

# NUKE INFO TOKYO

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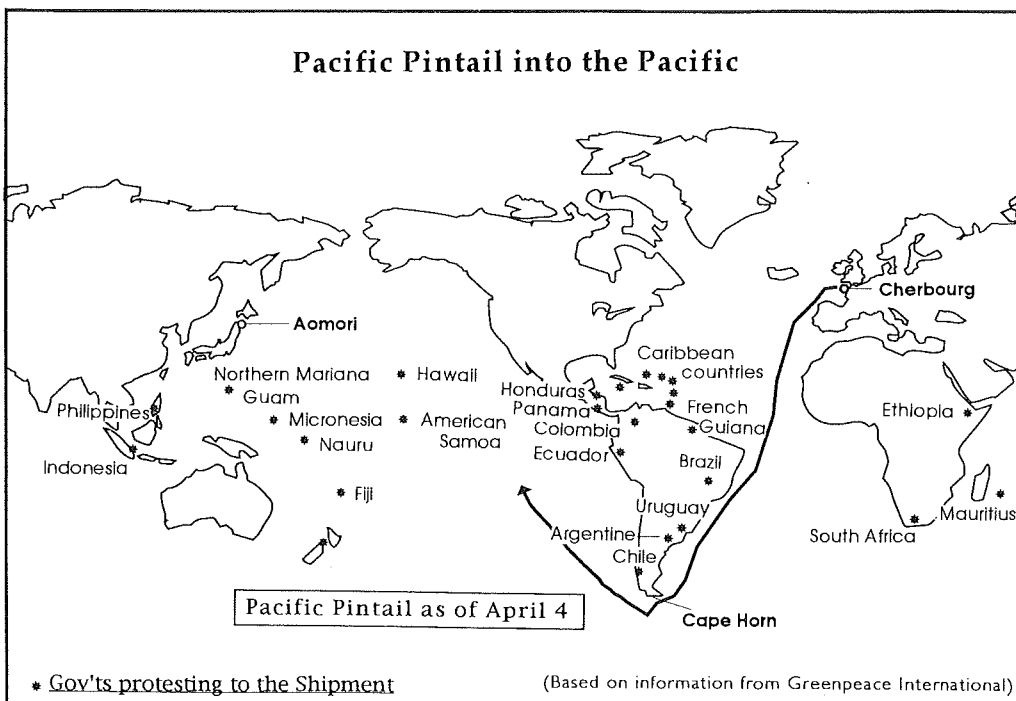
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## HLW TRANSPORT -- Series No.8



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En route to Japan, the Pacific Pintail carrying 28 canisters of vitrified high level waste (HLW) entered the Pacific Ocean via Cape Horn on March 21. Despite repeated warnings from naval authorities of Argentina and Chile, and amidst mounting protests from more than 30 countries, the ship undauntedly proceeds to navigate through Pacific Waters.

# JAPAN'S ARROGANCE AND IRRESPONSIBILITY HARSHLY CRITICIZED

*International concern over safety has escalated as the nuclear waste porting ship passes through the world's most treacherous seas along Cape Horn, prone to virulent storms and perilous icebergs. As a Pacific islander spoke to this author, "this shipment may go off safely... and we hope so...we still have to fear several tens of shipments yet to come !."*

## CNIC Made Statements of Protests

In a statement made on February 15 jointly with the Nuclear Control Institute and Greenpeace International and in further statements released independently on February 16 and 23, Citizens' Nuclear Information Center rebuked the governments and nuclear industry of Japan, France and the U.K., for failing to

- (1) address important safety issues of the shipment raised by scientific experts, in particular by Dr. Edwin Lyman of the Princeton University,
- (2) conduct a full environmental impact assessment and consult with en route countries concerning the shipment, thereby violating international environmental laws,
- (3) disclose the route and time table of the transport, —thereby continuously evoking fears among the residents of possible en route countries all over the world.

## Sensitization Issue

Of all the safety issues raised by

Lyman, the sensitization of the stainless steel canisters used to contain the vitrified high level waste is by far the most serious. As an addendum to his report " Safety Issues in the Sea Transport of Vitrified High-Level Radioactive Waste" commissioned by CNIC, NCI and GPI and released in December last year (see NIT 44), Lyman issued a note supplementing his argument on the sensitization base on further evidences this February.

According to his note, canisters made of SUH 309 stainless steel will unavoidably experience a phenomenon called "sensitization" during the production process of HLW glass logs. During the process, a mixture of radioactive wastes and glass frits is melted at 1150°C and poured into the stainless steel canister which is preheated to the same temperature. These are then cooled to below 500°C, at which temperature the molten mixture solidifies into glass.

