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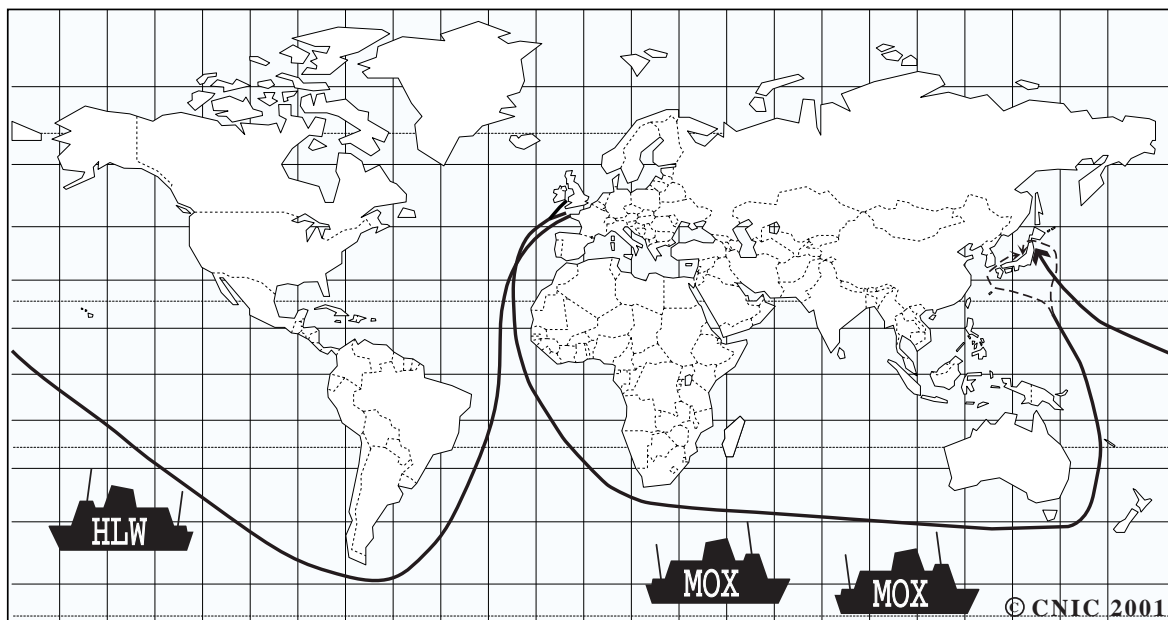
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First Ever Simultaneous Shipments of HLW and MOX



For about a month from late Jan. 2001, two separate shipments of Japanese nuclear materials—a cargo of high-level waste (HLW) via the Cape Horn and a shipment of mixed uranium-plutonium oxide (MOX) fuel via the Cape of Good Hope—were simultaneously moving through international waters. Japanese power companies expect at least 50 more shipments of MOX and HLW to take place in the future, at a rate of about two or three a year.

Under its plutonium program, Japan has its nuclear spent fuel reprocessed by a French company, COGEMA, and a British company, British Nuclear Fuels plc (BNFL). The contracts between the reprocessors and Japanese power companies stipulate that radioactive waste resulting from plutonium separation must

be shipped back to Japan. Though most of Japan's roughly 35 tons of extracted plutonium is stored unused in Europe and Japan, some of it has been manufactured into MOX fuel to be burned in light water reactors (i.e. thermal reactors) under Japan's "Plu-thermal" program.

The British-flagged Pacific Swan left Cherbourg, France on 19 Dec. 2000 with 192 canis-

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ters of HLW. It arrived on 21 Feb. 2001 in Rokkasho Village, Aomori Prefecture, in northern Japan, where a HLW storage facility is located. As soon as the route was made public, Argentina, Brazil, Chile, and Uruguay issued a joint communique which reiterated their concern to France, the UK, and Japan over the shipment. The statement recalled the sovereign right of coastal countries to protect their marine environment under the United Nations Convention on the Law of the Seas, and confirmed the need for international organizations to strengthen the regulations on the safety of radioactive material shipments.

