officials for a briefing on the matter after he alerted Governor Guerrero and CNMI leaders on the plutonium shipment.

Raised was utmost concern over the dangers of transporting plutonium, a radioactive element through the waters of Northern Marianas.

The briefing was held in Washington on May 7 as conducted by State Department Officials Fred McGoldrick and Chris Kessler.

Representing the CNMI government along with Babauta were Division of Environmental Quality Chief F. Russell Mechem, House Committee of Federal and Foreign Relations Chairman Crispin I. DL. Guerrero, and Dan

MacMeekin and Robert Schwalbach, both from Representative Babauta's office.

During the briefing, the Japanese government was said to be preparing a classified transporta-



Gov. Lorenzo I. DL Guerrero

tion plan, including contingency plans, documenting the specific arrangement to be implemented. This plan is being prepared with the cooperation and assistance of the U.S. and France.

But Guerrero feels the CNMI government should be part of whatever contingency measures so that it would know what steps to take if and when something unexpected happens.

"We appreciate the need for security. But secrecy arrangements should not compromise the CNMI's ability to meet possible hazards and protect island residents and visitors. Secrecy considerations should not make us part of a security problem, instead we should be part of a solu-

tion," Guerrero told Solomon, in the May 14 letter.

Beyond concerns for terrorism, Guerrero believes that an environmental disaster brought about by any untoward incident must be avoided. Some proposed routes have these plutonium shipments in the Pacific, and this concerned the CNMI because plutonium is highly radioactive and toxic.

"We live in a fragile, small island and ocean environment. We don't want radioactive spills and we safe shipment of the substance," said Guerrero.

The shipment will be performed by Japan's Power Reactor and Nuclear Fuel Development Corporation and the Japanese Maritime Safety Agency (JMSA) is responsible for the protection of the shipment.

An operations center has been established in Japan, responsible for maintaining contact with and monitoring the progress and status of the shipment, and for liaison with response authorities.

The plutonium, according to the U.S. State Department officials will be transported in a ship specifically designed for shipment of nuclear materials. Over 100 shipments of spent fuel have been successfully completed in vessels of this class.

The transport ship, according to the US officials was built specifically for transporting nuclear cargos. The plutonium oxide will be its only cargo during the voyage.

CNMI- US agree o orm group or 902 interpretations



NUCLEAR CONTROL
INSTITUTE

1000 CONNECTICUT AVE NW SUITE 704 WASHINGTON DC 20036 202-822-8444

May 21, 1992

Coastal State Control of Access to its Ports,
Territorial Sea and Straits

Overview

Coastal states possess broad authority under international law to control access to their ports, internal waters and territorial seas. Coastal states exercise complete sovereignty over their ports and internal waters, and the imposition of unilateral, non-discriminatory standards on foreign-flag vessels in order to prevent pollution is an appropriate incident of that authority. In other words, a state is not required to open its ports and internal waters to hazardous cargoes, even where being transported in accordance with international standards, if it is not satisfied that those standards adequately protect its citizens. It is also clear that denial of access to both ports and the territorial sea is appropriate in a number of emergency circumstances. For example, under the 1969 Intervention Convention, its 1973 Protocol, and Section 221 of the 1982 Law of the Sea Convention, a coastal state has the right to take positive action to keep polluting vessels away from environmentally-sensitive nearshore waters. Finally, while there is a doctrine of force majeure in international law which contemplates that vessels may be forced into a nation's waters by conditions beyond their control and should not be subject to coastal nation jurisdiction when this occurs, this doctrine should not be able to be invoked to require a coastal nation to accept a vessel carrying hazardous cargoes into its ports and internal waters. Indeed, even in emergency circumstances affecting the operation of a vessel, it does not seem reasonable to interpret the doctrine to strip coastal states of the power to protect themselves against the threat of serious environmental harm.

A. Internal Waters and Ports

The right of a coastal state to impose unilateral, non-discriminatory conditions on vessels for entry into its ports and

Strategies for stopping the spread and reversing the growth of nuclear arms.

internal waters is well-established under international law. As a general proposition, "A coastal state has full sovereignty over its internal waters and ports, as if they were part of its land territory." Sohn and Gustafson, The Law of the Sea 79 (West 1984). In other words, it is not required to open its ports and internal waters to hazardous cargoes, even where the transport of such cargoes is in accordance with international standards, if it is not satisfied that those international standards adequately protect its citizens.

The 1982 Law of the Sea ("LOS") Convention effectively recognizes this authority, providing only in Article 211(3) that, when it is exercised, coastal states must "give due publicity to such requirements and...communicate them to the competent international organization." It is in fact not uncommon for coastal states to require compliance with their domestic security, pollution control and safety regulations as a condition of entry. In order to prevent pollution, the United States, for example, has long asserted authority under Title II of the Ports and Waterways Safety Act of 1972, 46 U.S.C. § 391a., to impose unilateral design, construction, alteration, repair and maintenance standards on foreign vessels carrying oil and other hazardous substances in bulk which wish to enter U.S. ports.

The ability of a coastal state to exclude a vessel which, as a result of a casualty, poses a grave and imminent danger of pollution with major harmful consequences to that state's coastline or related interests is equally clear. The 1969 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties and its related 1973 Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution other than Oil (the "Intervention Convention") generally establish the right of coastal states to take action on the high seas outside their jurisdiction to "prevent, mitigate or eliminate" serious pollution threats. This right, moreover, is recognized in Article 221 of the LOS Convention. A fortiori, states must be able to exclude vessels from their ports and internal waters in similar situations to accomplish the same objectives.

Finally, there would appear to be coastal state power to exclude vessels seeking to make emergency port calls in situations where there has not been a casualty creating a grave and imminent pollution threat. While there is a recognized doctrine of force majeure in international law, its parameters are somewhat ill-defined. Article 18(2) of the LOS Convention allows "stopping and anchoring" in force majeure situations in the territorial sea but is notably silent with regard to entry into ports and internal waters. For the most part, moreover, this doctrine is not humanitarian in intent but rather is intended to protect vessels from the application of domestic laws

when they are forced into port by conditions beyond their control, i.e., severe weather. It is questionable whether it can be invoked in a positive sense to require a coastal state to accept a vessel in its ports and internal waters, especially when the vessel is carrying hazardous cargo and thus can be considered a threat to important coastal state public safety and environmental interests. Indeed, it does not seem reasonable to interpret the doctrine to strip coastal states of the power to protect themselves against the threat of serious environmental harm. In any event, the doctrine is highly qualified--there must be "distress" involving immediate jeopardy to the cargo and crew, not just mechanical failure and the like, for it to apply. O'Connell, The International Law of the Sea 855-856 (Clarendon 1982).

B. The Territorial Sea

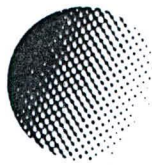
The ability of coastal states to condition passage through their territorial sea is more circumscribed under international law and subject to the "right of innocent passage". See LOS Convention, Articles 17-32. With regard to vessels carrying "nuclear or other inherently dangerous or noxious substances or materials," however, Article 22 of the LOS Convention does speak to their passage and allows the imposition of requirements for use of special sea lanes and traffic separation schemes. It would consequently seem permissible for coastal states, for example, to establish special routes for vessels carrying plutonium, especially if the plutonium casks did not meet certain safety standards, and conceivably to require advance notification by vessels before entry into the prescribed routes. (The LOS Convention is silent on the permissibility of notification requirements.)

Coastal states would further seem to have the ability to prevent passage through their territorial sea in situations where there was a grave and imminent threat of serious pollution, especially if resulting from a casualty. Just as the Intervention Convention presumptively gives coastal states power to deny port access, so, too, would it seem to give them power to deny access to their territorial sea. Such a conclusion is supported by the LOS Convention. Article 19(2)(h) of the LOS Convention provides that passage is not innocent if it involves an "act of wilful and serious pollution", and Article 25(1) allows a coastal state to "take the necessary steps in its territorial sea to prevent passage which is not innocent." In a casualty situation, deliberate entry into the territorial sea could plainly be interpreted as "wilful" pollution, triggering the right of the coastal state to take preventive action. This right would seem to be reinforced if the vessel is making for port, since Article 25(2) of the LOS Convention authorizes action where a vessel is proceeding to internal waters "to prevent any

breach of the conditions to which admission of those ships to internal waters...is subject."

C. Straits

The regime governing "straits used for international navigation" is found in Articles 34-45 of the LOS Convention. States bordering straits are permitted under Articles 41 and 42 of the LOS Convention to establish sea lanes and traffic separation schemes, similar to those permitted in the territorial sea, thus opening up the prospect of some special controls over vessels carrying substances such as plutonium. However, if they wish to do so, they cannot act unilaterally but must, under Article 41(4), first refer them to "a competent international organization with a view to their adoption."



NUCLEAR CONTROL
INSTITUTE

1000 CONNECTICUT AVE. NW SUITE 704 WASHINGTON DC 20036 202-822-8444

May 21, 1992

EMERGENCY PORT CALLS

The exchange of notes, dated October 18, 1988, between the United States and Japan, modifies the understandings of the two countries with respect to transportation arrangements for recovered plutonium pursuant to Annex 5 of the Implementing Agreement to the U.S.-Japan Agreement for Nuclear Cooperation. It adds provisions to such Annex covering sea shipments.

As regards emergency port calls, the October 18, 1988 exchange of notes has three relevant provisions:

First, it provides in paragraph B.1 that such port calls "will only be made in conformance with procedures set forth in the transportation plan provided for in paragraph 2 below."

