

NUKE INFO TOKYO

July / August
1995



Citizens' Nuclear Information Center

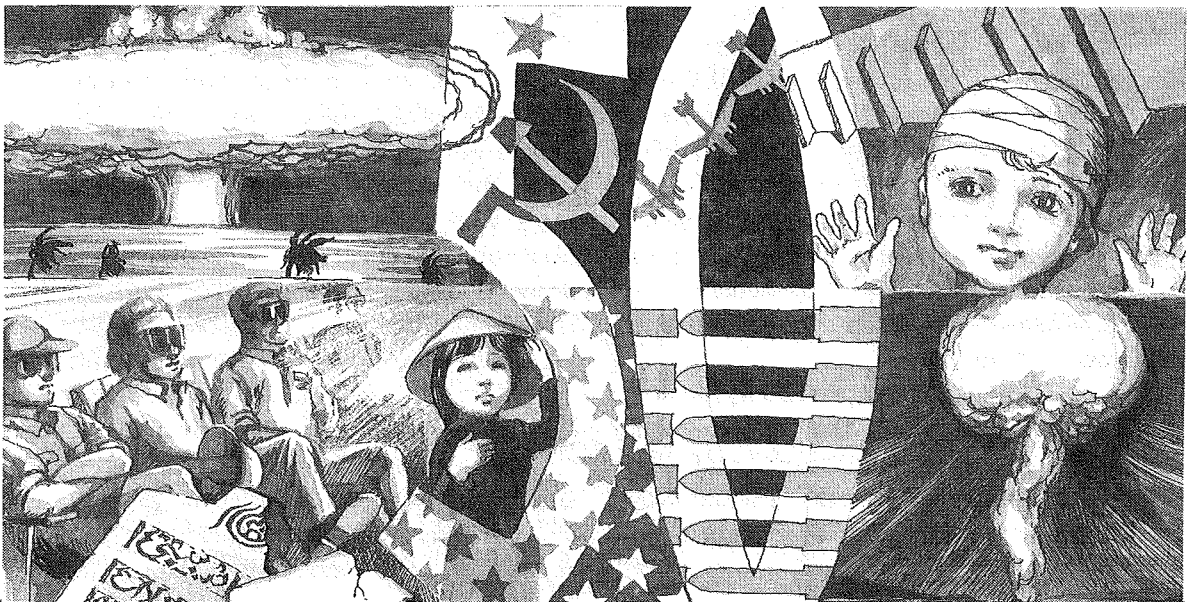
No. 48

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

Phone:81-3-5330-9520, Fax:81-3-5330-9530

50 YEARS ON FROM HIROSHIMA AND NAGASAKI

What Have We Learned from History?



IN THIS ISSUE

The 50th anniversary of the A-Bombing s	1-3
Japan's Plutonium Policy	4-5
HLW Transport Series No. 9	6
DATA: Incidents at N-Plants	7
Anti-Nuke Groups Around Japan	8
NEWS WATCH	9-10
Cancelation of Hanau / Japan's N-Export / A Refrendum in Maki-machi / N-Powered Vessel Mutsu	

What lessons has mankind learned, if any, from the history of the nuclear age? This question should be asked anew on the 50th anniversary of Hiroshima and Nagasaki, because we are now at a very crossroads. Despite the world-wide upsurge of protests against French decision to resume nuclear testing, the Chirac administration seems to be resolute about its decision. This is a challenge to us world anti-nuclear movements, and we must respond to it resolutely.

A HIROSHIMA PERSPECTIVE

by *Shoji Kihara*

My parents and two older sisters were in Hiroshima's Minami-machi area, two kilometers from the epicenter, when the atomic bomb was dropped. My eldest sister was three years old, and the next was born in February of the following year, which meant she was exposed while in the womb. My mother's parents, who lived about one kilometer from Minami-machi, towards the epicenter, died instantly amid the roaring conflagration. I was born in 1949, four years after the bombing, and another four years after that, in 1953, my father died of illness.

Although my mother had burn scars from her back up to her shoulders, she raised the three of us alone and in her weakened condition. She's now 83 years old. A few years ago she broke a bone and is now confined to a wheelchair. Her life alternates between a senior citizens' home and my home.