On 10 Jan. 2001, a Federal Court of Appeal in Argentina ruled that the government must take steps to prohibit Pacific Swan from entering "Argentine waters." However, the government allowed the ship to enter its "waters" by arguing that the court's decision did not apply to the country's 200 mile exclusive economic zone (EEZ). On 12 January, upon the Pacific Swan's approach into the vicinity of Chile, the navy began surveillance of the area with military aircraft and warships. During the initial shipment of Japanese HLW in 1995, which also used the Cape Horn route, the Chilean navy had blocked the Pacific Swan from entering the country's EEZ.

Meanwhile, the British-flagged Pacific Pintail and Pacific Teal left Europe on 19 Jan. 2001 to transport 28 assemblies of MOX fuel manufactured by a Belgian company, Belgonucleaire (BN), for Kashiwazaki-Kariwa plant in Niigata Prefecture. Ironically, BNFL's MOX fuel transported for Takahama 4 in the initial shipment in 1999 is now destined to be sent back to the UK due to the quality control data fabrication scandal involving the company. Plans to burn MOX fuel were severely delayed because of this scandal. To date, no Japanese reactors have been loaded with MOX.

In Fukushima Prefecture, while citizens concerned over similar data falsification await the court ruling on the use of BN's MOX fuel manufactured for Fukushima I-3 (see NIT 81 p.3), the Governor has stated his intention to review the prefecture's nuclear power program (see p.11). In Niigata Prefecture, Kashiwazaki City Council adopted a statement on 6 Sep. 2000

calling for full disclosure of the quality control data for BN's MOX fuel currently under transportation. Moves for a referendum on the use of this fuel have been initiated by Kariwa villagers (see p.12).

Prior to the fuel's departure, New Zealand's Foreign Affairs and Trade Minister Phil Goff expressed the country's "very strong concern" at the news of the nuclear shipment. On 21 January, following the announcement of the route, Mr. Goff stated that the country would lodge a formal protest with the three governments. The minister stated that airforce surveillance would be considered should the vessels enter the country's EEZ, and while the country recognizes the navigational rights to enter EEZs under international law, it will continue efforts to prevent entry of such shipments into its EEZ. Local environmentalist stressed the need for specific contingency plans, recalling that during the shipment of MOX fuel in 1999, one of the ships had to approach the Australian coast in order to have a helicopter carry away an injured crew member.

In late 2000, Japan offered an initial grant of US\$10 million to be placed in a "good will" trust fund for the Pacific Island countries. The principle of the fund is to be available to cover the costs of the initial response to incidents during nuclear shipments through the South Pacific. Some argue that such a fund actually allows the nuclear industry to avoid any liability. In any case, no fund could adequately cover the perceived damage to marine products and tourism in the event of an accident, even if it does not involve radiation release.

The shortest Panama route was initially the preferred option, but since the Panamanian government took control of the canal in December 1999, it has become difficult to obtain permission. In addition, Caribbean countries have been very vocal in their opposition to nuclear shipments via this route. In fact, information from Japanese companies suggested that initially they were considering the Panama route for the most recent HLW transportation. Local and international pressure will continue to be the key fact in efforts to put an end to international maritime transportation of Japanese nuclear materials. By Gaia Hoerner

Latest Developments in Aomori Prefecture

Rokkasho Reprocessing Plant: Cooling Circulation Pumps Fail at Nuclear Fuel Storage Pool