Second, it provides in paragraph B.2 that any transportation plan must be "established through coordination among the sender, recipient, and carrier, and with the cooperation and assistance of the parties, the transferring government and, if necessary, any other government, which will be secured in advance through appropriate liaison and consultation with relevant authorities."

Third, it provides in paragraph B.2(g) that "[d]etailed contingency plans will be established in advance," specifying "possible emergency situations and the actions to be taken in such situations."

It is clear, given the language and structure of the agreement just described, that countries in which plutonium transport vessels may seek to make emergency port calls must be involved in the establishment of the transportation plan. The essence of the parties' understanding is that such port calls can only be made in accordance with the terms of the transportation plan and that such terms must be established in advance of any plutonium shipments.

Of necessity, arrangements for port calls can only be established with the cooperation and assistance of the potentially affected countries. Consequently, the language of

Strategies for stopping the spread and reversing the growth of nuclear arms.

Paul L. Leventhal, *President*, Peter A. Bradford, David Cohen, Rear Admiral Thomas D. Davies USN (Ret), Denis A. Hayes, Julian Koenig, Sharon Tanzer Leventhal, Roger Richter, Dr. Theodore B. Taylor
BOARD OF DIRECTORS

paragraph B.2 referring to the "cooperation and assistance of...any other country" being "secured in advance" in connection with the development of the transportation plan must be taken to mean that, where there is a country potentially affected by emergency port calls, it must be brought into the plan development process.

The necessity for such involvement--and, by the same token the explanation for the qualifying phrase "if necessary" in the same provision--are created by the existence of contingencies in the sea shipment of plutonium affecting countries along the transport route. Where those contingencies exist, the obligation to secure in advance the cooperation and assistance of the affected countries is manifest.

PROPOSAL TO ENTER SUBSEQUENT ARRANGEMENT
UNDER THE ATOMIC ENERGY ACT

COMMUNICATION

FROM

THE ASSISTANT SECRETARY OF ENERGY
FOR INTERNATIONAL AFFAIRS AND
ENERGY EMERGENCIES

TRANSMITTING

NOTIFICATION OF A PROPOSED SUBSEQUENT ARRANGEMENT
UNDER THE AGREEMENT FOR COOPERATION BETWEEN THE
UNITED STATES AND JAPAN INVOLVING THE APPROVAL FOR
SEA TRANSPORT OF PLUTONIUM FROM EITHER FRANCE, OR
THE UNITED KINGDOM, TO JAPAN, PURSUANT TO 42 U.S.C. 2160



SEPTEMBER 20, 1988.—Referred to the Committee on Foreign Affairs and
ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE

MODIFICATIONS FOR ANNEX 5

Before paragraph 1 of Annex 5 of the Implementing Agreement, "A. Air Shipment" shall be inserted.

After sub-paragraph (h) of paragraph 2 of Annex 5 of the Implementing Agreement, the following shall be inserted.

"B. Sea Shipment

1. Transportation will be carried out by dedicated transport ship from a port in the United Kingdom or France to a port in Japan via a route selected to avoid areas of natural disaster or civil disorder and to ensure the security of the cargo and the transport ship. The transport ship will not make scheduled port calls enroute. Emergency port calls will only be made in conformance with procedures set forth in the transportation plan provided for in paragraph 2 below.

2. Prior to each shipment a transportation plan documenting the specific arrangements to be implemented for the shipment will be prepared to assure, inter alia, adequate physical protection of the nuclear material to be transported. The plan will be established through coordination among the sender, recipient, and carrier, and with the cooperation and assistance of the parties, the transferring government and, if necessary, any other government, which will be secured in advance through appropriate liaison and consultation with relevant authorities. The transportation plan will include the following measures.

(a) (i) Escorts, armed and equipped, and independent of the transport ship crew, will be aboard the transport ship. The on-board escorts will be responsible for maintaining constant surveillance of the cargo and for its protection, acting in accordance with the laws and regulations of each country concerned.

(ii) The transport ship will be escorted from departure to arrival by an armed escort vessel unless alternative security measures, documented in the transportation plan, effectively compensate for any absence of an armed escort vessel.

(b) Determinations of trustworthiness will be made for individuals having key responsibilities for the shipment, such as the transport ship crew, the escorts on board the transport ship and the personnel in the operations center.

(c) At all ports access to the transport ship will be controlled with the cooperation of relevant authorities including police or by use of other armed personnel to protect against theft or sabotage.

(d) Measures will be taken to impede removal of the cargo at sea, including rendering inoperable the hatch removal mechanisms and the on-board derricks or cranes. Shipment casks or transport containers will be locked and sealed in order to impede access to the nuclear material by unauthorized persons. Individual shipment casks or transport containers will be equipped with transponders or transmitters to facilitate location in the event of an accident.

(e) The transport ship will be equipped with a reliable communications system, utilizing advanced technology as practical, independent of standard navigation communications equipment, which will include the capability (i) for secure transmission of transport ship location and cargo status information automatically from the transport ship to the operations center, and (ii) for separate and secure communications between the on-board escorts and the operations center, independent of the transport ship crew.

(f) An operations center will be established with responsibility for continuous monitoring, consistent with the advanced technology available, of the transport ship location and cargo status from departure to arrival. Channels of communication will be established between the operations center and points of contact within the response authorities designated in the transportation plan.

(g) Detailed contingency plans will be established in advance. These plans will identify possible emergency situations and the actions to be taken in such situations by the transport ship crew, the on-board escorts, any escort vessel, and the operations center personnel. The plans will identify the points of contact within and the demarcation of responsibilities among the response authorities designated in the transportation plan.

(h) Confirmation will be obtained from each designated response authority that necessary specific plans have been prepared, through consultation as appropriate with other response authorities and close contact with the sender, recipient and carrier to ensure effective implementation of the security measures described above."

SIDE LETTER TEXT

Excellency:

I have the honor to refer to sub-paragraph (a)(iii) of paragraph 3 of Article 1 of the Implementing Agreement Between the Government of the United States of America and the Government of Japan Pursuant to Article 11 of Their Agreement for Cooperation Concerning Peaceful Uses of Nuclear Energy, and to Annex 5 of the Implementing Agreement, entitled "Guidelines for the International Transportation of Recovered Plutonium."

I have further the honor to refer to the Notes exchanged between our two Governments on [month/day] 1988 concerning modifications to the above-mentioned Guidelines to include provisions for the international transport of recovered plutonium by sea..

I have the honor further to state that during the negotiations of the aforementioned modifications of Annex 5, it was confirmed that the statements made in our November 4, 1987 exchange of letters on Annex 5, except those concerning shipment casks for air shipment, apply to sea shipment under the modified Guidelines.

It was confirmed during the negotiations on the said modifications that, in order to fulfill the Guidelines, the Government of the United States will notify the Government of Japan prior to each sea shipment of the nature and scope of its cooperation and assistance to be provided.

During the negotiations on the said modifications, it was confirmed that sea shipment of plutonium, except fabricated mixed-oxide fuel rods or assemblies, pursuant to the modified Guidelines will be utilized only if new casks suitable for air shipment through the airspace of the United States have not been developed and certified as safe for such purposes by the United States Nuclear Regulatory Commission in accordance with applicable law.

With respect to the possible sea shipment of fabricated mixed-oxide fuel rods or assemblies, it was confirmed during the negotiations that Part B of the modified Guidelines applies to such shipment. The two parties may hold discussions prior to the establishment of a transportation plan with a view to considering alternative security measures pursuant to sub-paragraph (a)(ii) of paragraph 2 of Part B of the modified Guidelines.

It was also confirmed during the negotiations that alternative security measures pursuant to sub-paragraph (a) (ii) of paragraph 2 of Part B of the modified Guidelines are to be mutually satisfactory.

With respect to sub-paragraph (a) (ii) of paragraph 2 of Part B of the modified Guidelines, it was confirmed during the negotiations that the armed escort vessel is to be either a maritime safety/coast guard vessel or any other ship on government service authorized and fully capable of protecting the transport ship and its cargo and of deterring acts of theft or sabotage.

It was also confirmed during the negotiations that details of the transportation and contingency plans, including route, departure and arrival dates, and details of the security measures to be taken, will be handled carefully, only on a need to know basis.

Finally, it was confirmed during the negotiations that sea transportation will meet the requirements recommended in the applicable provisions of the International Maritime Dangerous Goods Code and the International Atomic Energy Agency Transport Guidelines.

Accept, Excellency, the renewed assurances of my highest consideration.

○

1992. JUNE 5

JAPAN TIMES

Delegates stifle debate on plutonium plan

AGANA, Guam (AP) The Japanese delegation to the Asia-Pacific Parliamentarians' Union stifled attempts to discuss Tokyo's plutonium shipment plan during this week's assembly.

The earliest the issue could be discussed now would be Sept. 24 at the annual meeting

in Taiwan. Plutonium shipments could begin this fall.

In recent weeks, islanders from Palau, Guam, the Northern Marianas and other islands have raised concerns about plans to ship about one ton of reprocessed plutonium in oxide powder from Europe to Japan three or four times a

year for use in its breeder-reactor program.

Two of the three proposed routes traverse Pacific islands, raising objections from local leaders that they should have been consulted or informed about the ship and its movement in case emergencies arise.

