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Citizens' Nuclear Information Center

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Towards a Peaceful and Sustainable Future



Over 2000 people gathered to bid farewell to Dr. Takagi and to reaffirm their commitment to his vision for the future: a peaceful, nuclear-free sustainable world

Dr. Jinzaburo Takagi's death is a very great loss for CNIC. On behalf of all CNIC staff, I would like to express our firm determination to carry on Dr. Takagi's important and distinguished work to free Japan, and the world of the nuclear threat.

I wanted to believe that Dr. Takagi's death was to be far in the future. However, I was suddenly told on 8 Oct. 2000 that his condition had become critical. I rushed to the hospital, and was able to see him for the very last time.

Our association began in 1981 when I organized a lecture of his. At that time, I had never dreamed that I would begin working at CNIC. However, the anti-nuclear movement

became very strong in Japan following the Chernobyl accident, and as a result I began working under Dr. Takagi's instructions. It was very exciting and rewarding to work with him. Anyone who came in contact with Dr. Takagi was drawn to his nobility and integ-

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rity. Initially, Dr. Takagi was committed to nuclear research and belonged to the nuclear industry, but he became its most rigorous critic. From the time that he established CNIC in 1975, he was a "citizens scientist" and he remained so to the end of his days.

It is my impression that the accident at Chernobyl prompted the Japanese anti-nuclear movement to spread from local area where there were plans for nuclear facilities to the wider population in the cities. Dr. Takagi was at the center of this expansion. He attended the International Atomic Energy Agency (IAEA)'s meeting in Europe in 1986 and also invited many Europeans to Japan to disseminate information on the nuclear situation in their region. Because of increasing networking with the international community for anti-nuclear activities, Dr. Takagi began publishing Nuke Info Tokyo in 1987. Initially, an editing committee consisting of CNIC staff and volunteers was set up and the publication was based mostly on volunteer work. After becoming a CNIC periodical, it continued to offer reliable information on the Japanese nuclear situation for the international community.

Through his will, far-sighted Dr. Takagi has left us three organizations: CNIC, the Takagi School, and the Takagi Fund. In the message he left for his followers entitled My Purpose, he states that CNIC is the first venue to practice the building and development of citizens' science. The second such venue is the Takagi School for training and instructing the young in citizens' science. Finally, he expressed his

wish to have the Takagi Fund set up for practical purposes. The fund will be used to encourage and foster Japanese and Asian NGOs and individuals. These three operations must be conducted within the concept of "citizens' science."

The mission of CNIC is to collect and analyze data and to contribute to the world's anti-nuclear movement by providing such data in forms applicable to the notion of citizens' science. We provide such data and information through our monthly Japanese CNIC News and our English bi-monthly Nuke Info Tokyo, as well as through research reports, books, pamphlets, and leaflets. We believe our information can only be useful to the anti-nuclear movement if it is reliable and can withstand scrutiny. CNIC has always made efforts to provide dependable information, and is committed to continue this endeavor.

In his speech at the Right Livelihood Award ceremony in 1997, Dr. Takagi mentioned that "we have just started to write the ending Chapter" of the plutonium story. Now that he has died without completing this chapter, it is the role of those who carry the same spirit as Dr. Takagi to finish this job. Although we are very sad about his death, I feel that his influence is still with us. He has become a star, shining the way for us all. CNIC must make every effort to carry on his work — always adhering to the rigorous standards which he demanded. In the meanwhile, we very much hope that you will continue to support our work.

By Hideyuki Ban

SUBSCRIPTION

Nuke Info Tokyo is a bi-monthly newsletter that aims to provide foreign friends with up-to-date information on the Japanese nuclear industry as well as on the movements against it. Please write to us for a subscription (subscription rates: Regular subscriber - \$30 or ¥3,000/year; supporting subscriber \$50 or ¥5,000/year). When paying in Japan, the subscription fee should be remitted from a post office to our post office account No. 00160-0-185799, HANGEN-PATU-NEWS. When sending the subscription fee from overseas, please send it by international postal money order. We would also appreciate receiving information and newsletters from groups abroad in exchange for this newsletter.

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Lawsuit Against the Use of MOX Fuel at Fukushima I-3

TEPCO Claims BN is 200 Times Superior to BNFL

The third hearing on the case seeking a provisional injunction against the use of Belgo-nucleaire (BN)'s MOX fuel at Fukushima I-3 was held at the Fukushima District Court on 27 Oct. 2000. The main argument concerns whether BN exercised proper control over quality control data for the outer diameters of MOX fuel pellets manufactured for Fukushima I-3 (see NIT 80 pp 4-5).