However, when the SUH 309 stainless steel is cooled through a temperature range of approximately 850- 425°C, sensitization occurs for cooling rates usually used for production of HLW glass logs. Once the sensitization

occurs, the canister becomes extremely vulnerable to corrosion. Because of this drawback, US experts rejected this material for the canisters used at the Defense Waste Processing Facility. Lyman points out, "Use of this (SUH 309) stainless steel is, frankly put, a bad engineering decision." To date no response except a very irresponsible one by the Japanese government (see below) seems to have been made by the nuclear industry.

## **Pacific Plutonium Forum**

On 23 February 1995, the Pacific Pintail set sail from the Cherbourg harbor on its historic voyage of transporting high level nuclear waste across the globe. Ironically, it was on this same date 54 years ago that plutonium was synthesized and identified as the 94th element at a radiochemistry laboratory at the University of California, Berkeley. Whether planned in conjunction with either epoch making event, a symposium was held at the same Berkeley campus from 22-24 February, where delegates from ten countries — largely from the Pacific region including President Dowyogo of the Republic of Nauru— met to discuss the issue of plutonium and high level waste shipments. Because of the timing of the meeting, the interest and concern of the participants of the Pacific Plutonium Forum focused on the HLW shipment and Japan's plutonium program.

Everybody criticized the arrogance and irresponsibility of Japanese government, particularly the Foreign Minister Yohei Kono statement made during an Upper House Session affirming that Japan holds no liability for any damages caused by an accident during the

shipment, insofar as the shipment is conducted in accordance with the IAEA safety standards. Regardless of lawfulness of Kono's statement, people along the shipping route assert Japan is primarily responsible for any risk and/or, loss caused by the shipment, because the waste originates from Japanese nuclear power generation and everybody at the forum felt deeply offended by Kono's remark.

We experienced another example of irresponsibility, when we visited STA (Science and Technology Agency of Japan) on February 13 and discussed with officials about the sensitization issue that Lyman had raised. They did not answer directly to the question whether sensitization would occur to HLW canisters or not, and said, "Even if the sensitization occurs, the canisters would not develop corrosion because the ambient air is kept free of moisture and chloride in the Rokkasho HLW Storage Facility." But when asked if the air is controlled similarly in La Hague, they could not answer. When we pointed out that canisters are exposed to the salty and wet seashore air during storage at La Hague, all what they could say was: "Oh, it's a French matter. We are responsible for the regulations inside Japan. If the French authorities think it's OK, we think it's OK."

## **Safety Demonstration?**

On February 13, STA released a short summary of a report entitled "Environmental Impact Assessment of High Level Radioactive Waste Cask Sinking in the Sea", in response to our demand that STA should conduct a full environmental assessment of the shipment. This report —which according to

STA has been commissioned the Central Research Institute of Electric Power Industry (CRIEPI) in 1990 —consisted of a four page summary of the Industry's findings. That STA should take five years to conduct and formulate a fly-away four page— that is, three pages of text and one cover sheet —summary on such a vital issue was indeed astonishing.

Concerning the report itself, STA told us that while the agency basically believes environmental impact assessments to be unnecessary, given transport safety regulations provided in IAEA standards, it commissioned the study to "promote further understanding". In other words, STA only wanted to use the questionable conclusion of the study which resolves that "even in the event of the worst accident scenario —the sinking of all 28 canisters under the sea—the effect to human health would be negligible."

However, the assessment is open to questions. In our meeting with STA, we asked the officials what basic assumptions were used for calculations in the report. Much to our surprise, the official responsible had to leave the room to call CRIEPI to inquire the data. Clearly, since no detailed description of the methodology and assumptions used to reach the absurd conclusions of the report is available to the public, the credibility thereof remains to be seen.

Furthermore, the very fact that the study was commissioned to the CRIEPI which is owned by utilities responsible for the waste management, undeniably depreciates the report. The study was conducted as a part of a comprehensive study commissioned by STA to CRIEPI with the title "Safety Demonstration (!?)

Tests of Radioactive Wastes Transport Containers."

## To Our French Friends

There have been some press reports to the effect that French people generally want the Japanese wastes to be shipped back to Japan as early as possible and the Japanese anti-nuke movement should not oppose the shipment.

While we also believe that Japan holds ultimate responsibility for the waste from Japanese power plants, we are opposed to the unsafe and secret shipment, the lawfulness of which is also highly questionable in the light of international laws such as the UN Convention of the Law of the Sea.