Herald INTERNATIONAL Tribune

TUESDAY, JULY 14, 1992

OPINION

Japanese Plutonium Raises a Nuclear Scare at Sea

By Mark J. Valencia

HONOLULU — A not-in-my-backyard syndrome is about to take on global dimensions as Japanese authorities prepare to ship a ton of highly radioactive plutonium from France back to Japan in the fall. It is the first of many such shipments that Japan plans to make in the next decade. Tokyo says the plutonium will be used as fuel for nuclear power plants in Japan.

The movement by sea of this highly radioactive material is of considerable environmental and health concern to countries along the shipping route. South Africa has said it would bar Japanese ships carrying plutonium from sailing within 200 miles of its coast. Emil Salim, the Indonesian minister of state for population and environment, says that in the interests of safety Indonesia has advised Japan to avoid congested straits and shipping lanes off Southeast Asia even though they might offer a quicker route; he said Japan should use ocean routes as far as possible from land.

Now Australia, New Zealand, Papua New Guinea and 12 Pacific island states have asked Japan to consult them on the planned plutonium shipment through the Pacific, saying it should be carried out "in ac-

cordance with the highest international safety and security standards."

The first cargo of plutonium is to be carried in a special ship escorted by a lightly armed Japanese coast guard vessel. U.S. satellites will provide surveillance.

One ton of plutonium is enough to make more than 100 nuclear bombs. Environmental groups and other critics of the Japanese plan say the convoy is a potential hijacking target. Staffed by a Japanese crew without military training or heavy arms, the two vessels could be susceptible to a terrorist group equipped with a speedboat and anti-ship missiles.

Because the plutonium is derived from nuclear fuel supplied to Japan by the United States, Washington must approve the shipping plan. The United States has indicated that it is satisfied with arrangements. But environmental critics worry that containers for the plutonium oxide powder are not guaranteed to withstand temperatures of more than 800 degrees centigrade, a temperature sometimes exceeded by fires at sea.

Should the cargo ship sink, the

pressure of water in the depths of the ocean might crush the casks and release the plutonium. There is also concern that the Japanese shipments may open the door to worldwide commercial traffic in one of the most toxic substances on earth. South Korea and Taiwan may also want to start shipping spent nuclear fuel from power reactors for reprocessing into plutonium and return by sea.

A likely route for the plutonium convoy is around southern Africa, across the Indian Ocean, then through the Straits of Malacca and the South China and East China seas. This 17,000-mile voyage would take about seven weeks.

The Malacca straits, one of the busiest sea-lanes in the world, is claimed as territorial sea by Indonesia and Malaysia and thus falls under a regime of innocent passage. A ship that the governments of these two countries judge to be a threat to their peace, good order or security could be barred. An innocent passage regime also applies to China's territorial seas around the Paracel and Spratly islands in the South China Sea.

Beijing asserts sovereignty over the islands, although its claims are disputed by other countries.

Under the Convention on the Law of the Sea, maritime powers enjoy various navigational rights. But it will still be several years before the treaty will have enough signatures to come into effect. Some maritime powers, such as the United States, have indicated that they will not sign the treaty.

Japan's plutonium shipments may have major implications for freedom of navigation. In an environment of legal uncertainty and plutonium allergy, sovereignty claims may be extended, hampering foreign passage through critical straits and sea-lanes in Asia and elsewhere. Amid growing environmental consciousness, such jurisdictional extension may sooner or later be interpreted by governments as a responsibility to protect living marine resources and the health of people from activities that could cause serious pollution.

The writer, who specializes in law of the sea and maritime resource issues, is a research associate at the East-West Center in Hawaii. He contributed this to the International Herald Tribune.



Government of Kosrae

Office of the Governor
Post Office Box AD

Kosrae, Federated States of Micronesia 96944

Telephone: 011-691-370-3002 / 3003 • Facsimile: 011-691-370-3162 • Telex: 729-6874 GOVKOS FM

May 19, 1992

Dr. Jinzaburo Takagi
Executive Director
Citizen's Nuclear Information Center
1-59-14-302 Higashi-nakano
Nakano-ku, Tokyo 164, Japan

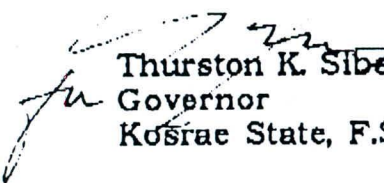
Dear Dr. Takagi:

This is to acknowledge your letter dated April 30th, 1992. We wish to inform you that we are extremely concern about the plans to transport 50 tons of plutonium from Europe to Japan. The potential for accident to occur with the handling, shipping or hijacking of this most toxic and deadliest of material can not be overemphasized.

We believe that our country, the Federated States of Micronesia is geographically located near whichever alternative route is chosen to be hazardously exposed to potential irreparable consequences. For this reason we are forwarding our concern on this subject to the Department of External Affairs, Federated States of Micronesia for review and action.

We thank you most sincerely for sharing this important information with us.

Sincerely,


Thurston K. Siba
Governor
Kosrae State, F.S.M.

/rda

N J.T. Jan. 16 '92

Japan plutonium program blocking nuclear-free Korea, expert claims

WASHINGTON (Kyodo) Japan's potential capability to manufacture nuclear weapons may stand in the way of a totally nuclear-free Korean Peninsula, a U.S. nuclear expert said Tuesday.

Paul Leventhal, president of the Nuclear Control Institute, said a North Korean official has reportedly said that North Korea might withhold international inspections of its nuclear facilities unless Japan gives up its program to reprocess spent nuclear fuel.

Reprocessing spent nuclear fuels yields plutonium, a fissionable material essential for the production of nuclear weapons.

Testifying before a congressional panel, Leventhal said

the North Korean representative to the International Atomic Energy Agency expressed fears of a Japanese nuclear weapons program at the the agency's board meeting in December and cited Japan's plutonium program.

"It is my understanding, based on an account by an IAEA official who was present (at the IAEA board meeting), that the North Korean said his nation might not agree in the future to international inspections of all nuclear facilities until Japan agreed to forgo separation and use of plutonium," Leventhal said.

The December board meeting took place before North Korea declared it would sign an IAEA safeguards accord

that would permit inspections of its nuclear facilities.

Leventhal's testimony, before the Senate Foreign Relations Subcommittee on East Asian and Pacific Affairs, is at variance with other reports of the IAEA board meeting in Vienna.

According to a source familiar with the IAEA proceedings, the North Korean representative accused Japan of pressuring North Korea to allow international inspection of its nuclear facilities, saying the Japanese effort was an attempt to hide its own nuclear weapons program.

"There was no reference on the Japanese plutonium program during the board meeting," the source said.

J A P A N

Second thoughts

Neighbours question plutonium plan

By Susumu Awanojara in Washington and
Louise do Rosario in Tokyo

The Japanese Government is not amused by the international attention that is being suddenly focused on its long-standing plan to start shipping home large quantities of reprocessed plutonium from France.

The Japanese have dreamed of an efficient "nuclear fuel cycle," using plutonium instead of enriched uranium for nuclear power generation, which now accounts for a quarter of their energy supply. The plutonium would come from the large and growing amount of spent Japanese uranium fuel, reprocessed in Britain and France and later also in Japan, and would fire fast-breeder reactors that create more plutonium fuel as they consume it.

The idea makes eminent sense to the Japanese, always insecure about their near-total dependence on imported energy. The US has been consulted fully by Japan and approved the plan until now.

But just as Japan is preparing to receive the first major shipment of plutonium — about 1 tonne — from France and has commissioned a lightly armed ship of the Maritime Safety Agency as escort for the controversial cargo, concerns and objections are being raised by critics. (A one-time shipment of 250 kg of plutonium, also from France, was made in the mid-1980s under heavy US and French naval guard.) The Japanese are expecting to take back more than 30 tonnes of reprocessed plutonium from Europe in the next decade.

In early April, ECO Engineering, a firm of maritime safety experts, issued a report warning that the Japanese plan to transport plutonium from France posed a serious environmental risk to major sea lanes and ports along the way. ECO Engineering's report said the plutonium containers to be used by the Japanese were not guaranteed to withstand fire, collision, immersion or attacks at sea. There was also the threat the cargo might become the target of terrorists or rogue governments.

Then in mid-April, an official of the International Atomic Energy Agency (IAEA) suggested that Japan should place the plutonium stockpiles under international custody, rather than keeping them in Japanese hands. This proposal is at least in part politically driven. The agency apparently fears that other countries with nuclear ambitions, notably North Korea, could use the Japanese precedent to insist that they

should have nuclear reprocessing facilities and plutonium stockpiles.

In fact, the North Korean Government and some South Korean commentators have begun questioning Tokyo's plans to have both even while it insists, along with the US, that Pyongyang renounce them. The North Korean ratification of the agreement to submit to IAEA inspection of nuclear facilities was particularly welcomed by Japanese officials, who had feared that Pyongyang might use Japanese plutonium stockpiling and reprocessing as an excuse for continued intransigence.

Apart from doubts about the security of plutonium shipments and the problem of setting precedents, critics point to the much-increased relative cost of plutonium reprocessing — which makes uranium-based nuclear power generation more efficient — and the temptation which the plutonium stockpile would provide the Japanese to

develop their own nuclear weapons.

Japanese officials are particularly incensed at the last suggestion and invoke the experience of Hiroshima and Nagasaki to dismiss the notion that Tokyo would develop nuclear weapons. One Japanese Embassy official blames "people like [former US secretary of state] Henry Kissinger" who insist that Japan as economic superpower will inevitably become a political/military superpower as well, acquiring nuclear weapons along the way.