Basing our arguments on statistics, we, the plaintiffs, questioned the claim made by the defendant, Tokyo Electric Power Company (TEPCO), that there was a zero rejection ratio for the MOX pellets. We are arguing that the defendant's claim is indeed proof that some kind of falsification had taken place.

Mr. Nezu, TEPCO's fuel managing group manager, contended in his formal statement that "it is possible to have a zero rejection ratio, it is not anomalous." However, his argument became fatally circuitous as he asserted that "this argument is based on the fact that BN has an excellent quality control ability for the data on MOX pellets' outer diameter. This is proven by the fact that they had a zero rejection ratio [for the lots prepared for Fukushima I-3]." So far TEPCO has not released any of the data demanded by the plaintiffs.

Furthermore, TEPCO based their comparison of the respective rejection ratios of BN and BNFL on the same assumption about the zero rejection ratio at BN, arguing that "the quality control data has a regular distribution" and concluding that the supposed 0.01% rejection ratio of BN was 200 times less than the 1.7% of BNFL. This argument now obliges TEPCO to prove that BN is about 200 times superior to BNFL.

The above matters were debated at the fourth hearing on 28 Nov. 2000. The court ordered TEPCO to either produce the data

demanded by the plaintiffs or give a sound argument on why they cannot provide the information. The court ordered TEPCO to give specific details on the following points: (1) how and what they confirmed during the witness inspection, (2) the contents of the pre-manufacture process confirmation, (3) the precision of the laser micro-meter used to measure pellets for the total pellet inspection, (4) the average and standard deviation figures for the total pellet inspection if it exists. (TEPCO maintains that there is no data from the total pellet inspection.)

All four hearings so far were closed sessions. However, the court decided that the next hearing will be an oral hearing which will be open to the public and the media. The next hearing will be held on 26 Dec. 2000. Mr. Hideyuki Koyama (Instructor at the Osaka Prefectural University) and Dr. Frank Barnaby (Former Director of the Stockholm International Peace Research Institute) will present testimony in support of the plaintiffs' case. Mr. Koyama will testify about the statistical assumptions concerning data falsification. Dr. Barnaby will testify about the homogeneity of BN's MOX pellets, in particular to the safety problems associated with plutonium spots (plutonium clods) which are speculated to be more often in BN pellets than in pellets manufactured by other companies using alternate methods.

The Fukushima Governor, Eisaku Sato, has been very cautious in giving the final approval for the use of MOX fuel at Fukushima I-3, and has shown great interest in this court case. Though we try to refrain from being overly optimistic, we are slowly driving TEPCO into a corner, and there is indeed a possibility that we might win a provisional injunction against the use of MOX fuel. By Chihiro Kamisawa

Protest Against Restart of the Tokai Reprocessing Plant

By Gan Nemoto,
Ibaraki Action Coalition Against Nuclear Power

Three years have passed since the fire and explosion at the Japan Nuclear Cycle Development Institute (JNC)'s bituminization facility at the reprocessing plant in Tokai-mura, Ibaraki Prefecture. Ibaraki Prefecture and Tokai-mura agreed to the re-start of the plant, and the company — formerly the Power Reactor and Nuclear Fuel Development (PNC) — began the operation of the plant on 20 Nov. 2000.

Before giving the green light, the Prefecture consulted the Ibaraki Nuclear Council, and the Council had a meeting for the first time in 5 years. They only met three times and in total spent a mere seven hours discussing the matter. Obviously they had already made up their minds to recommend the re-start even before having these token meetings.

Our group, the Ibaraki Action Coalition Against Nuclear Power, pointed out to the Council problems associated with the aging of the Plant, the worldwide trend of withdrawal from reprocessing, and advised the Council on the municipality's right not to accept the national policy calling for the re-start of the plant. We also asked for clarification of the Council's responsibility and demanded that the Council dissolve immediately if it could not clarify its obligation. However, the Council ignored our requests and approved the re-start of the plant.

We immediately submitted a request to the governor and asked for a written response. We pointed out that since some of the members of the Council have personal interests, the members should be re-appointed. We also asked if the Prefectural government had reflected on the JCO accident, and demanded that it conduct an environmental impact assessment for the reprocessing plant, which creates 500 times more radiation than a standard nuclear power plant. We also pointed out JNC's continuing habits of secrecy, and its unfair treatment of subcontractors who are given the most hazardous work.