On 19 Nov. 2000, all cooling circulation pumps temporarily failed at the spent fuel storage pool of the Japan Nuclear Fuel Ltd. (JNFL) owned Rokkasho Reprocessing Plant currently under construction in Rokkasho Village, Aomori Prefecture. Two of the three pumps that circulate water into the heat exchanger which cools the pool water simultaneously stopped functioning (A and C pump). Because the third pump (B pump) was under periodic inspection, it was also not functioning and thus all three pumps malfunctioned. C pump began operating 9 minutes later, A pump 24 minutes later, and the incident was reported three hours later to the former Science and Technology Agency (STA), now incorporated into the Ministry of Education, Culture, Sports, Science, and Technology (MEXT, see p.9). However, the incident was not reported to local residents until the following day due to instructions from the STA. Adhering to its usual practice of hiding incidents, JNFL explained that the report was delayed since the company judged the incident to be even less significant than ones termed as "slight incidents" which are required to be made public.

The facility is equipped with three cooling circulation pumps and three heat exchangers and normally operates by alternately using two systems. When switching to an alternative heat exchanger, it is necessary to adjust the pressure at a valve. The pumps failed to operate because an operator had forgotten to close the valve. The safety review standards of the facility only assume an incident where both systems in operation would simultaneously and completely malfunction for 30 minutes. It was pure coincidence that the pumps began operating again within 30 minutes. If the cooling sys-

tems failed to function for more than 30 minutes, it is certain that the safety of the facility would be put into risk due to a rise in the temperature of the pool water from the decay heat of the spent fuel. This incident makes it clear that there is a serious fault in the storage pool cooling function, as well as in the operating manual. However, the STA would not admit the deficiency in its own safety review system and acted in defense of JNFL by stating that the storage pool can amply be cooled by a single system.

This incident also revealed that safety countermeasures have not been prepared for the facility in case of a long-term cooling malfunction. At the time of the incident, there were still only 32 tons of spent fuel in the storage pool. However, there will be about 1,600 tons stored in the pool by the time of the plant's planned completion in July, 2005. It is planned that about 2,600 tons of spent fuel will be stored at any time once the facility begins operation.

Spent Fuel Shipment Begins to Defective Rokkasho Storage Pool

Full-scale transportation of spent fuel to Rokkasho Reprocessing Plant from nuclear plants across Japan began on 20 Dec. 2000. Because most of the contracted amount of spent fuel for overseas reprocessing has been shipped to Europe, some of the Japanese nuclear plants are reaching the limits of their storage capacity. The transportation of spent fuel was temporarily on hold following the criticality accident at Tokai-mura in 1999. The transportation of spent fuel from nuclear plants to the reprocessing plant's spent fuel storage pool (3,000 tons) will all be carried out by the nuclear transport vessel Rokueimaru (4,913 tons) via sea. Rokueimaru is owned by Japan Nuclear Transportation Company, Ltd. (JNT), a subsidiary of JNFL.

On 20 Dec. 2000, 11 tons of spent fuel from Tokai II, and 13 tons from Fukushima II was shipped to Rokkasho. The plan seems to be to transport spent fuel from about one or two sites every four weeks. JNFL plans to receive 37 tons by March 2001, and additional consignments of 350 tons by March 2002, 400 tons by March 2003, 400 tons by March 2004, 500 tons by March 2005, and 800 tons by 2006. After that it plans to store a total of about 2600 tons of spent fuel at the facility. (Low-level waste is also being transported to Rokkasho by Seieimaru (4,053 tons) about every four weeks.)

Due to the 1999 British Nuclear Fuels plc (BNFL)'s mixed uranium-plutonium oxide (MOX) fuel data fabrication scandal, no nuclear plant in Japan has yet been loaded with MOX. The delay in initiating the plutonium fuel program has produced many negative opinions over the necessity of the Rokkasho Reprocessing Plant, as a large amount of the Japanese plutonium extracted in Europe is still unused. The transportation of spent fuel to Rokkasho Reprocessing Plant under such conditions is merely a temporary solution for the problem of waste management. Local residents are skeptical whether the facility will really be operated, and are worried that Rokkasho will become a semi-permanent storage site for spent fuel.