So I am a second-generation hibaku-sha (survivor). With the approach of August 6th each year since my childhood, mother has given me fragmentary anecdotes about that time, such as, "There were lots of corpses floating in the river," or "Our burns were full of maggots."

The hibakusha's perspective on today's society is colored by their hellish experience. Just as it colors my father's death and my mother's life for me. Even now I sometimes wonder that if the bomb hadn't been dropped maybe my father would still be alive, and my mother would have been spared so much suffering. Now, that I am a father myself, I am not completely free of fear for the health of my own children, who are third-generation

hibaku-sha.

Hiroshima has always been a good argument against the atomic bomb. But although the Cold War has supposedly come to an end, there are still many nuclear weapons throughout the world, and due to accidents and nuclear testing there are people who have become hibakusha. Even a look at the area around Hiroshima shows that we're surrounded by the means for war. We have the U.S. military base at Iwakuni, the Self-Defense Force bases at Kure and Kaita City, U.S. military ammunition dumps in several places, and more. No matter how you see it, it's presumptuous for Hiroshima alone to be the fountainhead of world-wide peace campaigning, surrounded as it is by all these preparations for war. Living here in Hiroshima, I've seen its reconstruction and growth into a huge city, but it worries me that the Gembaku Dome now looks smaller both literally and figuratively.

The atomic bombing experience should be juxtaposed against the present state of affairs and used to counter any repetition of past mistakes. The Hiroshima experience must show the right course of action, simply because, as the first bombing experience, it is best suited to do so. I believe this is the major challenge for the children of the atomic bombing victims.

This year, on the bombing's fiftieth anniversary, I'd like to sit down and listen carefully to my mother's stories about that time while I still have the opportunity. It'll be the source of the spiritual energy that will guide me through the rest of my life.

A NAGASAKI PERSPECTIVE *by Shigetoshi Iwamatsu*

At the moment the plutonium bomb exploded over Nagasaki on August 9, 1945, I was working in the Mitsubishi Ordnance factory making torpedoes for the navy. The explosive power generated by the heat and shock waves was so destructive that I thought the bomb had been dropped on or very near the site of the factory. The world became strangely dark like hell, being covered with the mushroom cloud. It became known afterwards that the epicenter of the blast was 1,100 meters away from the site and that the whole devastated area was contaminated by radiation.

A lot of people living in Nagasaki city, including Koreans, Chinese and POWs, were killed instantly. Others died a few days later as a result of burns from the heat and shock waves or radiation. With flayed skin hanging down like old rags, some with bloodied faces and bodies blackened from the blast many of the wounded wanted water. They crawled on their knees, down to Urakami River and

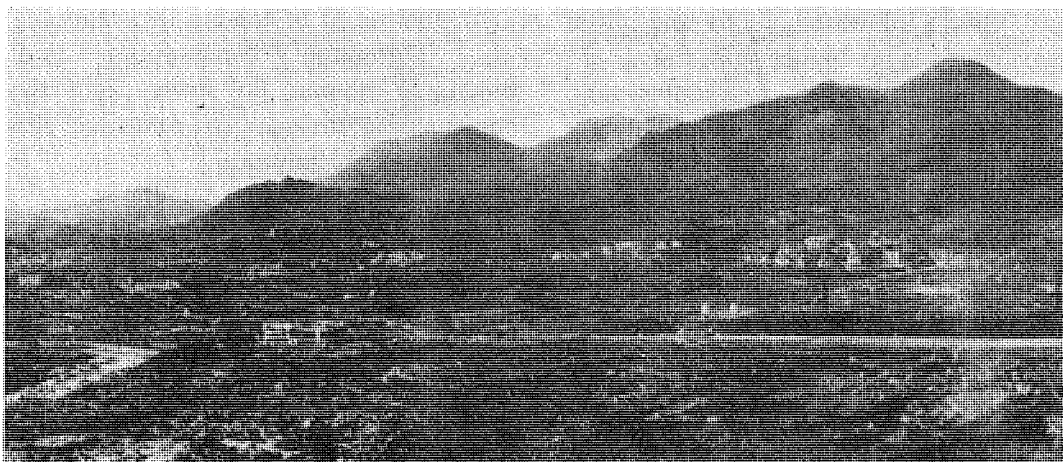
died as soon as they drank the water.