On 6 Nov. 2000, one day after our submission of the above requests, the Governor and the Tokai-mura Mayor decided to agree to the re-start of the Plant. On the very same day it was revealed that JNC and the local governments had tried to conceal another incident which occurred at the reprocessing plant on 18 Oct. 2000. While workers were fixing the switchboard in the ventilation at the bituminization facility within the reprocessing plant, they accidentally pulled out the wires. This caused a power loss which resulted in a pressure decrease in the facility. Fortunately it was fixed in 12 or 13 minutes, but the incident revealed that the electrical system had never been furnished with the promised multiple protection. JNC merely made a simple report to the Prefecture and the Village verbally and by fax. The Prefecture then concealed the incident from the media for about a month.

Once again we protested that there is no logical reason to approve the re-start and that residents' opinions are not reflected in the Council's finding. We contended that they tried to hide the 18 Oct. accident because they knew it would be bad PR for the re-start of the plant. We expressed our opinions directly to the prefectural officials and they promised to give us the governor's response to our previous requests as well as to this protest letter.

On 14 Nov., the Prefecture and JNC held the promised explanatory meeting on the re-start of the plant for the municipalities that have safety agreements. Instead of answering to any of the safety concerns at this meeting, JNC simply announced the date of the re-start. The first reprocessing campaign will run till 19 Dec. 2000 and the uranium solution which was the source of criticality in JCO accident is now being reprocessed. Together with spent fuel assemblies, JNC will process 2.8 tons of spent nuclear materials during this period.

Exercising Self-Restraint For Our Children's Future: The Use of Ecotubes

By Morio Hinoke
The Experimental Village - An Approach to Global Problems Based on Agrarian Values

My name is Morio Hinoke, and I am a member of The Experimental Village — An Approach to Global Problems Based on Agrarian Values, a project being undertaken by farmers and non-farmers that transcends regional and national considerations. The most pressing global issue facing those of us who live in so-called advanced industrial countries is learning to exercise self-restraint. That means working to restore the natural cycles on which life depends in many different areas, such as food and agriculture, energy, the environment, and large-scale regional development. I live in Toho Village, Narita City, Chiba Prefecture, where I truck organic vegetables directly to consumers and help raise free-range chickens. Through my participation in the Sanrizuka struggle against the construction of the Narita International Airport, I came to know Jinzaburo Takagi and Yukio Yamaguchi of the Citizens' Nuclear Information Center, and it is at their invitation that I am addressing this workshop today. I will not go into the background of the Experimental Village and instead will concentrate here on our efforts this past summer to install an ecotube ventilation system as part of the Experimental Village's regional energy self-sufficiency project.

Japan has a humid climate, and seasonal energy use peaks not in the winter months but in August, an unnatural phenomenon that is caused by the intensive use of air conditioners. In the cities, where concrete and asphalt cover the land, heat given off by air conditioners running day

and night creates an immense heat island. In the

past 100 years, Japan's average annual temperature has risen by one degree Centigrade (°C), but Tokyo registered an increase of 2.6 °C. Radically rethinking urban planning and our current energy-intensive lifestyle has become a matter of great urgency. To find a solution to this problem, the Experimental Village turned to ecotubes, which utilize the power of the soil to produce a natural cooling or warming effect, depending on the season. The temperature of the earth at a depth of one meter is a constant 15 to 20 °C. By inducing outside air through a buried ecotube several meters in length, the air can be cooled through heat transfer, maintaining a constant air flow at a temperature of about 20 °C in both summer and winter. This ventilation system would greatly reduce reliance on electric heating and cooling devices. A fan at each end of the ecotube draws outside air into a room through the underground pipe. Used air is expelled via another pipe. Powering the fans with solar energy would reduce artificial energy use even further. Here I would like to compute the potential energy savings such a system might offer.