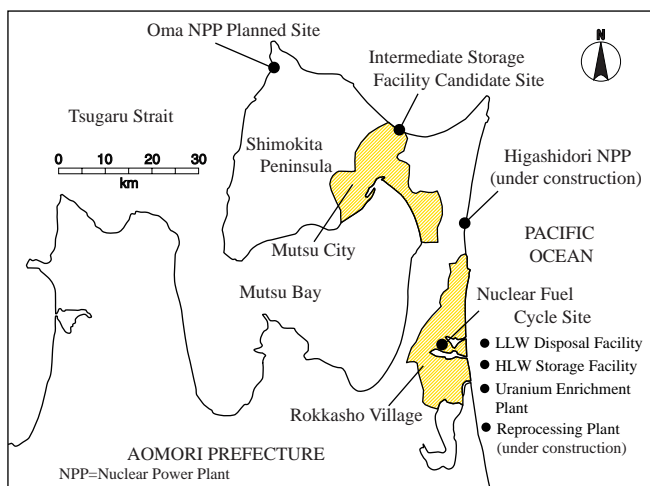
Plans for Construction of Spent Fuel Storage Facility

The most serious dilemma facing the electric companies concerns the mounting quantities of spent fuel. This problem cannot be solved merely by shipping some of it to the Rokkasho Reprocessing Plant. As a result, in 1998 the Law for the Enforcement of the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors was amended to allow storage of spent fuel outside nuclear plant sites, specifically at intermediate storage facilities. Electric companies are actively seeking "nuclear dump sites" even outside areas where they supply electricity. There are 17 candidate sites across the country at the moment. The Federation of Electric Power Companies (FEPCO) has published its plan to construct storage facilities in two or three sites across Japan by 2010.

In Jan. 2001, Tokyo Electric Power Company (TEPCO) began a "siting feasibility survey" for a spent fuel storage facility at Mutsu City in Aomori Prefecture, near Rokkasho Village. The survey was initiated following propositions made by the Mutsu City Council and the city mayor in an effort to secure the development of the facility in their district. Such propositions were made with a view to the enormous subsidies to be provided in exchange for spent fuel storage.

Mutsu City, once the center of development as a nuclear vessel port, is in a terrible financial situation. Except for the military base of the Maritime Self Defense Force, there is virtually no industrial activity there, and it is projected that the city will have a cumulative deficit of about 1.7 billion yen by the end of fiscal year 2004. When preliminary investigation and construction of the storage facility is carried out, the city will receive about 2.1 billion yen from the central government. In addition, the facility operator will be paying a substantial fixed property tax to the city. The mayor has boasted that it is natural to try to attract "nuclear waste" which has big money attached to it. TEPCO will take about a year to study the geological features of the port area, which was designed for a former nuclear-powered vessel, "Mutsu," now turned into an ordinary vessel. TEPCO maintains that there is a possibility of utilizing this facility in tandem with other electric companies, implying the possibility of the construction of a large-scale storage facility.

Rokkasho and Mutsu City are both located on Shimokita Peninsula in Aomori (see map). This peninsula, located at the northern tip of the main island, Honshu, is already burdened with four nuclear facilities—a low-level radioactive waste disposal facility, a high-level radioactive waste storage facility, a uranium enrichment plant, and a reprocessing plant (under construction)—in addition to the possible MOX fabrication plant and plans to invite the development of the International Thermonuclear Experimental Reactor to the region (see pp.7-8). The concentration of nuclear waste in Shimokita Peninsula has become increasingly serious and is posing great difficulties for people who are against turning the area into a dumping ground



for nuclear waste.