Japanese officials seem to believe that if they earnestly explain Japan's position, the world will understand and accept it. That may be optimistic. For the moment, the US Government is "satisfied with the [plutonium shipment] plan and will continue to work with the Japanese to ensure its full implementation," according to a State Department spokeswoman.

But a senior US official says that the Japanese must understand that the world has changed since the days when Japan first formulated the nuclear fuel cycle plan.

"There's a big surplus of yellow cake [uranium] and plutonium poses a real proliferation threat," he says. The official fears that Japan-bashers in the US would try to exploit the issue, making the Japanese defensive and adamant.

O Japão vai transportar um grande carregamento de plutónio altamente radioactivo por via marítima. O primeiro embarque está previsto para Novembro. Apesar de quatro rotas possíveis, a costa de Portugal é ponto de passagem obrigatório

Japoneses põem Portugal na rota do plutónio

Filomena Navez

PORTUGAL está na rota de uma parte do carregamento de plutónio altamente tóxico, entre a Europa e o Japão, e poderá ser requisitado como ponto de emergência se ocorrer algum acidente em águas próximas do nosso país, sublinha o DN junto do Nuclear Control Institute (NCI), em Washington.

Segundo Daniel Horner, investigador daquele Instituto, o Japão prepara o embarque no novo acordo, com a combinação dos Estados Unidos da América e o transporte do plutónio reprocessado na Europa, que será feito por barco a partir de França e Inglaterra, poderá seguir uma de quatro rotas possíveis, e não observando todos os normais de segurança.

De acordo com a mesma fonte, o primeiro carregamento de mil quilos partirá de La Hague, em França, e poderá ocorrer já em Novembro. Segundo a confirmação da World Information Service on Energy (WISE), baseada em Peter de Hoffeld, na Grã-Bretanha, o Pacific Crane, um barco sob bandeira inglesa, que fará o segundo transporte da primeira carga.

Japão omite preparativos de emergência

A história deste plutónio não começa na Europa, mas sim nos Estados Unidos que há anos funcionam urânio de central nuclear japonesa. Um acordo entre os dois países permitiu, entretanto, ao Japão em entender a França e a Inglaterra o reprocessamento do plutónio residual, isso está feito e o plutónio pronto para embarcar.

De resto, o segundo acordo na posse do NCI, o programa tem duração calendarizada para duas décadas. Para lá, está previsto um carregamento anual de uma tonelada cada. Mas existem projectos para aumentar o número de navios para três ou quatro por ano, a partir do final do decénio, diz Daniel Horner.

Aparentemente os testes realizados sobre os contentores em que viajará o plutónio indicam que estes não são totalmente seguros, o Japão ainda não informou os países, no longo dos julgados percorridos da viagem, dos seus planos. Mais do que isso, não pretende sequer fazerlo. Devidamente, citadas pelo NCI, de Tsuchi Sakata, director do Divisão de Combustível Nuclear, do Agência de Ciência e Tecnologia Japonesa, trata sem caso intenção.

Acordo desrespeitado

Para Sakata, o Governo japonês não é obrigado, e não temeloso, fazer diligências para garantir a segurança

não são da mesma opinião. Um acordo formal entre o Japão e os Estados Unidos da América obriga claramente a primeira a proceder àquela preparativos prévios de emergência», sublinha Daniel Horner. «Se essas diligências não foram feitas junto dos países ao longo da rota do barco, e se ocorrer um aci-

dente, os países desses países não estarão preparados para enfrentar o problema e isso agravará ainda mais a situação», adianta o mesmo investigador. «Mas, o que é mais grave», diz Horner, «é que os Estados Unidos estão a apoiar esta posição de governo japonês».

Paul Loventhal, presidente

do NCI, o Damon Mogen, dirigente do Circulo Internacional, endossaram no dia 19 deste mês uma carta aos governos dos 99 países situados ao longo das quatro rotas possíveis para o carregamento.

No documento, os signatários pediram informações aos responsáveis governamentais

sobre uma questão, e apelam para que -preluzam a entrada dos barcos carregados de plutónio nas suas águas territoriais, ou a entrada nos seus portos, devido à falta de cumprimento das normas de segurança e à ausência de adequados preparativos de emergência».

Segundo Daniel Horner, o

mixiva foi também enviada ao Executivo português, uma cópia entregue em Washington ao embaixador de Knopfl.

Em contacto com o gabinete do primeiro-ministro e ministros do Ambiente, Negócios Estrangeiros, Obras Públicas e da Defesa, DN não conseguiu confirmar a recepção daquela carta.

Violados normas de segurança

Conforme um relatório elaborado pelo ECO Engineering de Amoyville, um centro de pesquisa nos EUA elaborado em transporte marítimo e alguns perigos, e contentores que vão ser usados no carregamento do plutónio para o Japão não correspondem às normas de segurança estipuladas pela Agência Internacional de Energia Atómica (AIEA).

Em questão está, desde logo, a sua incapacidade para resistir ao fogo abafado da temperatura mínima considerada segura por aquela agência. «Enquanto os contentores não provaram resistir a 1400 graus centígrados, a temperatura média em incêndios a bordo de navios é da ordem dos dois mil».

Para além deste aspecto insatisfatório, outros outros em igual circunstância. Os especialistas da Eco Engineering identificaram também nos contentores «insuficiente resistência à colisão e submersão». Em relação a esta última, não se sabe, por exemplo, como reagirão aqueles envolvidos se foram submeridos a uma imersão que se prolonga para além de 20 minutos.

Hipótese de ataque terrorista

Tal como se afirma no relatório da ECO, «a duração e intensidade de eventual incêndios a bordo, os níveis imensos de energia associadas a possíveis colisões do navio e a quantidade de pressão hidrostática da profundidade dos oceanos, para não mencionar as consequências de um ataque terrorista, provocariam situações de limite para as quais os contentores não estão preparados por não obedecerem às normas estipuladas pela AIEA».

Para além deste nível desafiante, o NCI aponta ainda a possibilidade de um ataque terrorista ao barco. Uma hipótese arrepiante. O plutónio reprocessado produz mais energia que o urânio enriquecido, o que lhe confere alto valor militar. Este material está na base de fabrico de bomba nuclear.

Dito isto, há quatro rotas possíveis para o transporte do plutónio japonês a partir de França. Segundo Daniel Horner, elas já foram discuti-



Quatro rotas para o plutónio japonês

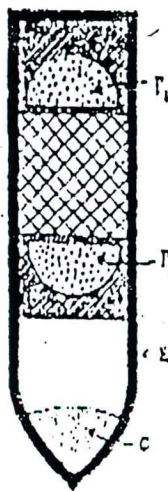


ROTA 1
França
Espanha
Portugal
Cabo Verde
Quilá Bissau
África do Sul
Moçambique
Indonésia
Taiwan

Brazil
Argentina
Filipinas

Panamá
Hawaii
Filipinas

ROTA 4
França
Espanha
Portugal
Marrocos
Líbia
Egipto
Etiópia
Arábia Saudita
Indonésia
Taiwan



Esquema de uma bomba nuclear, com os núcleos de plutónio



Grande parte das centrais nucleares japonesas funcionam à base de plutónio, material que o Japão é obrigado a importar

Senato John Glenn

News Release

For Immediate Release:
August 12, 1992

Contact: Bryan McCleary (202) 224-9799
Len Weiss (202) 224-4751

GLENN ATTACKS PLANNED JAPANESE PLUTONIUM SHIPMENTS

Senate Non-Proliferation Leader Calls on Administration to Reverse Policy of Condoning Commercial Uses of Plutonium

Senator John Glenn (D-Ohio) today warned that serious terrorism, proliferation, and environmental threats may loom if Japan is allowed to import weapon-strength plutonium from Europe. Japan is scheduled to begin the shipments this fall.

"The proposed shipments will present new risks to the environment, new risks of terrorism, and new risks of weapons proliferation," Glenn said. He added that these risks are needless "since there is no compelling economic justification for the commercial use of plutonium in Japan or any other country." Glenn said that plutonium use only makes economic sense as a nuclear fuel if uranium is scarce and expensive -- exactly opposite from current conditions.

Glenn, author of the Nuclear Non-Proliferation Act, outlined these concerns in a letter to the General Accounting Office (GAO) which will investigate the proposed shipments at the Senator's request.

Japan uses U.S.-produced uranium in its nuclear power plants and ships spent nuclear fuel to France and England. There it is reprocessed into plutonium -- the radioactive material used to make nuclear weapons. This fall, Japan plans to ship this plutonium to one of its special nuclear reactors in an effort to increase energy self-sufficiency.

"I don't want to take any chance of plutonium finding its way onto the black market since many countries around the world are looking to purchase it," said Glenn. "I don't think we should be producing it, I don't think we should be promoting it, and I certainly don't think we should be sending ships across the oceans with it. The threats posed by terrorists and spills are too great."

"This is not an innocuous shipment of some inert matter," Glenn continued. "This is plutonium we are talking about -- one of the world's most toxic and dangerous substances."

"Our goal should not be to encourage foreign commercial uses of bomb material," said Glenn. "I opposed the U.S.-Japan nuclear agreement because I believed then and I believe now that it is a mistake to allow thirty years of shipments of plutonium from U.S.-origin spent fuel to go to Japan or anywhere else."

Glenn said that if the U.S. government does not put a stop to the shipments and Japan and Europe are allowed to transport the U.S.-controlled plutonium then these parties should "pay for every red cent of related expenses, including Uncle Sam's cost of monitoring, tracking, and preparing for emergencies whether on land, in the air, or on the high seas."