An electric air conditioner/heater consumes an average of 1 kW of energy. Assuming that during the three summer months and the three winter months an air conditioner/heater unit is used an average of eight hours per day, 10 days per month, the total energy consumption comes to about 500 kWh ($8 \times 10 \times 6 = 480$ kWh). Convert-

ing this figure into total CO₂ emissions, we arrive at $500 \times 0.2 = 100 \text{ kg} - \text{C} = 0.1 \text{ t} - \text{C}$ ($\because 1 \text{ kWh} \Leftrightarrow 0.2 \text{ kg} - \text{C}$). If 2.3 million households, or 5% of Japan's 46 million households, installed ecotube ventilation in their homes, they would save collectively in one year about 1.2 billion kWh (2.3 million \times 500 kWh = 1.15 billion kWh) per year, or roughly one sixth of the current annual 1 million kW produced by nuclear power. At the same time, that would translate into a 240 million kg (1.2 billion \times 0.2 kg) reduction in annual CO₂ emissions.

This summer we installed ecotubes in the Kinone Pension House next to Narita Airport's main runway. The Pension House is one of the centers of Experimental Village activity. The ecotubes are indeed large tubular structures, but the tubes are actually connected to underground cooling chambers. The cooling chambers are called potato pits because they resemble the deep trenches traditionally dug by farmers in Chiba and Ibaraki prefectures to store sweet potatoes during the winter months. Our "potato-pit ecotubes" utilize this traditional storage technique, which has the advantage of reducing the length of tube required, thereby cutting costs.

We experimented with the length of the cooling chambers and with the location of the air intakes and outlets, setting them in different directions. The photo below was taken on July 10, 2000. It shows Village members creating a cooling chamber one meter below ground level. The pit is 50 cm deep and 40 cm wide. It is covered with steel plates on top of which soil is shoveled



to bury the structure. One end of the tube is located 17 meters from the west side of the Pension, the other end runs eight meters under the floor inside the Pension, for a total length of 25

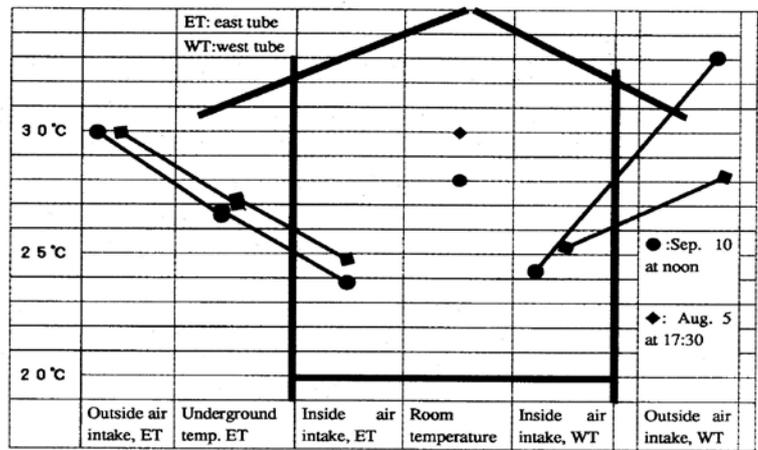


Fig.1 Temperatures inside the Kinone Pension House Using Ecotubes

meters. Another tube is placed 10 meters from the east side of the Pension and runs 4 meters under the floor, totaling 14 meters. The work was completed in early August. Presently, the Pension has three 125 mm ecotubes, two entering from the west and one from the east, pulling fresh air in and drawing used air out.

Since finishing this work, we have measured the inside temperature several times. Figure 1 shows the measurements taken at 17:30 on 5 August 2000, represented by the diamond dots, and at noon on 10 September 2000, represented by the round dots. As the figure indicates, the western ecotube drew air into the Pension at a temperature of 25°C, which was eight degrees cooler than the outside air. Air continued flowing into the building at that temperature for about two hours, but after that point, the temperature rose by one degree and stabilized. Since we expected the air to be cooled to about 20°C, our system has clearly not fulfilled its potential. The power running the ventilation fans may not be sufficient, or it may take more time for the cooling chambers, which were dug and buried on a hot summer day, to reach their optimal temperature. We will continue taking regular measurements over the next year, and will try to increase the efficiency of our fans.

Our experiment with ecotube ventilation has just begun, and we intend to continue perfecting the system. We hope that at a workshop in the not too-distant future we will be able to report to you that the ecotubes are effectively heating the room in winter and cooling it in summer.

Public Debate on Geological Disposal of Radioactive Waste

Why Geological Disposal in Japan?

On 21 October 2000, CNIC sponsored a public debate entitled "Examining the Geological Disposal of High Level Radioactive Wastes." Following is a summary of the background and the discussions carried out between citizens and representatives of the Science and Technology Agency and the Japan Nuclear Cycle Development Institute (JNC) at the public debate.