In sync with its selection of candidate sites, the Nuclear Safety Commission (NSC) has begun to create safety review standards for spent fuel storage facilities. They are trying to create a standard hastily, before an application is submitted for siting such a facility. It is envisaged that it will take about a year to create the standards, but they will be prepared only for dry metal cask storage. Standards will not be based on constructive studies of, for example, the comparison of various wet and dry storage methods, or on analysis of problems with various storage methods so as to ensure the highest safety measures. Rather, NSC is simply creating standards for dry metal cask storage because the electric companies plan to construct that type of storage facility. The NSC seems to be content with creating standards applicable only to the form of storage preferred by the electric companies.

BNFL, COGEMA Fail to Conduct Transport Cask Inspection; MOT and STA Conceal the Incident

Inside information has led once again to a revelation of a scandal involving BNFL and the French company COGEMA. It was revealed in Dec. 2000 that casks used for the transportation of Japanese spent fuel to Britain and France were not properly inspected. It is stipulated by Japanese law that spent fuel transport casks used in the course of commissioned overseas reprocessing must be inspected at least once a year at the place where they are stored. The seals and surfaces of the casks are checked during this inspection. BNFL and

COGEMA were in charge of overseas inspections. At the time, transport casks were regulated by the former Ministry of Transport (MOT) when transportation was by sea alone, and by the former STA when transportation was by sea and land. Currently, the Ministry of Land, Infrastructure and Transport (sea) and the MEXT (sea and land) are in charge of transport cask inspection. However, both companies failed to carry out the required inspections for 26 of the casks stored at their plants, and it was found through investigations by the controlling agencies that some casks had gone without inspection for over a year.

All the utilities which owned the casks knew of this violation but concealed the fact. In Feb. 2000, electric companies were instructed by the then MOT to submit applications to cancel the permissions for using the casks. The utilities submitted such applications in March 2000, and the permissions were revoked. COGEMA explained that inspections were delayed due to an accident at its facility used for inspections. BNFL explained that the delay was caused due to preparations for fuel transportation at such facility.

However, this is not the end to this incident. Officials of Japanese electric companies, who were aware of the inspection breaches, and officials of the former MOT and STA, which had confirmed the violations, had met a couple of times to discuss how to handle the situation. As a result of these discussions they concealed this scandal, reasoning that "the casks weren't in use during the period of the overdue inspection." There was actually a different reason for not making this incident public. When the controlling agencies became aware of this incident, the nuclear industry was in the middle of the BNFL MOX fuel data falsification scandal. Thus the agencies and utilities decided it was best not to make the incident public. There is a possibility that the casks which had their permission revoked may be re-used if the utilities decide to put in applications for permission to use them. The casks could then be used to transport MOX fuel from Europe to Japan. Citizens must keep a watchful eye on the controlling agencies' safety confirmation of transport casks. By Masako Sawai

In Memory of Jinzaburo Takagi

The public memorial to bid farewell to Jinzaburo Takagi, co-founder and former Director of Citizens Nuclear Information Center (CNIC), was held on 10 December, 2000 at the historic Hibiya Public Hall located on the edge of Hibiya Park in downtown Tokyo. The building overflowed with some 2,500 or more people from all walks of life, who had traveled from across Japan as well as from countries in Asia, Europe and North America (see photo). Everyone knew for whom we mourned and why we might feel deep sadness and grief. But it was not a sad occasion and in listening to his colleagues, friends, admirers and fellow activists we could all agree that it was not a cold winter day. It was a day of memory, renewed commitment, and community.

The extraordinary life of Japan's greatest citizen scientist was traced with a mixture of deep admiration, humor, wonderful tales and moving private memories provided by speakers who spoke in many voices from many perspectives. Takagi-san was an unimaginably prolific writer, a superb scientist, a public speaker, social activist and dedicated teacher. He was the author of children's books and also an unremitting critic of the nuclear establishment. He was a deeply cultured man who also knew how to inspire and challenge people. Those of us who have used the facilities of CNIC knew that he could also manage an efficient organization. The many speakers—colleagues and fellow activists, lawyers, professors, editors, a former teacher and others including guests from France, the United Kingdom and Korea—reminded us all once again, often in quite personal terms, of his remarkable life.