The way the French, Japanese and British governments and nuclear industries are enforcing the shipment, violates human/environmental safety but principles of democracy as well. If French people allow their government to treat the French nuclear wastes in the same manner, life threatening hazards to could be predicated. We therefore believe that the French people have good reasons to oppose to shipments conducted in such a manner.

We know that we, first of all, have to oppose the transportation of spent fuel from Japan to Europe and, we feel deeply sorry that our protests were so weak that it did not get much attention, CNIC's basic position is against the entire processes associated with reprocessing including transport of spent fuel, separation and shipment of plutonium and shipment of waste. We hope to share this anti-reprocessing position with our environment-concerned and anti-nuke friends in Europe.

## PETITIONS BRING GOV'T NUCLEAR POLICY TO A DEADLOCK

A new trend to stop further construction of nuclear reactors has begun to emerge in Fukui Prefecture. Residents in Fukui have been fairly quiet, enduring the pressure and presence of the reactors for a long time. Recently however they are demanding the governor embargo the building of any more reactors.

Along the mere 50 km Wakasa Coast in Fukui, there are as many as 15 reactors of various breeds, including the FBR, Monju. In the spring of 1992 a plan to build Tsuruga 3 and 4 (14,200MW, APWR) was secretly proposed. In March 1993, the Tsuruga City council made a decision to go ahead with the plan. The Fukui Prefectural government also approved the plan the same year, asking the governor to sign approval as well.

The petition drive sought to inform the governor the people's strong opposition to the plan. This was carried out throughout the year not only by the longtime anti-nuclear activists but also by fundamentally conservative small and medium business owners, local women's groups, and business minded young men's organizations as well as religious leaders and farmers.

In January this year as many as 213,749 signatures were submitted to the governor. This number constitutes one fourth of total population of the prefecture and one third of the electorates. The governor was so surprised with the number of signatures that he declared that things are back to square one despite pressure from the Prefectural assembly.

Prefectural and council elections are soon to be held. Whether building more

reactors or not has become the main focus of the campaign in this area. In Tsuruga city where the council pushed hard for more reactors, four candidates are running for a mayor. The opinions of these candidates vary from opposition to the plan, freezing the plan, and revamping the whole plan itself. Even the current mayor who is running for re-election now affirms he will freeze the plan once re-elected. Candidates from the Liberal Democratic Party for the prefectural council are now saying that they are against further construction. The nuclear kingdom supported by the solid conservative constituency for a long time is being shaken hard by the grass-roots petition drive.

On top of this, petitions demanding a freeze of Monju operations started in December last year totaled more than 800,000. The petitions were submitted to the Director of STA, Makiko Tanaka, who was apparently impressed by the number. On February 12 a debate sponsored by STA and the Power Reactor & Nuclear Fuel Development Co. (PNC) was held in Osaka between petition signatories and government officials. This was the first debate ever to take place between citizens and government on the nuclear issue.

When asked about the antiseismic plans, Tanaka answered that she would like to conduct a disaster assessment on Monju and plutonium transport, notwithstanding objections from an official from the Agency who repeatedly stated there would be no problems. The pressure from the petitions seems to be working at various levels of government.

(by Shigeiko Ogiso)

# The Hanshin Quake

## - Nuclear Nightmare -

The most devastating earthquake since the end of the World War II struck the Kobe-Osaka area on the early morning of January 17. The death toll is around 5,500 persons, and more than 80,000 evacuees are still now living two months later in 801 temporary shelters.

Since Japan is a country with high seismic activities, all constructions are supposed to be built with high standard earthquake resistancy. Japan's standard was believed to be the most superior and advanced in the world.

All these beliefs, however, proved to be pure mythology. The buildings were destroyed with just main frames remaining, houses collapsed and burned, the pillars of highways and the bullet train, (which were never believed to be breakable) caved in, bridges and wharfs at Kobe Port were damaged unusable for many months.

The Great Hanshin Earthquake measured a Magnitude of 7.2 on the Richter scale, far greater than any construction standard could possibly withstand against such an on-site earthquake. The antiseismic design standard was made mainly to balance horizontal tremors. Only half antiseismic resistance was required for vertical quakes. However, it was found that the vertical quake was responsible for, damages of some infrastructures of the city of Kobe, the level of which was in some places 1.6 times more than the horizontal quake.

Japan is located in an area with innumerable active faults on a scale unseen anywhere, even in the earthquake belt of the Pacific rim. On such a small island, there are 49 nuclear reactors (with plans to build more) in

operation today.

The collapse of the earthquake-proof Japan myth naturally brought people to wonder what would happen if such a great earthquake occurred right under the nuclear power plants.