The JNC has conducted research and development for the final disposal of Japan's radioactive wastes under the prescribed policy of "geological disposal," decided upon by the Atomic Energy Commission (AEC) in 1984. Last November, JNC released its "H12: Project to Establish the Scientific and Technical Basis for HLW Disposal in Japan," and the AEC indicated its agreement with the document's content. To facilitate the actual job of selecting the candidates for disposal sites, at the end of May the government passed the "Law for the Geological Disposal of Specified Radioactive Wastes," established and authorized a corporation called the "Nuclear Waste Management Organization of Japan" to perform the disposal, and designated the "Radioactive Waste Management Funding and Research Center" as the organization to manage disposal costs.

However, there has been no broad public discussion, as in the Diet, on the crucial matter of whether geological disposal is really acceptable for high-level wastes, or whether it is genuinely possible in Japan. On geological disposal we have no national consensus, only the AEC's arbitrary decision. In view of this situation, CNIC and the people living in areas considered for disposal sites believe we must carefully examine the government's plans for geological disposal, and rethink waste disposal solutions. The public debate was organized in response to such demands, and was attended by about 180 people.

Does Japan Have Any Stable Geological Formations?

The problems of geological disposal itself have been discussed worldwide, and what is more, Japan is in one of the world's active seismic zones, making it perhaps impossible to find a disposal site that is unaffected by earthquakes and underground fault activity in any area of the country.

While the proponents did admit that Japan is an area with frequent volcanic and seismic activity, it maintained that geological disposal is possible if volcanic zones are avoided and disposal sites are located far enough away from active faults. The proponents asserted that even if an earthquake occurs, safety can be assured because deep underground areas are not affected by earthquake movement as much as the surface is.

Citizens made the point that, as with the severe magnitude 7.3 earthquake that occurred in Tottori Prefecture in Western Japan in October (see News Watch p.11), earthquakes can occur in regions said to be free of active faults. They maintained that the effects of earthquakes on the ground are complex, making it impossible to say that a deep underground storage site would be safe. Citizens also contended that there is no scientific basis whatsoever for the assertion that a place will be unaffected by earthquakes over the more than 100 thousand years required before the radiation of high level wastes falls to a safe level. Therefore, they said, it is impossible to find an absolutely safe place.

In sum, the safety of geological disposal, as asserted by the proponents, is safety under an artificially conceived worst-case scenario; it is based on mere probability, and has no scientific underpinning. We must continue to actively discuss the disposal issue, and we shall continue to propose a quick nuclear power phase-out, which would help alleviate formidable problems, such as the burden imposed on future generations.

By Masako Sawai

The Rokkasho Site: Recent Developments

Overseas reprocessing to be extended

The Federation of Electric Power Companies (FEPCO) have stated that they are interested in having more reprocessing done at the French company COGEMA. Although at present there is no formal agreement, it is said that contracts may be signed in spring 2001. The utilities justify the additional reprocessing contracts by pointing to the need for employee training for the operation of Rokkasho Reprocessing Plant. The main techniques at the plant, such as separation of uranium, plutonium, and waste from melted spent fuel, were imported from the SGN company which is a subsidiary of COGEMA. However, the Tokai Reprocessing Plant also imported techniques from SGN and thus there is no need to send operators to France for training.

At the same time, 40~50 people are to be sent from France to Japan to give technical training at Rokkasho Reprocessing Plant as part of the technique transfer contract between JNFL and SGN. A French town is being constructed in Shimoda town near Rokkasho for the family of such trainers. A single-family house is being built for each trainer's family and there are families living in 10 which have already been completed. The children of families already in Japan are being educated by teachers sent from France, and are receiving education in the same style as their home country.

COGEMA's UP-3 plant (capacity/800 tHM) exclusively processes spent fuel of non-French origin. The reprocessing of the contracted amount of 2900 tHM of Japanese spent fuel has already been completed. Spent fuel from Germany is to be sent to COGEMA up until 2005, but there is no more spent fuel to be reprocessed for the moment. Thus COGEMA is planning to consolidate

UP-2 Plant, which up until now processed domestic spent fuel, and UP-3 Plant, and will reduce the annual processing capacity to 1000 tHM. In addition, Electricity of France (EDF) has become more cautious on pursuing reprocessing, and reprocessing business for COGEMA is in decline.