Interspersed with the individual accounts was a program of song, classical music, readings from some of Takagi-san's works and a video that traced parts of his professional life. Ordinary people performed and sang in memory of a man who had no pretense, no false airs. One delightful minstrel



composed a song for the occasion reminding us of how wonderful it was to share a cup of coffee with Takagi-san after some hard work had been done or to receive that generous and warm smile that we all were inspired to work very hard to earn.

Takagi-san would have been severely critical had we been mawkish, sad and nostalgic. For over three decades he conducted a broad range of research projects and wrote close to 60 books and countless articles and reports on nuclear and environmental issues, human rights, and on how the world might achieve international peace without nuclear weapons. The agenda he addressed was enormous, the challenge extraordinary. Fittingly, the theme of the memorial was how to achieve a peaceful and sustainable future. Lots of ideas were proposed. The listener could make the connections among nuclear developments in Japan, Korea, North America and Europe. While the future remains demanding, the directors of CNIC spoke encouraging words and assured that their commitment and determination will not diminish. The unique educational activities of the Takagi School for Alternative Scientists, launched by Takagi-san with funds he received from the Right Livelihood Award, will facilitate communication between scientists and the citizen in unprecedented ways.

The memorial was an afternoon of affection and admiration in honor and praise of a remarkable and distinguished citizen-scientist who will be greatly missed, both in Japan and abroad.

By Michael Donnelly

Nuclear Fusion and the Current ITER Situation in Japan

Nuclear fusion has been called the ultimate energy source, yet after all this time the dream has not materialized. Since late last year, without sufficient discussion with citizens, the Japanese government has energized its efforts to build the International Thermonuclear Experimental Reactor (ITER) that researchers claim will contribute to achieving fusion power. This article will discuss the problems of nuclear fusion and the ITER, and report on what the government and citizens are doing.

1. What's Wrong with Nuclear Fusion?

Nuclear fusion research began in the 1950s under the pretense of enabling the world to make peaceful use of technology used for hydrogen bomb. Since then, Japan too has invested enormous resources and time in the fusion project, but the goal is still out of reach. Why hasn't nuclear fusion become a reality? The reason is clear when the principle of fusion reactors is examined.

Fusion reactors use the energy given off when atoms of low-mass elements like hydrogen are forced to collide with one another. A special, complex method has been conceived to obtain fusion reactions that are large enough to make electricity generation possible. To begin with, a small amount of hydrogen gas is sealed within a vacuum container and a large electric current is applied to strip the electrons from the atomic nuclei, thereby creating a plasma. As the nuclei and electrons flit about at high speeds and the nuclei collide with each other, neutrons and energy are released. This energy is extracted as heat and used to move turbines, which in turn generate electricity. The high-temperature plasma must be enclosed and controlled by magnetic lines of force to keep it from making contact with the vacuum container. And because nuclear fusion reactions do not readily arise, researchers are thinking of somehow sustaining an adequate fusion reac-

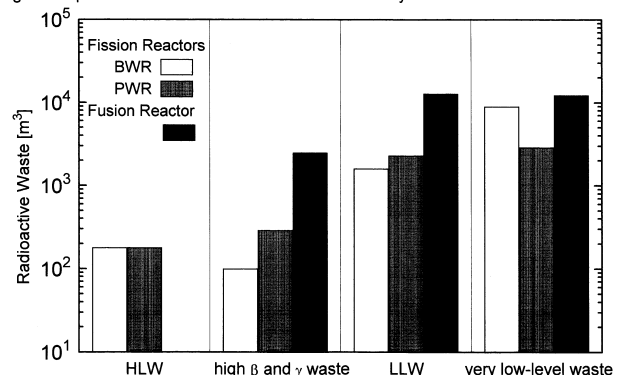
tion by using external energy inputs such as beams and high frequency, just as if one might heat something using hot water and a microwave oven.