Glenn added that such nations should also be required to ante up more funds to support International Atomic Energy Association (IAEA) safeguards, as he has proposed in a bill to strengthen the IAEA.

"This is another example of the Administration giving our non-proliferation goals low priority for the sake of helping out the international nuclear industry," said Glenn.

NEW YORK TIMES
AUGUST 3, 1992
(A3 Incl Section)

Japan Thinks Again About Its Plan to Build a Plutonium Stockpile

By DAVID E. SANGER
Special to The New York Times

TOKYO, July 31 — Facing growing criticism from abroad, Japanese Government officials say they have begun rethinking the nation's ambitious nuclear energy plans, and may delay or derail the building of self-sustaining breeder reactors that would add to the worldwide oversupply of deadly plutonium.

The quiet change seems to reflect the Government's reluctant conclusion that efforts to develop new technology for energy independence, begun in the energy crises of the 1970's, are becoming prohibitively expensive and politically untenable.

Japan's giant utility companies have told the Government they will no longer foot the bill to build a pilot breeder reactor, which would both consume and produce plutonium. Moreover, since the collapse of the Soviet Union and the dismantling of large numbers of nuclear weapons, experts have warned that a glut of plutonium could pose major environmental problems and security threats.

Thinking It Through Again

Government officials insisted during the last week of July that they were not abandoning their hopes of eventually creating a self-sustaining nuclear fuel cycle that would reduce their dependence on suppliers of uranium, which fuels ordinary reactors.

But on Wednesday, the Science and Technology Agency created an advisory panel to reassess the country's mid-term plans, which in Japan covers the next several decades.

Officials said a number of the conclusions seemed to be pre-ordained. Among them is expected to be a major change of course toward reactors that consume plutonium rather than create it, and a proposed venture with Russia to convert plutonium from dismantled weapons into fuel for nuclear power.

The committee chairman, Akira

Oyama, a professor emeritus at the University of Tokyo, said in an interview that while Japan still hopes to use breeder reactors, the moment may not come until "the mid-21st century."

At Sea in Vulnerable Ships

Though officials deny it, this change appears to be largely in response to mounting international protests, especially over Japan's plans to transport tons of plutonium — fabricated from Japan's own nuclear wastes — from Europe by sea, starting late this year. Environmental groups say the ships

The economy and the politics of nuclear power have changed.

would pose an unnecessary environmental hazard and would be slow-moving targets ripe for terrorists.

Though the Bush Administration has informally approved the plan and will track the cargo by satellite, in late June the House of Representatives passed an amendment to the National Energy Policy Act that would effectively prevent Japan from moving the plutonium through United States waters. South Africa has also declared its waters off limits.

While Japanese officials say they plan to go ahead with at least one or two shipments in order to establish the precedent, they add that further deliveries could be delayed while Tokyo figures out how to use the plutonium.

"Something is finally happening inside the Government, and they are reviewing their plutonium policy," said Jinzaburo Takagi, a nuclear engineer and one of the leading critics of Japan's

nuclear plans. "I don't think they will give everything up. But surely, there is some shift in present policy."

Government officials say the powerful bureaucracy in Tokyo has been reluctant to abandon its dream, even though the United States has already abandoned large-scale reprocessing of wastes into plutonium for fear of nuclear proliferation.

"Our whole plutonium program began to take on a life of its own, and no one has wanted to pull the plug," a senior Government official who opposes the program said recently. "I think people are beginning to realize that this is placing us in a diplomatically very difficult position."

The problem is compounded by the fact that Japan has never satisfactorily explained how it would burn off all of the plutonium that its plans call for producing. Tokyo forswore the production of nuclear weapons after World War II, and almost no one believes the country has any desire to stockpile plutonium for conversion into a bomb.

Nervous Neighbors

But diplomats from other Asian nations worry aloud about the wisdom of placing so much plutonium at Japan's disposal, even if it is regularly inspected by the International Atomic Energy Agency. It is widely assumed that Japan has the technology to produce a bomb should its policy ever change.

Mr. Oyama dismisses those concerns, saying there are "wide differences in the purity level of the plutonium we use for nuclear power and plutonium for military use."

Japan's goal of nuclear energy independence dates to the 1950's. The hope of relying on plutonium-fueled fast-breeder reactors was based on the assumption that uranium would be scarce and expensive.

Plutonium is a by-product when uranium is used to power a nuclear reactor, and it can be recovered and use fuel another kind of reactor. Two small

experimental fast-breeder reactors have already been built, and a major demonstration reactor is under construction.

A giant reprocessing center at Rokkasho in northeastern Japan is already a decade late, partly because of local protests. The plan to ship 80 or 90 tons of plutonium from Britain and France, which already have reprocessing complexes, arose from those delays.

But the economic predictions on which the plan was based have changed radically. Uranium is now plentiful and cheap, and the biggest problem now is how to store the highly toxic plutonium safely.

The United States has considerable control over Japan's plans because much of the nuclear waste being converted into plutonium was originally supplied by American companies. While the United States has officially supported Japan's plans, in private Bush Administration officials have been saying for months that they want Tokyo to find a way to extricate itself.

INTERNATIONAL HERALD TRIBUNE
Tues. April 21, 1992 *

Japan May Put Off Plutonium Plans

The Associated Press

TOKYO — The head of a nuclear power development program said Monday that Japan may put off plans to use a special reactor to produce plutonium, the material used in both power plants and nuclear arms.

The statement, by Takao Ishiwatari, president of the Power Reactor and Nuclear Fuel Development Corp., was the first sign Japan may be moving away from its plan to begin producing and importing tons of the material. Critics contend Japan could build a dangerous stockpile of plutonium.

Mr. Ishiwatari said nuclear arms reduction plans by the United States and the former Soviet Union may create a surplus of plutonium and reduce the need for Japan to begin making its own.

But he reaffirmed his commitment to Japan's plutonium-powered nuclear program. Japan's commercial nuclear industry is the only one to rely mainly on plutonium fuel rather than on enriched uranium.

Mr. Ishiwatari said a \$4.5 billion prototype fast-breeder reactor — which yields more plutonium than it uses — could be refitted to become a power-producing plant rather than plutonium producer.

Nuclear experts, however, say fast-breeder reactors have no special use beyond making plutonium. The plant is scheduled to go into operation this year.

Controlling plutonium has become a key concern of the United Nations since the breakup of the Soviet Union and allegations of se-

cret nuclear weapons programs in Iraq and North Korea.

Since India exploded a nuclear bomb in 1974 built using plutonium it recovered from a research reactor, international pressure has been growing to abandon plutonium for commercial use. Washington adopted such a policy in 1977.

Japan, and to a lesser extent France and England, are the only industrialized nations that continued to push fast-breeder reactors.

In August, Japan's atomic energy commission approved a plan to increase the use of plutonium and rely less on uranium. Under the plan, 80 to 90 tons of plutonium would be used by the year 2010 by about 12 reactors currently operating on uranium and by fast-breeder reactors.

Critics doubt that much will be needed. Japan already has 30 to 40 tons coming from reprocessing plants in Europe, where plutonium is extracted from used uranium fuel rods. Another 60 tons is expected from Japanese reprocessing plants into the next century.

Mr. Ishiwatari also said Japan would use U.S. satellite surveillance to help ensure safe passage of a freighter scheduled to carry nearly a ton of plutonium from France to Japan later this year.

The shipment, guarded only by a specially armed coast guard cutter, has aroused controversy abroad because of fears that the plutonium could be lost to terrorist attack or an accident during the 27,000-kilometer (16,800-mile) journey. One ton of plutonium is enough to build 100 to 150 nuclear weapons.

WT 4-22-92, A24

Tokyo Official Criticizes Nuclear Power Program

Expert Fears Proliferation of Plutonium

By T. R. Reid
Washington Post Foreign Service

TOKYO, April 21—A top nuclear power expert in the government has sparked new debate over Japan's national energy program, saying he fears that a plan to build a network of nuclear power stations will lead to proliferation of toxic plutonium.

Takao Ishiwatari, president of the government's nuclear fuel research institute, agreed with some foreign critics of Japan's energy plans when he expressed his concerns at a press conference Monday.

Ishiwatari said he feared that the stations, expected to "breed" new high-grade plutonium fuel, would increase production of the substance, which remains lethally toxic to humans for thousands of years.

Ishiwatari also said the government is looking for alternative ways to bring into the country the plutonium to be used in the program.

Currently, Japan plans to ship weapons-grade plutonium via freighter from Europe on a 17,000-mile trip through three oceans, with a single Japanese coast guard ship as escort. The first one-ton shipment is scheduled for this fall.

Critics here and abroad have argued that this plan could give terrorists an opportunity to capture a hoard of plutonium.

The U.S. government, which helped Japan design its nuclear fuel program, has supported the plutonium plan, despite criticism from some environmental groups and members of Congress.

But the comments from Ishiwatari, chief of the research agency that designed the Japanese nuclear power plan, will probably force a new assessment of the program at top levels.

Over the past two decades, Japan has moved resolutely to decrease its dependence on fossil fuels such as oil and coal and to move to nuclear-generating capacity for its electricity. So far, Japan's nuclear power stations have used uranium

fuel from mines in the United States, Canada, Australia and South Africa.