The new contract between Japan and France is for 600 tHM of spent fuel to be reprocessed at the UP-3 Plant. This is clearly an effort on the Japanese side to assist the prolonging of the operation of the UP-3 Plant and thus there is a strong possibility of additional contracts. It is reported that COGEMA is asking for 300 million yen (a reprocessing fee of 200 million plus a training fee of 100 million yen) per 1 tHM of spent fuel. This brings the value of the contract to 180 billion yen. The spent fuel is to be sent in four separate shipments carrying 150 tHM each, starting in 2001. The extension of reprocessing contracts is a stark contradiction of efforts by the Japanese government and utilities to force through the construction and operation of Rokkasho and Tokai Reprocessing Plants. Clearly the decision to commission additional overseas reprocessing was seen as an easy short-term solution for the problems of radioactive waste management, countering the difficulties met in siting a location for a domestic spent fuel interim storage facility. COGEMA, which has lost business due to Germany's nuclear phase-out policy, and Japanese utilities, which are in desperate need of a waste dump, are satisfying their interests by extending reprocessing contracts.

Developments in reprocessing and MOX fuel use

On 12 October 2000, the governments of Aomori Prefecture and Rokkasho Village agreed with Japan Nuclear Fuel Ltd. (JNFL)

on a safety package for receiving spent fuel at JNFL's Rokkasho Reprocessing Plant. However, the agreement really has nothing to do with "safety" and is more like an excuse for the discharge of radioactivity. It is planned that six other municipalities will sign similar agreements. This means that all local governments have agreed on the operation of the Rokkasho Reprocessing Plant.

Although operation of the plant is not expected to begin before July 2005, the safety package was signed in great haste. Of course this is not because of any pressing need for plutonium, but because of the problems with storage of spent fuel. The utilities are currently looking for a site to construct an interim spent fuel storage facility but have not even been able to come up with a site candidate. The utilities' efforts to promote the establishment of such facilities have been met with strong local opposition. In fact, the utilities will not be able to find a new storage site for this burdensome nuclear waste. That is why they are trying to send as much of their waste as possible to the Rokkasho Reprocessing Plant which has a 3000 tHM storage pool. The safety package was needed for this reason. As of March 2000, the amount of spent fuel stored at nuclear power plants across Japan is about 8500 tHM. JNFL plans to have spent fuel shipped in mid-December 2000 from Fukushima II and Tokai II, where there is little room left in the storage capacity. JNFL has stated that they will have about 1600 tHM of spent fuel transported to Rokkasho by the beginning of plant operation in July, 2005.

MOX Plant Construction Plan

On 10 November 2000, FEPCO, which promotes reprocessing as radioactive waste management, announced its plan to construct a mixed plutonium-uranium oxide (MOX) fuel production plant. The plan is a response to the overriding pressure to devise ways of using extracted plutonium. JNFL, the owner of the Rokkasho Reprocessing Plant, will be the oper-

ator, and the plant will be constructed on the Reprocessing Plant site with an annual capacity of 130 tons. The construction is planned to take 5~6 years, and the plant is expected to begin operation some time in 2008~9. The estimated construction cost is 120 billion yen. It is certain that the deregulation of the electricity market will continue in Japan, and there are considerable doubts over the possibility of promoting MOX fuel use since it further raises the costs of already costly nuclear power.

FEPCO maintains that the construction of a MOX Plant adjacent to the Rokkasho Reprocessing Plant is in conformity with original plans. However, the use of MOX fuel in light water reactors was in reality thought up in the aftermath of the failure of the fast breeder reactor development program. This MOX Plant construction plan is a counter-measure to deal with the excess plutonium that will be extracted at the Rokkasho Reprocessing Plant. The Japanese government and the utilities are dragging the Japanese public into the plutonium quagmire in order to cloak the fact that their nuclear fuel cycle plans have collapsed.

6th Transportation of Japanese High Level Radioactive Waste

On 6 Dec. 2000, JNFL and the Nuclear Fuel Transport Co., Ltd. announced that the sixth shipment of Japanese high level radioactive waste from Europe back to Japan will take place early next year. According to the Electric Newspaper, the companies plan to have the ship leave Europe by mid-January, and arrive in Rokkasho, Aomori Prefecture around February 2001. The short transport period involved in this plan most likely means that the route will be through the Panama Canal. The high level waste was treated at COGEMA's UP3 Plant in La Hague, France and will be carried by Pacific Nuclear Transport Ltd. (PNTL). JNFL applied to have 8 casks containing 192 canisters transported to its high level waste storage facility in Rokkasho.