50 years have passed. Many people have been working together with the atom bomb survivors, for peace and to get rid of nuclear weapons. But still there are many people who have not seen the exhibitions of the horrible effects of the atomic bombs. If they dared to look at them, they might direct their attention to the nuclear weapons as well as the Japanese war crimes.

The Japanese atom bomb survivors know well that many Koreans, Chinese and war prisoners who were compelled to work in Hiroshima and Nagasaki during the wartime suffered from the atom bombs. And they also understand that Japan invaded Asian countries and committed cruelties in many campaigns. They are opposed to nuclear plants, too, because they recognize the same radiation effects from the nuclear plants as they did from the atom bombs.

It is the time for us all to push for a nuke free human society.

At the time of the bombing Shigetoshi Iwamatsu was a student. He was born in 1928 and is the Professor Emeritus in Economics at Nagasaki University.



Cancellation of Ohma ATR Shakes Japan's Plutonium Program

The failure of the Japanese plutonium program has become more apparent. Last June, the Atomic Energy Commission (AEC) published the updated "Long-Term Program for Research, Development and Utilization of Nuclear Energy" in which AEC asserted that plutonium would be blended with uranium to be used in light water reactors (LWR) and advanced thermal reactors (ATR) thus no surplus stockpile of plutonium would result despite the delay of the fast breeder reactor (FBR) project. However, on July 11th, the Federation of Electric Power Companies requested that the Ministry of International Trade & Industry and the Science & Technology Agency cancel the planned construction of an ATR, which makes balancing the plutonium stockpile a more difficult task.

The Failure of ATR Development

The Electric Power Development Co. was planning to construct a demonstration model of an ATR in Ohma, Aomori prefecture. It was scheduled to go through the safety assessment, the final licensing procedure before approval the construction was given, as early as this year. The nation's nine electric power companies asked that the plan be halted because the price for electricity generated by the planned ATR will be more than three times that of a conventional LWR. Once the plant is completed, they will be obliged to purchase electricity generated by it at a fixed price.

The price will be 38 yen (about 45 cents) per 1 kilowatt hour for the initial year, which is far higher than they could reasonably afford, the companies said. The Electric Power Development Co. announced that it would consider their request seriously, and it is quite likely that the plan will be abandoned. The cancellation of the demonstration ATR will most certainly lead to the termination of the entire ATR development project in Japan.

The Federation of Electric Power Companies instead proposed an

advanced boiling water reactor (ABWR) in Ohma. The ABWR would be capable of consuming as much plutonium as the originally planned ATR when loaded with MOX fuel, an mixture of plutonium and uranium oxides, in 100% of the reactor core.

The proposed ABWR has twice the electrical output of the originally planned ATR.

The government and the Electric Power Development Co. should ask the local community once again for its consent and readdress the issue of compensation for the local fishermen, which won't be done so easily.

Even if its construction goes smoothly, it would be a long time before MOX fuel could be loaded into the core. The plutonium consumption will inevitably remain far lower than the current program calls for, and a surplus will steadily accumulate.

The Use of MOX in LWRs also Facing Difficulties

According to the aforementioned "Long-Term Program for Nuclear Energy", LWRs will play the major role in the plutonium consumption program. It

stated that Japan "will start using MOX in a few pressurized water reactors (PWR) and boiling water reactors (BWR) in the second half of the nineties and increase the number of such reactors in a planned fashion, allowing for flexibility, to about ten by the year 2000 and ten or so more by 2010."

On May 19, the Nuclear Safety Commission (NSC) approved the general framework for the relicensing of LWRs for MOX burning, which was researched and recommended by the Reactor Safety Standards Advisory Committee, a subcommittee of NSC. The Committee concluded that the conventional safety guidelines for loading of uranium fuel in LWRs are equally applicable to MOX fuel.

The use of MOX fuel in LWRs may create more serious technical problems than that of uranium fuel and could reduce the safety margin of nuclear reactors. For instance, the control rods' effectiveness is reduced, the regulation and termination of the nuclear chain reaction becomes more difficult, large localized increases in temperature occur, and so on.

However, the review by the Advisory Committee claims that the light water reactor is designed to have a safety margin sufficient for the use of MOX fuel with a plutonium content of up to 8%; the loading of up to 30% of the reactor core with MOX fuel; and the achieving of a maximum burn of up to 45,000MWd/MT. Therefore the reactor safety specifications for the use of MOX fuel can be used unaltered.