But the country now wants to create a "recycling" process, in which used uranium is reprocessed into plutonium. The plutonium can be used to fuel so-called "breeder" reactors, which produce, or "breed," more plutonium while generating electric power.

This plan would have two desirable effects, the government here says. First, Japan would no longer be dependent on foreign sources for energy supplies. Second, replacing oil-fired power plants with nuclear reactors reduces emission of air pollutants and thus helps ameliorate the growing problem of global warming.

Japan is now building its own plutonium-reprocessing facility. Until it is completed, Japanese uranium fuel is being shipped to reprocessing plants in France and England. Japan has rights to about 30 tons of plutonium from the European reprocessing plants and has plans—on paper, at least—to ship that amount here over the next 18 years.

Because of the problems with plutonium proliferation, Ishiwatari said, "It would be better for Japan to develop a [power-generating] system that burns up plutonium rather than one that breeds it." But that proposal suggests a large-scale revamping of the plutonium-breeding energy system that Japan has developed at considerable expense.

"The remarks by Ishiwatari-san mean we are looking at a complete revision of the nuclear energy program," said Jinzebuo Takagi, a physicist who heads a citizens' group opposing the plan. "If the government is now worried about plutonium proliferation, that undermines the basic rationale for developing a plutonium-breeding reactor network."

Japanese government spokesman Koichi Kato said today there has been discussion of the plutonium cycle within the government, but at the moment "we are still planning to go ahead with the nuclear-generating plan we have in place."

WASHINGTON POST

92-4-22

Industries

ENERGY

JAPAN'S NUCLEAR GAMBLE IGNITES A WHITE-HOT DEBATE

It's importing tons of plutonium as it seeks energy self-sufficiency

Eighty-five miles north of Tokyo, in a labyrinth of sealed rooms separated by radiation detectors and security posts, Japanese government researchers in white coveralls and yellow boots experiment with one of the deadliest substances on earth: plutonium. Wearing thick rubber gloves, they reach into acrylic boxes and mix the toxic element with uranium, making black pellets that will burn in nuclear-reactor cores. Here, at the Tokai nuclear research center, squabbles over the wisdom of stockpiling atom-bomb material are irrelevant to engineer Masayuki Iwanaga. "I hope politics doesn't interfere with technology," he says.

That may be a vain hope. In the 21st century, Japan plans to become self-sufficient in electricity—and make its industries even more competitive—by firing up "fast-breeder" reactors that generate more plutonium fuel than they burn. But while the idea sounds good to a country that imports nearly all the oil and uranium it uses to produce 56% of its electrical power, it's fueling a furious debate. Some Japanese question spending what could be \$75 billion on iffy technology. And criticism is rising at home and abroad over a plan to ship in 42 tons of plutonium from Europe, starting in November. "You're introducing bomb material," says Paul L. Leventhal, president of the Nuclear Control Institute in Washington, who dreads what may happen on the 17,000-mile journey. "Should Japan acquire this much plutonium?"

NO WASTE. Japan says yes. By 2010, the government aims to cut oil's share of total electricity from 29% to 10%, while boosting nuclear power from 27% to 43%. Plutonium is the key. Conventional light-water reactors create some pluti-

um as a byproduct of fission, the splitting of atoms to release energy. But these reactors typically run only on uranium, with the plutonium stored as waste. Now, Japan plans to convert 12 of its 42 existing nuclear plants to run on a mixture of uranium and plutonium. At the same time, it will develop fast breeders, which not only burn the urani-

the core and transfers heat away from it by means of pipes looped around the vessel. But this piping has many elbows and bends that increase the chance of coolant leakage. A French design minimizes piping by placing the cooling system inside a larger tank, but that makes maintenance hard. The Japanese have come up with a third type that uses less piping and is easier to service. The Monju plant, a \$4.6 billion, 280-megawatt prototype built on this design, is due to fire up next spring in western Japan.

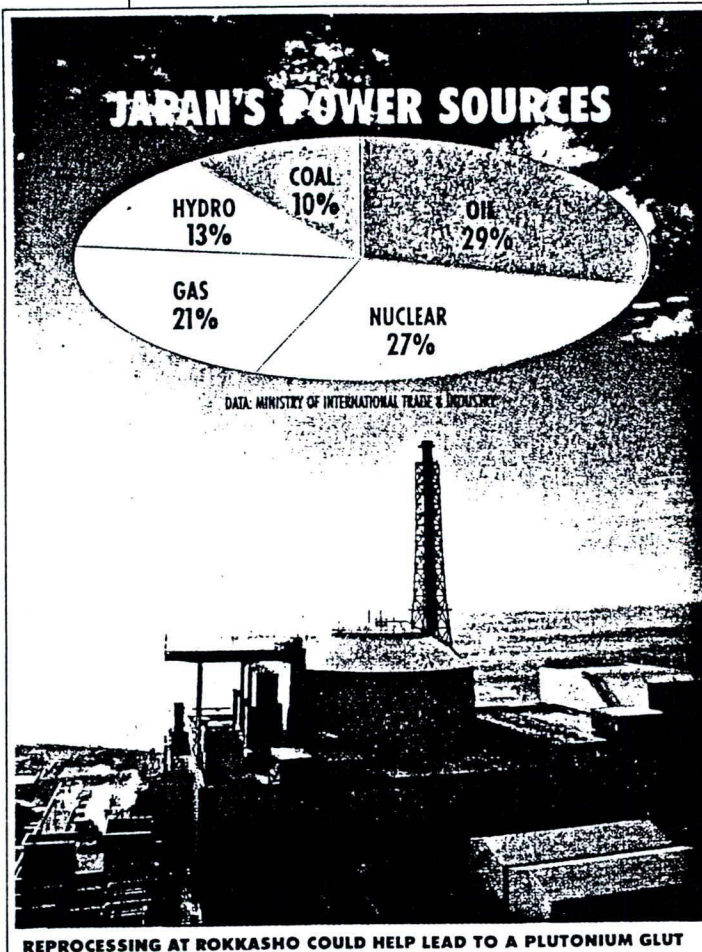
A utility consortium will take over the project and start on a 600-800 megawatt demonstration reactor later this decade. If it proves successful, the commercial units will follow. Neither the government nor the utilities will predict the final tab. But nuclear chemist Jinzaburo Takagi, head of the Tokyo-based Citizens' Nuclear Information Center (CNIC), says it could surpass \$75 billion.

HOT TARGET. This is a major argument against the fast breeder, whose price may be three times that of a conventional nuclear plant. With world uranium supplies dwindling, the trade-off seemed acceptable in the 1970s, when Tokyo shaped its plan. But since then, thanks to new discoveries in Canada and Australia and worldwide antinuke sentiment, uranium demand has moderated and prices have plunged. The U.S. funds only modest fast-breeder research. Even in France, where nuclear plants generate 73% of electricity, vs. 22% in the U.S., the fast-breeder program is on hold.

The other focus of criticism is the chance of a high-seas mishap. Over the next 18 years, before Japan's plants start breeding their own fuel, spent rods from its conventional nuclear units will be reprocessed in Britain and France. The plutonium extracted from them will be sent back aboard the

Pacific Crane, a 7,000-ton, double-hulled nuclear fuel transport. Extra fuel tanks will let it sail nonstop. But since Japan's constitution forbids sending military ships abroad, the Pacific Crane's only protection will be the lightly armed Shikishima, a Coast Guard-like vessel.

To prevent accidents, sensors have been installed to detect and flood fires in the hold. The four-layer lead casks bear-



um-plutonium blend but also have such a high degree of fission that they create more plutonium than they use—in essence, burning your fuel and having it, too. Japan plans to have two commercial fast breeders on-line by 2030.

To get there, it will have to solve plenty of problems. An experimental fast breeder designed by the Japanese government circulates sodium coolant into

ing the plutonium can withstand a fire of 800C for 30 minutes and survive pressures at ocean depths of 10,000 meters. Moreover, satellites will monitor the ship as it plies its secret route. The U.S., which sold Tokyo its uranium and has the right to approve transport plans, has O.K.'d these safeguards, says Toichi Sakata, director of the nuclear fuel division at Japan's Science & Technology Agency. The State Dept. says approval is still pending. In any case, nuke watchers are upset. On May 21, Greenpeace and the Nuclear Control Institute launched a global campaign to stop the shipments.

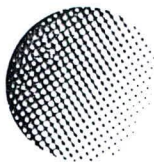
DOUBLE STANDARD? Assuming the plutonium reaches Japan without incident, the controversy still won't die. Few accuse the country, whose constitution forbids nuclear weapons, of plotting to make a bomb. Still, the plan sends a mixed message, says Jon Wolfstahl, senior analyst at the Arms Control Assn., a Washington think tank. He notes that Japan could legitimize plutonium stockpiling just as Western nations are trying to get North Korea to abandon a uranium-reprocessing facility it says is purely commercial. "This has serious political implications," argues Wolfstahl.

Such acute scrutiny has the Japanese nuclear community on the defensive. Already, grass-roots opposition has made it hard to find a site for the demonstrator reactor—forcing the utilities to delay groundbreaking several years, until the late 1990s. Beyond that, the \$4 billion demonstrator project will strain the utilities financially. And they still must finish Rokkasho, a \$9.2 billion complex in northern Japan that includes nuclear waste storage, enrichment facilities, and a planned reprocessing plant that should end the need to import plutonium. "It's a hot discussion over how to afford both," says one utility official.