Proponents claim that fusion is safe. But this statement should be qualified: fusion is safe in comparison with conventional fission power. As explained above, fusion is a highly unstable energy source that can be maintained only by adding external energy, so it is safer only in the sense that a runaway reaction is less likely. But ironically, that instability of fusion reactions is the reason that fusion power is so difficult to achieve.

Advocates of fusion also say that fusion power is unlimited because its source can be obtained from sea water. Indeed, deuterium is contained in sea water, making the source of energy unlimited. But assuming a fusion reactor will run on the most likely deuterium-tritium reaction, tritium will have to be made from lithium or other elements. And the fact that tritium is radioactive gives the lie to the frequent claim that nuclear fusion is clean energy.

What is more, the huge numbers of neutrons emitted by fusion reactions activate the surrounding devices. Fig. 1 compares the amounts of radioactive wastes generated by fission and fusion reactors. Calculations were made on the assumptions that all three types have 1000 MW class capacity. For the calculation of a fusion reactor, the envisaged commercial reactor model was used and only wastes from the reactor were taken into account. Although by nature fusion does not generate high-level

Fig.1 Comparison of Radioactive Wastes Generated by Fission and Fusion Reactors



Source : The Subcommittee of The Fusion Council for Fusion Development Strategy

radioactive wastes, it does produce larger amounts of high-beta, high-gamma and low-level radioactive wastes than nuclear fission.

2. Problems with ITER

As it became clear that massive equipment was required to realize controlled nuclear fusion, Japan, the United States, Europe and the Soviet Union abandoned their competitive efforts and started the joint ITER Project in 1988, hoping to reduce financial and logistical burden on each country. (The U.S. left in 1998.) In the original plan, the estimated construction cost was about a trillion yen. Yet, as such cost was too high to allow the project to proceed, the current plan has a budget that is half the cost of the original estimate.

The ITER is only an experimental equipment in which burning plasma reaction occurs. (This is the state in which the amount of energy output is larger than that of input, and enough heat can be generated.) Burning plasma is different from the plasma that has been researched for nearly fifty years, and therefore no one can guarantee that such experiments can be put to practical use. According to the Atomic Energy Commission (AEC) s Special Committee on ITER Project, as a condition for hosting the ITER, residents must understand that 1~2 kg of tritium will be used each year, and that about 39 thousand tons of low-level radioactive waste from the operation and decommissioning of the ITER will be processed and disposed of in their locality. Furthermore, about 500MW half the capacity of a standard NPP is required to start-up the ITER. So much is required just for an experimental reactor. It is expected that the operation of the ITER will start from 2010, which is quite a long way from now, and yet the development of both the prototype reactor for proving generation capacity and the demonstration reactor for proving economical efficiency must be accomplished before nuclear fusion reactors reach commercial operation.

3. The Government, Citizens and the ITER

The Japanese government has taken a number of actions on this project without properly informing citizens. In Dec. 2000, AEC s Special Committee on ITER Project agreed to promote the siting of

ITER in Japan. The site candidates are Naka Town, Ibaraki Pref., Rokkasho Village, Aomori Pref., and Tomakomai City,