By Masako Sawai

Anti-Nuke Who's Who

Yuichi Kaido

A Reliable Ally for the Anti-Nuclear Movement

By Yasuko Yamaguchi

The announcement by the Taiwanese government that it will scrap plans for the Fourth Nuclear Power Plant shows that nuclear phase-out is gathering momentum not only in the West but in the world at large. Yet Japan's revised and newly adopted Long-Term Program for the Research, Development and Utilization of Nuclear Energy encourages the reprocessing of nuclear waste and the restart of the Monju Fast Breeder Reactor (see News Watch p.12). Against this background, at its Convention on the Protection of Human Rights on 6 October 2000, the Japan Federation of Bar Association adopted a "Resolution seeking for a change of energy policy — from the dependence on nuclear power towards the discontinuance of nuclear power generation (see News Watch p.12)." This is a very bold and heroic action, and sure to be welcomed by everyone whose concern over accidents at nuclear sites has led them to dream of a nuclear-free society in the not too-distant future. The attorney Mr. Yuichi Kaido is one of the significant members who made efforts to adopt this resolution.

Mr. Kaido is not just an active member of the Bar Association, but the source of much encouragement as the attorney for plaintiffs in many court cases on nuclear issues like the MOX case and the Group of Ten Thousand Plaintiffs' Lawsuit to Stop the Nuclear Fuel Cycle. He is an even-tempered person, but in court he identifies the points at issue with admirable vigour.

He is very reliable, not only as an attorney but as a supporter of citizens working toward nuclear phase-out, for the reason that he has good relations with members of the Government party as well as members of Opposition parties such as the Social Democratic Party,

the Democratic Party of Japan, and the Japan Communist Party. He also keeps in touch with many people around the world. These human networks deepen the ties between Diet members and grassroots movements, and give us



activists a chance to share information from the world. For instance, at the meetings between Diet members and citizens, he is very effective as a facilitator in drawing out members' opinions on given issues. This, I think, is the fruit of his efforts in lobbying at the Diet. His visit to the Nuclear Regulatory Commission in the U.S. also contributed substantially to our movement for the independence of the nuclear safety regulatory administration. Still, the reality is that the government is reluctant to transform its nuclear energy policy into a strategy for nuclear-free power, and is resisting pressure to strengthen nuclear safety regulations. This obliges Mr. Kaido to canvass even more energetically.

Mr. Kaido became concerned with the issue of nuclear power in his university days, at the time of the Three Mile Island Accident. I have heard that he learned from the late Dr. Jinzaburo Takagi and others in 'Jisyu-Koza.*' Now Mr. Kaido is one of the board of directors of CNIC, which Dr. Takagi founded.

*"Independent study" — An independent-study movement in the '70s and early '80s which began from Tokyo University.

NEWS WATCH

Tomari 3 Construction to be Launched

The Electric Power Development Coordination Council met on 20 Oct. 2000, and Hokkaido Electric Power Co.'s plan to construct Tomari 3 (PWR, 912 MW) was officially included in the national government's basic plan for power-source development. The utility will shortly apply for construction permission to the Ministry of International Trade and Industry, and then the safety review will be conducted.

Mitsubishi Heavy Industries, the sole PWR manufacturer in Japan, has welcomed this development since it is the first such construction order since Genkai 4 in 1985. However, the situation is not all rosy, since the company has been asked to reduce the construction cost by 10-20%. In addition, prospects for additional orders after Tomari 3 remain dim.

Injuries Due to Radiation Exposure Recognized as an Industrial Hazard

The Fukushima Prefecture Tomioka Labor Standards Inspection Office has recognized a nuclear worker's death as an injury caused by occupational exposure. The worker had worked at nuclear plants in Fukushima Prefecture and died of leukemia, at the age of 47, in Nov. 1999. He had worked at nuclear plants for about 11 years, as a welder under a subcontractor of Tokyo Electric Power Co. The radiation dose was as high as 74.9 mSv. He contracted leukemia in Oct. 1999, and died one month later.

Aside from the three radiation victims of the JCO accident, this is the fifth case in which injuries have been recognized as caused by occupational radiation exposure. All five cases involved people who contracted leukemia and only one of them was recognized while the victim was still alive. There have been no cases

in which illnesses other than leukemia were recognized as occupational hazards caused by radiation exposure, as it is difficult to establish a causal relationship between disorders and occupational exposure.