While the government is pushing the use of MOX fuel in the present LWRs, neither the power companies nor the local communities seems to be willing to accept the plan. Several existing LWR plants

have been named as candidates for loading MOX fuel, but so far no formal announcement by electric companies has been made. Those local communities around the named plants are anxious about the wisdom of using MOX fuel in LWRs, as it has only been tested by computer simulation. Even the local governments of those areas, who are usually in agreement with the government program, are also resisting the introduction of MOX fuel.

For the electric power companies, besides safety the economy of MOX fuel is a concern. The cost for fabricating MOX fuel (excluding reprocessing costs) is calculated to be three to six times more than that of uranium fuel. The cost of electricity generated by burning MOX fuel in existing reactors would be lower than that by using ATR, only because the enormous expense of construction would be avoided. However much lower the price would be, the electric companies are obviously not in favor of burning MOX fuel. For the same reason, it isn't their intention to burn MOX in the ABWR planned for Ohma.

Rokkasho Delay Announced

On July 7, Japan Nuclear Fuel Ltd.(JNFL) announced its decision to delay the date for accepting spent fuel at the Rokkasho reprocessing facility due to delays in construction. It was targeted for start up in April 1996, but will now be postponed until June 1997 the operational start up of the reprocessing plant which was scheduled for 2000 will accordingly be delayed. In addition, recently some technical failures in the plant design were discovered, because of this further delays may be likely.

HLW TRANSPORT -- Series No.9

HLW Canisters' Safety Questioned

The high-level waste glass logs brought into Rokkasho-mura, Aomori Prefecture on April 26, 1994 began undergoing an acceptance inspection on May 9. Each log is checked for heat emission, radiation, surface contamination, confinement performance, and other criteria. But this inspection was extremely time-consuming, and on May 25 Japan Nuclear Fuel Ltd. (JNFL) announced at a press conference that it would inspect three logs per week. At that rate it will take until August to finish checking 28 logs, and because that will be followed by confirmation procedures by the national government, the prefecture, and Rokkasho-mura, it looks as if the logs will definitely be sent to the storage pit in September at the earliest. The only explanation offered for the delay in what was at first supposed to take about a month was "to be completely sure of safety."

As this series has previously reported, the material of the stainless steel canisters for these high-level waste glass logs vulnerable to corrosion (a problem known as sensitization), and Representative Osami Imamura asked questions about this at a session of the Science and Technology Committee of the Parliament. The Science and Technology Agency responded in the following manner. "COGEMA's canisters are made of SUH309 stainless steel, but the documents submitted with the licensing application for the high-level waste log storage facility are for SUS304L, which is the material used for the glass logs produced at the PNC [Power Reactor and

Nuclear Fuel Development Corporation] Tokai reprocessing plant. We have no data on SUH309." Also, "Licensing safety reviews involve not only submitted documents, but also comprehensive judgments based on experts' specialized knowledge and technical insights, so there are no problems."

As this clearly shows, the Agency has judged SUH309 to be safe despite the total lack of data on the material actually used by COGEMA.

Regarding its plans for the future, JNFL on May 25 applied to Aomori Prefecture to store another 96 glass logs there by March 1996. At that time JNFL stated that COGEMA is making one TN28VT, an existing transport container type, and two of a new type called TN20VT, which can hold 20 logs. Although it is not known why the new type will be used, it is possible that some flaw was found in the TN28VT. Because nothing at all has been revealed about specific plans for the next shipment, the citizens of Aomori are even more anxious. At the Rokkasho storage site, meanwhile, a TN28VT container used to train transport workers was on June 13 removed and shipped to COGEMA on the Pacific Crane.

This series on HLW transport, which has been a compilation of problems involved in the sea transport of high-level wastes, will close with this article. But there are still many problems involved in the sea shipment of high-level wastes. Whenever appropriate, we shall continue to inform you and highlight problems as they arise.