The nuclear power plants are said to be built with antiseismic resistance three times stronger than normal buildings, to endure on-site quake levels up to magnitude 6.5, but the magnitude for the on-site type Hanshin earthquake was 7.2.

The earthquake acceleration of the Kobe Earthquake was 833 gal at the maximum, but the antiseismic design levels for nuclear power plants are from 150 gal for the Tokai 1 plant to 670 gal for the Hamaoka 3 and 4 plants.

The government says nuclear power plants are earthquake-proof because they are built on a firm rock base, and where there are no active faults. However, all Japanese nuclear plants are built by the sea, where the rock base is rather weak. It is also difficult to find active faults which are hidden, and new active faults are found every time a big earthquake occurs. Whether or not the nuclear facilities site on an active fault has been a controversial issue over nuclear facilities in Kashiwazaki (Niigata), Sendai (Kagoshima), Hamaoka (Shizuoka), Rokkasho Nuclear Fuel Cycle Facilities (Aomori), etc. The issue is being fought in lawsuits.

The unexpected destruction of the Great Hanshin Earthquake awoke everybody to a realistic nightmare—that a nuclear holocaust could be caused by severe earthquakes. Two days after the quake, STA decided to establish a committee to review the reactors'

antiseismic design standards within the Atomic Energy Commission of Japan (AEC). The members consist of experts in seismology, civil engineering, geology, and officials of the Nuclear Safety Commission of STA.

Many members of the National Council of Mayors of Local Authorities with Nuclear Facilities were on the other hand angry that the government seemed to lose confidence in what they had promised to the local people when the nuclear power plants had been planned.

The Mayors' Council and the Local Assemblies Council of Fukui, and the neighboring prefectures including Niigata, demanded the government conduct a thorough safety review and disclose the results, as the explanation from the utilities has been simply repeating "they are built with complete antiseismic design standard," which was not very convincing.

The local residents of all regions where nuclear facilities are located made statements and demands to local and national governments for a full review of the safety standards of existing nuclear power plants, and emergency plans for nuclear plants. The "National Network to Stop Construction of More Nuclear Power Plants" held a nationwide meeting and adopted a resolution demanding a complete halt on all nuclear facilities' operations and transports of nuclear materials until a full review is accomplished and necessary measures are taken.

STA and the Ministry of International Trade & Industry held two briefing sessions, one with the Fukui prefectural nuclear safety surveillance committee at the end of January, and the other with the citizens in the beginning of March. There are 15 nuclear power plants in operation today, including FBR Monju in Fukui prefecture. The explanations by the government were not convincing either, as they were also merely reiterat-

ing 'safety' and that there was nothing to be learnt from the Great Hanshin Earthquake as regards nuclear safety.

Meanwhile, a referendum took place at Maki, Niigata in the end of January where the construction of a new nuclear power plant has been planned although such plans have been rejected for more than 20 years (see News Watch). 45% of the electorates participated, and 95% said NO to the plan. Many of the participants raised the Hanshin Quake as a big concern and the reason for opposing to the plant.

The Review Committee of the AEC has held two meetings to date. The committee will point out issues to be inspected and examine the antiseismic design standards with respect to the points raised whether the review will be adequate or not - as it will take several months to a year for the committee to complete the survey —remains to be seen.



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We published  
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THE EARTHQUAKE.  
( in Japanese, ¥100)

## ANTI-NUKE WHO'S WHO

### Suzuko Numata



Suzuko Numata (Center)

"I hope that you will be courageous people and you will love each other," Suzuko Numata, an atomic bomb survivor of Hiroshima said to 12 children at a small meeting for mothers and children in Hiroshima held on 17 March this year.

During the meeting, Numata warmly told her story of her early days and the fateful day of the bombing, August 6, 1945, to the young people and their mothers. Numata spoke about her selfish behavior, quarrels with friends, and her true and kind friend Noriko, who was killed by the atomic bomb. The small children were completely absorbed by the stories she told.

In this way Suzuko Numata has been telling her experience and her struggle and hope for peace to more than 30,000 young generations in and outside Japan.

She is 71 years old and lives with her younger sister. Both of them were working in the building of the Hiroshima Communication Bureau, a four story reinforced concrete building located 1,000 meters from the blast center on August 6, 1945.

Suzuko says that she saw a brilliant flash and fainted. The next thing she

remembers is that she had been blown to an adjacent room where it was completely dark. When she was rescued from under the rubble, her left ankle had already severed to the bone. After 3 days, doctors amputated her left leg at the thigh without any anesthetics. She gave a scream and fainted, but the scream gave her another life, she says.