Former JCO Director and Others Indicted

On 1 Nov. 2000, the Mito District Prosecutor's Office indicted six employees of the JCO Co., including the former director, on charges of professional negligence resulting in two fatalities. This follows the deaths of two workers as a result of the criticality accident at JCO Tokai Plant in Sep. 1999. One of those indicted was working with the victims at the time of the accident, and was himself exposed to a high level of radiation.

Also indicted are three senior employees, as well as JCO itself, which is charged with violating the Law on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors by altering production procedures without government approval. In spite of the fact that it was a company-wide violation, the then-president was not indicted for the reason that he had only been at JCO for three months, and was thus not in a position to know of the violations.

Earthquake in Tottori

On 6 October 2000 there was a big earthquake with a magnitude of 7.3 on the Richter scale in the western part of Tottori Prefecture. Fortunately the area suffered only minor damage, but this earthquake was a further reminder that most of the Japanese archipelago has entered a period of intense seismic activity. Furthermore, it is significant that an earthquake with a magnitude of 7, and with an epicenter not very far below the earth's surface, occurred

in an area where no active fault had been known. This is significant because the promoters of nuclear energy have been claiming that as long as nuclear facilities are located away from active faults, there cannot be an earthquake with an epicenter directly below a nuclear site.

Neither of the two reactors at Shimane Nuclear Plant, located very close to the earthquake area, were damaged since they had been shut down for periodic inspections at the time of the quake. The reactors were both under periodic inspections because the shroud replacement at Shimane 1 took longer than usual. On 4 October 2000, Chugoku Electric Power Co. applied to the Ministry of International Trade and Industry (MITI) for permission for the construction of a third reactor at Shimane plant.

Hokkaido Governor Accepts Horonobe URL

On 14 Oct. 2000 the Hokkaido Governor expressed his willingness to accept the Japan Nuclear Cycle Development Institute's plan to build an Underground Research Laboratory in Horonobe-cho, Hokkaido, for high level radioactive waste disposal research. This was in spite of the strong opposition reported in News Watch in the previous issue.

In order to suppress the opposition, the governor proposed to the assembly a prefectural ordinance declaring extreme reluctance to allow high level radioactive waste to enter Hokkaido. The prefectural assembly passed this ordinance on 16 Oct. 2000. MITI's assessment of this ordinance is that "the wording is not so strong as to completely ban the entry of radioactive waste." However, MITI is concerned that other prefectures will adopt similar ordinances.

JFBA Proposes that Nuclear Power Be Abolished

The Japan Federation of the Bar Association (JFBA) held its Convention on the Protection of Human Rights on 6 Oct. 2000 in Gifu City, during which it adopted a resolution clearly proposing nuclear power phase-out. In the past the

Association has proposed a review of the government's nuclear policy, including the plutonium policy, but this is the first time it has referred to the abolishment of existing nuclear plants.

The main content of the proposal is as follows: (1) to stop new and additional construction of reactors, and gradually phase out existing reactors; (2) to make aggressive efforts to reduce energy consumption, and establish a law which would encourage the research, development and adoption of renewable energy sources; (3) to make nuclear safety and regulatory administration independent from pro-nuclear government ministries and agencies; (4) to stop reprocessing of spent fuel, conduct studies on its direct disposal and create a legal system to allow direct disposal; and (5) to freeze the geological disposal policy for high level radioactive waste and promote studies which would explore various alternatives.

Monju and the Long-Term Program

Inside information has revealed that the development of the Eddy Current Test (ECT) equipment for Monju Fast Breeder Reactor's steam generator (SG) has been met with great difficulty and the Mitsubishi Heavy Industries Co. has given up on the development. ECT is a technology used to detect cracks in the pipes of the SG. Following the revelation, JNC announced that Mitsubishi has not given up on the project, but admitted that the development of the ECT has not been completed yet.

The most recent revised draft of the Long-Term Program for the Research, Development, and Utilization of Nuclear Energy — which is the basis of Japan's nuclear policy — was made public this summer and there was a public consultation period until mid-Oct. 2000. One of its main plans was to re-start Monju as soon as possible. Though citizens informed the Program's review committee on the problem with Monju's SG, the committee finalized the draft in late-Nov. 2000 without making any alterations to the plans for the early re-start of Monju.