DATA**Significant Incidents at Nuclear Plants**

(July to December 1994)

Date	Plant	Short description of event.
Jul. 20	Rokkasho Enrichment Plant	A compressor stopped due to anomalous rotations resulting from inferior weld.
Jul. 22	Ohi 1	Power manually dropped due to detection of air leakage from main feedwater control valve.
Aug. 2	Rokkasho Enrichment Plant	A centrifuge unit stopped due to anomalous rotations.
Aug. 9	Mihama 3	Main feedwater pump stopped due to leakage of electricity; operation continued with use of stand-by feedwater pump.
Aug. 26	Shiga 1	Recirculation pump stopped due to failure of inverter for rotation control ; reactor power dropped and manually shutdown the next day.
Sep. 20	Joyo	Reactor scrammed due to sodium temperature rise caused by failure of secondary sodium cooling blower.
Oct. 11	Takahama 1	17 ton primary coolant leaked through flange of primary coolant pump (during periodic inspection).
Oct. 26	Takahama 1	Damage to 214 steam generator tubes found during periodic inspection.
Nov. 18	Tokai Reprocessing Plant	Failure of waste drum transfer system at 2nd High Level Solid Radwaste Storage Facility.
Nov. 28	Tokai Reprocessing Plant	Operation of extraction process stopped due to failure of reagent regulation pump in the extraction and purification plant.
Dec. 4	Hamaoka 1	Reactor manually stopped due to radioactive leak from damaged fuel cladding.
Dec. 11	Onagawa 2	Reactor scrammed due to operation error caused by inadequate manual description for neutron monitor test.
Dec. 12	Tokai I	Generator stopped due to sea water leak from damaged main condenser tube.
Dec. 16	JRR-2	Reactor manually stopped due to tritium containing primary coolant (heavy water) leak from core tank inlet valve.
Dec. 18	Fukushima I-2	Reactor manually stopped due to trouble in power transmission line
Dec. 24	Fugen	Reactor scrammed due to steam drum pressure rise caused by deterioration of steam regulation valve control circuit

ANTI-NUKE GROUPS AROUND JAPAN

"Mothers' Group Protects Children from Nuclear Fuel Cycle Facilities"



In April 1985, Aomori Prefecture Government granted permission for the building of the nuclear fuel cycle project. But about 10 mothers gathered to form "Mothers' Group Protects Children from Nuclear Fuel Cycle Facilities". It was started in the hope of protecting children's lives and future, and giving them a safe home town to live in.

The nuclear fuel cycle facilities aim to concentrate most of Japanese nuclear wastes in Aomori prefecture. Specifically from the reprocessing plant, a high level of radiation will be discharged into the atmosphere and seas even when it is operating normally. Marine and farm produce such as fish, apples and rice will be polluted as a result of it's operation, and it will leave our children with a bleak and blighted legacy. As adults, it is our duty to protect our children from the nuclear fuel cycle facilities. They can not do it for themselves.

The coming issue of our newsletter which we first published 10 years ago will be No. 100, and last October was the 100th monthly "Women's Demonstration Against Nuclear Power Plants and Nuclear Fuel Cycle Facilities" which we started after the Chernobyl disaster. We

will continue to campaign until the day the nuclear fuel cycle facilities are abandoned, as we believe in the end we will win.

Individually we couldn't change anything but our experience in local campaigning brought us together as a group of like minded people and together we can change things.

In the course of the last 10 years, a uranium enrichment plant has begun operation, large number of drums containing low level radioactive wastes have been buried at the low level radioactive waste disposal site, construction has begun on a reprocessing plant, and this April Aomori Prefecture came face to face with it's new neighbor, high level radioactive waste. Aomori Prefectural Government vigorously campaigned to become a site for nuclear waste disposal.

Even though the nuclear fuel cycle facilities are now fact, our rallying cry remains "KAKUNEN MAINE (No! Nuclear fuel cycle facilities)". We won't give up and we continue to appeal against them.

Defiantly, powerfully, and persistently.
(Yoshiko Kuratsubo)

NEWS WATCH

It's Official, Hanau is dead!

The new Hanau plutonium fuel fabrication plant is to be axed. With the backing of the German utilities having already been withdrawn, the announcement from Siemens AG that, within the year, they too will withdraw their backing for all operations along with the facts that the existing MOX plant has been refused an operating license and the uranium fuel fabrication plant to be closed down by the end of September 1995 means that Hanau is no longer a viable economic proposition. It is out of business. This means that there is, now, little chance of plutonium from the ex-USSR's nuclear arsenal being transported into Germany to be used to manufacture MOX fuel assemblies.