She was 21 years old then and had expected to get married, waiting for her fiancée to return from the battle-field in the beginning of August. She never knew that he had already been killed in battle a month earlier.

It took years for Suzuko to find a new way to live. Now she says "I must speak out on behalf of all of the victims of Hiroshima and Nagasaki. We must never allow the tragedy to ever happen again."

She speaks not only on the tragedy she experienced, but also on the aggression that Japanese militarism predicated on Asian people. She says, "We committed the aggression to Asian countries unconsciously. So we must seek to know the true history."

Suzuko together with citizens from Hiroshima, Kyoto, and Aomori visited Panama this January as a part of the HLW campaign to appeal to the people of Panama about the nuclear holocaust of Hiroshima. Her speech in Panama left a great impression on her audience, in spite of the language difficulty.

This year is the 50th anniversary of Hiroshima and Nagasaki bombings. But Suzuko says the anniversary should not bring an end to the tragic history but must be the beginning of a new era seeking the elimination of the nuclear weapons. As she continues to lay the seeds of peace, we must water them and make them grow. (by Satomi Oba)



# NEWS WATCH

## **Kyoto Round Table Talks Held on Plutonium Policy**

The second Round Table Conference on the Current Issues on Nuclear Fuel Recycling was held in Kyoto in February by STA and the Japan Atomic Industrial Forum. The first conference was held last year to promote greater international understanding concerning the Japanese plutonium policy.

The main topics discussed were reprocessing, plutonium utilization policy, and nuclear proliferation.

Although the discussion was in some way parallel, there were some interesting comments. BNFL officially admitted that 'curie-to-curie substitution system' of returning reprocessing wastes is being discussed in the U.K.. The Japanese government which had up until this point repeatedly denied ever hearing of such a system for the first time, publicly commented that "nothing has been decided yet on the Japanese side".

The Belgium and the Swiss delegates talked about their plans to burn plutonium as MOX fuel in light water reactors, with a view 'to get rid of plutonium', a statement they stressed throughout their discussions.

Some critics opposed to government plans were invited i.e., Thomas Cochran of NRDC (USA), William Walker of SPRU (UK), and Jinzaburo Takagi.

However according to a Nikkei News article, the critics were invited as token participants to allow "fair" debate on the reprocessing policy issue.

## **International Conference for Asian Cooperation**

On March 6—8 in Tokyo AEC held the sixth annual International Conference for Nuclear Power Cooperation in Asia. Participating in the conference were delegates from China, South Korea, Australia, Indonesia, Malaysia, the Philippines, Thailand, and Japan, with an observer from Vietnam present for the first time.

Of special note was the participants' decision to hold a public acceptance (PA) seminar in China this October with the main theme being the treatment and disposal of radioactive wastes. At the March conference as well there was an active exchange of opinions on PA as a challenge necessitating international cooperation to which the all participants requested Japan's cooperation.

To countervail this international conference, citizens' groups held "counter-symposiums" in Tokyo on March 4 and in Osaka on March 5, where Japan's involvement with nuclear power plant construction in Asia was strongly criticized.

## Anti-nuke Candidate Loses Election for Aomori Governorship

NIT reported in the first two pages of the previous issue that Ms. Yumiko Oshita ran for Aomori governorship in the gubernatorial election held last February 5th. Incumbent Governor Masaya Kitamura, who had been promoting the construction of the nuclear fuel cycle facilities, was defeated. Regretfully however, Ms. Oshita, an anti-nuclear candidate, was unable to win the election either. The winner was Former Representative Morio Kimura affiliated with the New Frontier Party, out of whose election campaign a number of people were arrested on charges of bribery. Contrary to election results, the opinion poll conducted by a local newspaper during the election campaign, showed that those opposed to the nuclear fuel cycle project accounted for 57.7% of the total electorate, far exceeding of those in favor of the project, 21.8%. The delay in deciding who should run as a

candidate representing the opposition which threw the nuclear issue off the track in the campaign, and prevented the opposition from being able to sufficiently organize its campaign, is the reason attributed to the defeat.

## First Glassification in Japan — Operations Halted after Only Third Log

The Tokai Vitrification Facility built in Tokaimura, Ibaraki Prefecture by the PNC manufactured Japan's first glass logs of high-level nuclear waste on February 20. Two days later, however, while making the third log, the glass plugged up inside the binder, which puts molten glass into the canisters, causing all operations to come to a screeching halt.

Experts estimate considerable time will be needed to determine the cause at the malfunctioning, recover the glass, and work out measures to prevent such reoccurrences.

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