Indeed, some scientists now question whether Japan can use all the plutonium it is gathering. By 2010, the government expects to have collected 85 tons. Citing fast breeders and the conversion of conventional nuclear plants to burn a uranium-plutonium mixture, Tokyo plans to use it all. But the CNIC's Takagi charges that delays in these projects may leave Japan with more than 60 extra tons.

Government and utility officials aren't ruffled by the prospect of delays. Critics only look ahead 10 or 20 years, says Atsuyuki Suzuki, nuclear engineering professor at Tokyo University and an adviser to the Atomic Energy Commission. Japan's plan for a plutonium economy goes out 50 years. "It's not a question of whether to build fast breeders," he says. "It's simply a question of when." But as the sailing date for the Pacific Crane draws near, the issue may seem far from simple.

By Karen Lowry Miller in Tokyo



NUCLEAR CONTROL
INSTITUTE

1000 CONNECTICUT AVE NW SUITE 704 WASHINGTON DC 20036 202-822-8444

FACT SHEET

**JAPANESE SEA SHIPMENT OF PLUTONIUM--
KEY ISSUES: SECURITY, NEED, SAFETY**

Background

Large-scale sea shipments of Japanese plutonium are due to begin this fall, when one small, remodeled freighter, the Pacific Crane, and a lightly armed Japanese coast guard cutter, the Shikishima, transport about a metric ton of plutonium (2,200 pounds) from Europe to Japan. This is enough plutonium for at least 120 nuclear weapons. The material is also highly toxic---one microgram, the size of a pollen grain, could cause cancer, if inhaled. The plutonium is being recovered from Japanese spent fuel at reprocessing plants in La Hague, France and Sellafield, UK.

The voyage of more than 15,000 miles is expected to last up to ten weeks with no planned port calls along one of four possible routes---through the Panama or Suez canals or around South America via Cape Horn or around Africa via the Cape of Good Hope.

The plutonium was recovered in Europe from irradiated, power-reactor fuel that Japanese electrical utilities shipped there for reprocessing. The plutonium is to be shipped back to Japan for use in a new prototype breeder reactor, the Monju. Eventually, highly radioactive wastes recovered with the plutonium are to be shipped back, too.

Japan insists it will not have enough plutonium to run Monju unless plutonium is imported from Europe. However, new official Japanese data, obtained by Japanese Diet member Haremasa Seki and just released by the Japan Citizens Nuclear Information Center (CNIC), makes clear Japan does not need to import plutonium. Japan can keep Monju running with plutonium being recovered in its small Tokai-mura reprocessing plant but will accumulate a large plutonium surplus if it proceeds with the sea shipments from Europe, according to a CNIC analysis of the data, as well as other independent studies (see "Needs" section below).

Security

o The Department of Defense, in its March 1988 assessment of alternative shipping modes for the return of recovered plutonium to Japan, advised against sending the material by sea. Specifically, DOD noted dangers from 1) lax port security; 2) vulnerability to attack, "particularly when the vessel is passing through channels, straits, and other restricted waterways ... or when it is near the coast"; 3) risk of sabotage or collaboration with terrorists by disloyal crew members; and 4) hijacking or attack on the high seas.

o DOD warned that "even if the most careful precautions are observed, no one could guarantee the safety of the cargo from a security incident, such as an attack on the vessel by small, fast craft, especially if armed with modern anti-ship missiles." Two years later, Libyan terrorists undertook just such an attack against Israel, demonstrating that this danger is real.

o DOD also cautioned that, even if the U.S. Navy did not provide direct escort service as it did in 1984 for a previous Japanese plutonium sea shipment, "the United States would still need to be ready to respond to any incident which might take place during the voyage, impacting adversely on U.S. military readiness."

o When the subsequent arrangement for sea shipment was completed, contingency responses to terrorist attack were left to be dealt with later. When Nuclear Control Institute inquired what such a response plan might entail, a Department of Energy official responded, "Would you believe simply heading for the closest port?"

o The Department of Energy's 1987 assessment of shipping alternatives discussed the 1984 Japanese plutonium shipment, noting that "there was substantial concern at the time within the Executive Branch and the Congress that the transit time for such a shipment was too long to become a desirable precedent for the future--if one considers the risk of theft or attack by hostile forces . . . Accordingly, the U.S. expressed the view that future shipments of this kind should be by air . . ." This policy was reversed about one year later after Japan failed to develop a crash-resistant air-shipment cask. Japan then obtained blanket approval for sea shipments, despite the earlier U.S. government agency concerns noted above.

o In late 1989, a Japanese Science & Technology Agency official stated: "What we think we must protect the plutonium cargo from are pirates and terrorist groups. For that purpose, MSA [Japanese coast guard] cutters can function effectively. We are not considering attack with

missiles, for example, which means a real battle between nations." Some fifty-four nations are known to possess anti-ship missile arsenals--several of them (Iran, Iraq, Libya, Syria and North Korea) known sponsors of terrorism. A missile attack on the escort vessel could be a prelude to seizure of the transport vessel. A missile attack on the transport vessel could cause a ship fire reaching temperatures far beyond the tolerance of the plutonium shipping cask, releasing large amounts of highly toxic radioactive material.

Need

A number of independent studies have concluded that Japan does not need to import plutonium. Instead, Japan faces a future plutonium surplus of dozens of tons of this weapons-capable nuclear material, far in excess of its realistic research and electrical-power needs.

o Nuclear Control Institute calculates that, by the year 2017, Japan's domestic plutonium supply would exceed demand by nearly three and one-half metric tons--without any further shipments of plutonium from Europe or recovery of plutonium at a new Japanese reprocessing plant planned for construction at Rokkasho-mura. The output of Japan's small reprocessing plant at Tokai Mura, plus the plutonium previously imported from France and Britain, would be sufficient to meet the needs of the experimental Joyo and Monju breeder reactors and to complete Japan's mixed-oxide fuel (plutonium and uranium) demonstration program.

o These findings have been confirmed by recent data released by the Japanese government that show no shortfall of plutonium by 1993. An earlier projection of such a shortfall has been used as the rationale for start-up of plutonium shipments by 1992.

o Dr. Tatsujiro Suzuki, a visiting Japanese scientist at MIT's Center for Energy Policy Research, projects the plutonium surplus will reach 40 to 50 tons by the year 2010 if shipments from Europe and reprocessing at Rokkasho-mura proceed as planned. He finds that the planned plutonium recycle in light-water reactors (LWRs) and breeders simply will not be able to absorb all the recovered plutonium.

o Dr. Jinzaburo Takagi, a nuclear chemist from Tokyo University who heads the Japanese Citizens Nuclear Information Center, projects that, given the likelihood of continued difficulties with LWR and breeder recycling programs, "a plutonium surplus of as much as 77 tons is most likely to result by the year 2010, giving rise to various problems including potential accident hazard during storage and possible nuclear proliferation and terrorism."

o Dr. Thomas Cochran of the Natural Resources Defense Council projects that if Japan canceled its breeder reactor program "it could probably save \$10 billion in future R&D costs"---enough to purchase low-enriched uranium (LEU) sufficient to fuel Japan's existing reactors for 50 years, or for 100 years if advanced LEU fuels with improved burn-up are used.

o The accumulation of large plutonium surpluses in Japan will not go unnoticed in the region. Given the painful memories of World War II, and concerns in the Korean peninsula especially about renewed Japanese militarism, large surpluses of Japanese plutonium may well have a destabilizing and proliferating result.

Safety

o As in 1984, the U.S. Government is not reviewing safety aspects of the pending shipments, entrusting this area entirely to the French and Japanese. Thus, U.S. officials are not involved in determining that (as specified in Annex 5 of the 1988 U.S.-Japan nuclear agreement) "sea transportation will meet the requirements recommended in the applicable provisions of the International Maritime Dangerous Goods Code and the International Atomic Energy Agency [IAEA] Transport Guidelines."

o The Japanese and French governments refuse to release detailed documentation on the shipping cask to be used, including safety specifications and results of safety tests.

o The Japanese government has confirmed that the shipping package selected will not be tested beyond International Atomic Energy Agency standards for fire and collision. However, as a recent report by ECO Engineering (a firm of maritime safety experts) points out, these standards do not reflect realistic accident conditions. Ship fires, for example, frequently exceed the maximum temperature and duration specified in the IAEA standard, risking dispersal of the highly toxic plutonium. The ECO report also suggested that IAEA-certified containers could not withstand the enormous forces of a credible collision at sea. Accidents of this type most often occur in heavily trafficked channels and ports, where the human health risk would be greatest.

o Ocean depths along 70 to 90 percent of the shipping route would generate enough pressure to break open a shipping cask meeting IAEA immersion standards, should the transport vessel sink in an accident or an attack--risking large releases of plutonium into the marine environment.

o Japan claims to have tested the container to a pressure-equivalent of 10,000 meters depth. The test was