All of this is good news for CNIC, NCI, Greenpeace International, IPPNW and WISE-Paris who, on July 13th, sent an open letter to Chancellor Helmut Kohl of Germany, President Boris Yeltsin of Russia and President William Clinton of the USA calling for the closing of Hanau and the scrapping of the plan to process Russian plutonium. It is a big step towards the scrapping the entire MOX industry as a power source once and for all.

Japan's Nuclear Export

On 12 June, 1995, the Nuclear Sub-Committee of the Energy Council of the Advisory Committee for Energy rounded

off a report related with a versatile countermeasure under international corporation for nuclear safety in neighboring Asian region. The report identifies neighboring Asian countries such as China, Indonesia, North and South Korea, Taiwan, Thailand and Vietnam as a growing center for nuclear power in the world, and it also studies ways to establish nuclear security in the region. According to the report, there are some countries and areas in the neighboring Asian region which don't have sufficient safety measures to operate nuclear power plants. If they promote and extend nuclear power plants without such measures, there will be a danger of accidents which would adversely affect other countries and their nuclear policies. The report is only concerned about the effect of foreign nuclear accidents on Japan's promotion of nuclear power.

"Then, what should we do next?" The report suggests Japan should sell a complete package of hardware for nuclear power plants and software for their operation and maintenance to other countries. Financing for this could come from the Export-Import Bank of Japan, but at present the Bank is not involved in the exporting of nuclear reactors. To promote exports, the report suggests that the bank could help with financial aid.

The export of nuclear plants is going to be a key factor for the Japanese nuclear industry to survive, since it can no longer find much works domestically.

A Referendum to Question the N-plant

The Maki town council in Niigata Prefecture on June 26 passed a bill of ordinance on a referendum to question the planned construction of a nuclear power plant by a vote of 11-10. The ordinance is to be enforced by July 19, and the referendum is to be held within 90 days from the day of enforcement. If the anti-nuclear votes get the majority, the town mayor will in effect, be unable to sell the town-owned land for a nuclear plant site. So far three other municipalities have established plebiscite ordinances, all of which, however, stipulate that voting should be done after the utilities have presented an official request to start construction. Thus, no voting has been carried out yet. In Maki Tohoku Electric Power Co. planned to build a nuclear plant, and an application for permission to construct No. 1 reactor was submitted in 1982 to the government. However, since there was no prospect for purchasing the necessary land for the site, the company in 1983

requested that the Ministry of International Trade and Industry (the relevant authorities) suspend the licensing safety review. The land yet to be purchased consists of both town and private land, and a part of the private land is a common belonging of the people opposed to the construction.

The Japan's First and Last Nuclear-powered Vessel

The reactor of the nuclear-powered vessel Mutsu was removed on June 22. The ship will be converted to a diesel-driven marine research ship. The removed reactor was transported to a storage facilities built in Sekinehama, Mutsu City, Aomori Prefecture, the home port of the Mutsu, and the storage facilities may be opened in July next year as the Mutsu Science Museum, where the reactor will be displayed in a lead glass case. Spent nuclear fuel and low-level radioactive wastes will also be stored in Sekinehama. After more than ¥120 billion was wasted, all that remains is radioactive waste.

NOTICE: CNIC has recently published the proceedings of Belarus-Japan Symposium on "Acute and Late Consequences of Nuclear Catastrophes: Hiroshima-Nakagasaki & Chernobyl".

It costs ¥5000 plus p.&p., about ¥3000 from overseas (this is about \$90).

NUKE INFO TOKYO is a bi-monthly newsletter which aims to provide foreign friends with up-to-date information on the Japanese nuclear industry, as well as on the movements against this industry in Japan. Please write to us for a subscription (subscription rate: supporting subscriber \$50/year or ¥5,000/year, subscriber \$30/year or ¥3,000/year). The subscription fee should be remitted from a post office to our post office account No:00160-0-185799, HANGENPATU-NEWS by postal money order. We would also appreciate receiving information and newsletters from groups abroad in exchange for this newsletter. (In the case of sending the subscription fee from abroad, please send them by international postal money order.)