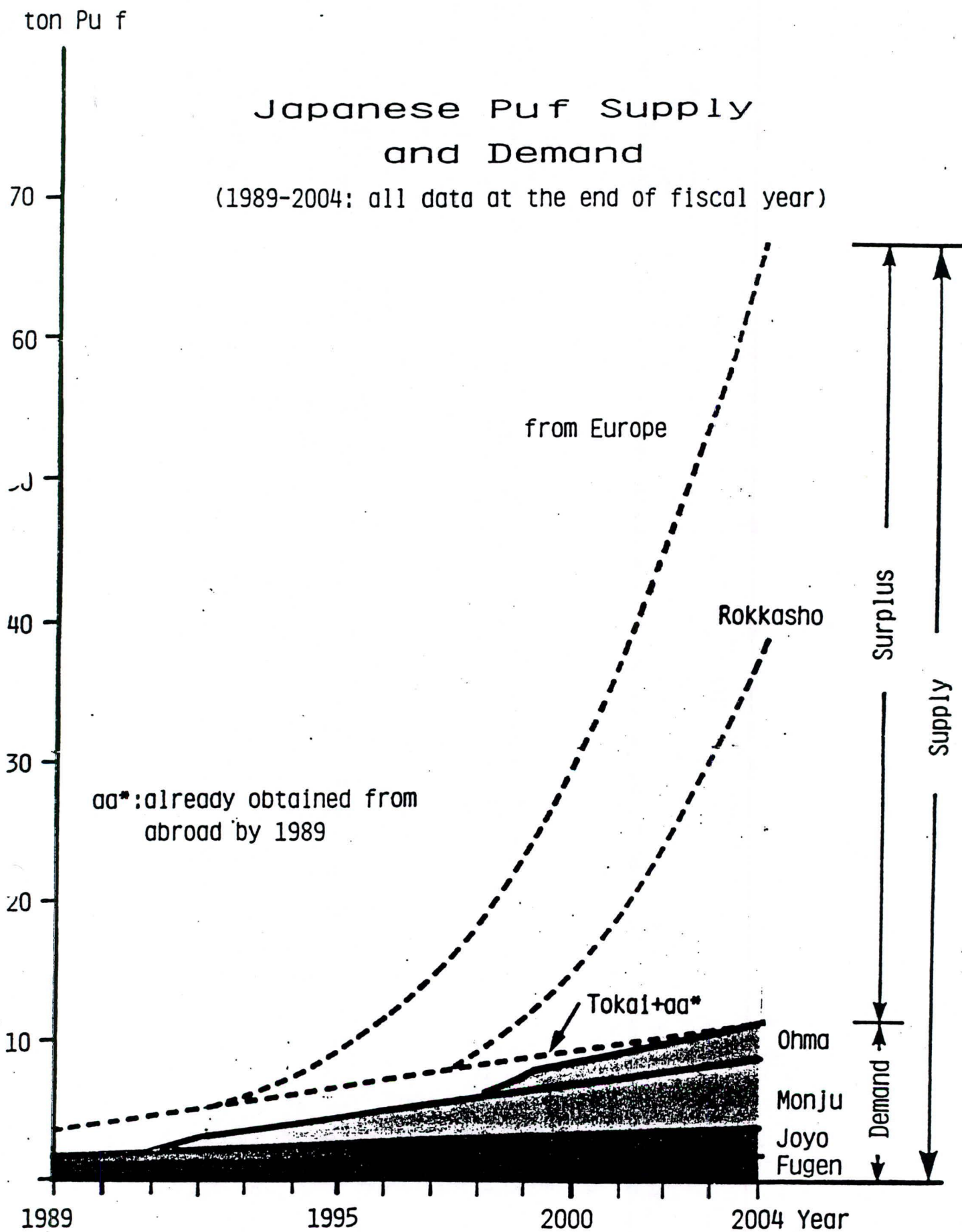
stopped after twenty minutes, an insufficient duration to prove the long-term integrity of the cask. Moreover, Japan refuses to release all the results, blocking independent expert evaluation of their experiment.

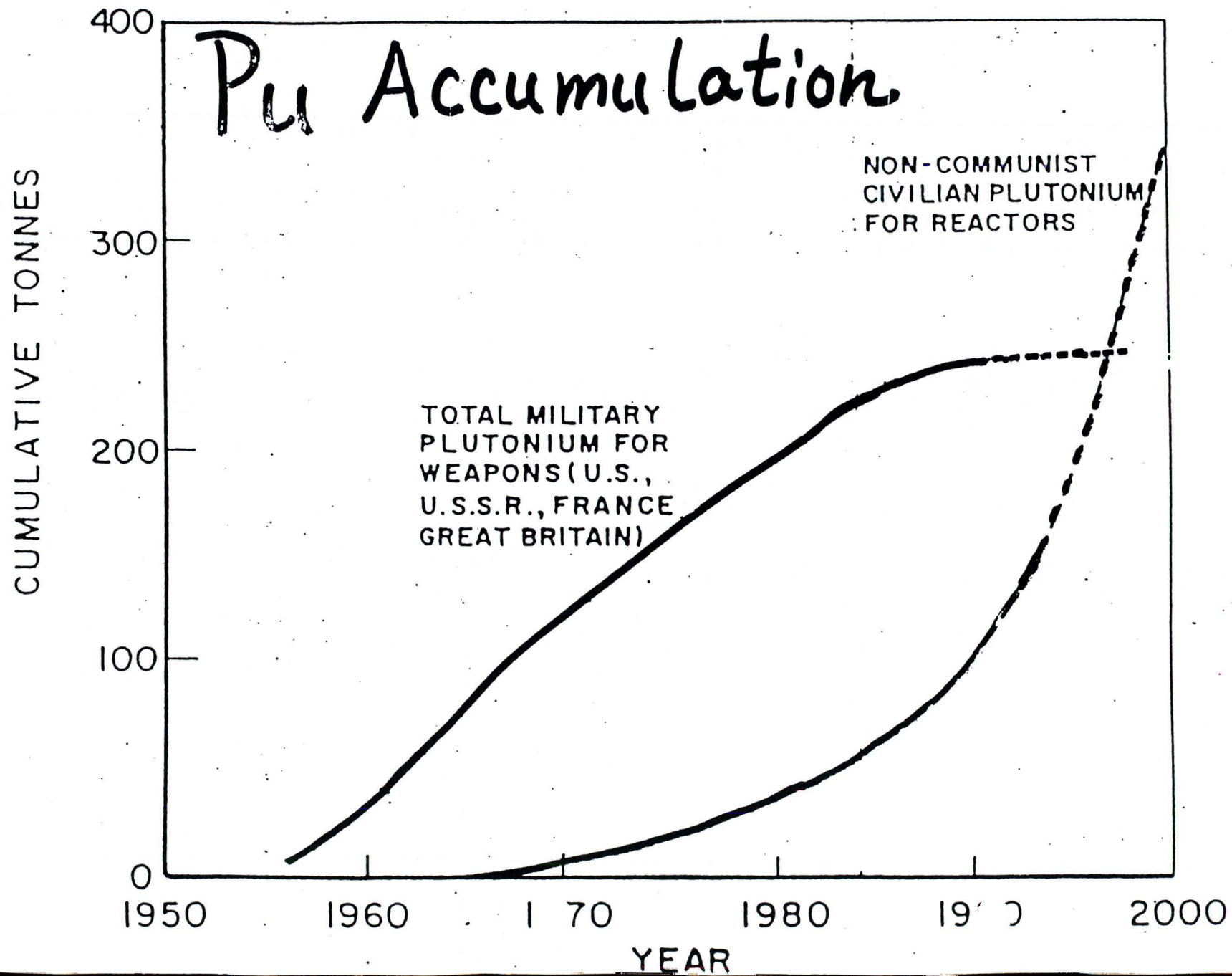
o Japan has admitted that it will not contact nations along the route to make arrangements for emergency port calls. This is a violation of the US-Japan nuclear cooperation agreement's requirement that "detailed contingency plans will be established in advance," and that Japan will obtain "the cooperation and assistance of the parties, the transferring government and, if necessary, any other government, which will be secured in advance through appropriate liaison and consultation with relevant authorities." If these plans proceed, en route nations and their citizens will remain unaware of the hazards to which they would be exposed if the transport ship entered one of their ports after an accident or an attack.

o Japan's original proposal was to ship plutonium from Europe by air. However, Congress passed restrictive safety standards in 1987, effectively blocking the air shipments after it was learned that Japan planned to use a container that had failed to survive a crash test.

Steven Dolley, Research Director
May 22, 1992

Source: CNIC, TOKYO JAPAN
(1991)





Exerpts from the Summary of the report dated March 30, 1992 by independent maritime experts Eco Engineering, Inc.:

A REVIEW OF THE PROPOSED MARINE TRANSPORTATION OF REPROCESSED PLUTONIUM FROM EUROPE TO JAPAN

ECO ENGINEERING, INC.

1356 Cape St. Claire Road, Annapolis, Maryland 21401, U.S.A.

Tel. (410) 757-3245

A. The Casks.

"The duration and intensity of shipboard fires, the enormity of the energy levels associated with ship collisions, and the extent of hydrostatic pressure of the ocean depths, to say nothing of the consequences of acts of terrorism, would appear to create exposure environments beyond the limits of the casks designed in accordance with IAEA standards."

"Although the casks are tested and certified to meet IAEA standards, the point at which they will fail is not known. Therefore, given their exposure to the fire, crush and immersion environments associated with maximum credible ship accidents, it is not known whether those casks can survive but it is strongly suspected that they could not survive such exposure."

B. The System.

"The system is so generally defined that no quantitative judgment can be made on the total risk. For example, there is no information concerning the issue of cask storage and protection aboard the nuclear transport vessel. There is little information on the details of the transport vessel itself and its ability to withstand collision, fire, and flooding."

Compiled by:

Citizens' Coalition Against the Plutonium Fast-Breeder Program

Plutonium Action Network - Kyoto

Suite 103, 22-75 Tanaka Sekidencho, Sakyo-ku, Kyoto, 606 Japan

Tel. +81-75-701-7223 Fax. +81-75- 702-1952