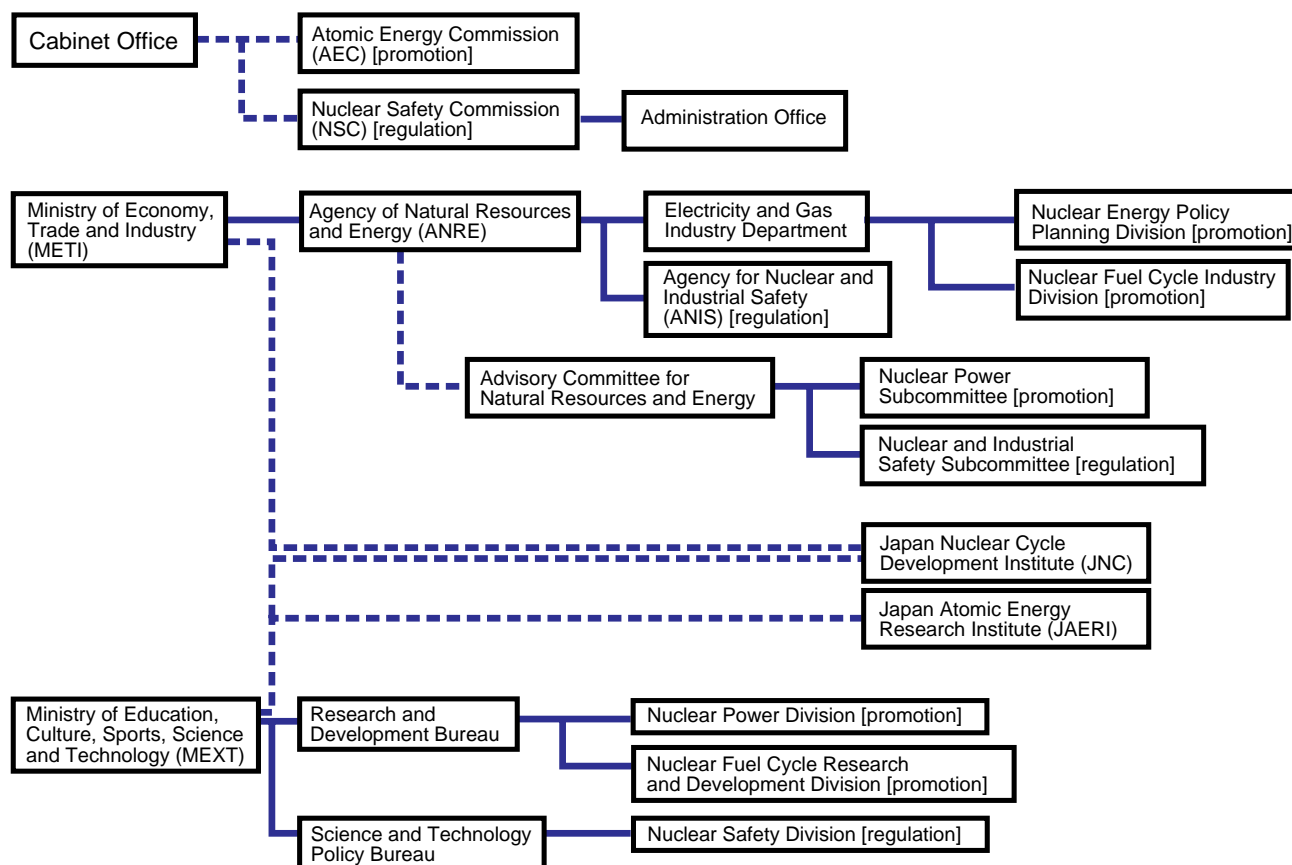
Hokkaido Prefecture. Naka Town is the location of the Japan Atomic Energy Research Institute, which has been researching nuclear fusion. ITER is a new enterprise target for Rokkasho and Tomakomai, where efforts to lure large industrial development projects have continually failed.

Researchers and the government say that the project is for the future of Japan. However, it seems that researchers are never aware of citizens, and the government is merely pursuing large-scale development projects under the excuse of solving energy problems. Behind these efforts to develop the ITER in Japan, one can discern the complicated interplay of self-interest, curiosity and the desire for fame.

On the other hand, local groups are actively working to oppose the siting of the ITER in their towns. This January, a meeting was held at Tomakomai, Hokkaido, and CNIC s Co-director Baku Nishio spoke in front of 500 people (see photo). Local people have become increasingly concerned, as the risks involved in nuclear fusion have never been clearly explained to them. Academics have voiced many criticisms of the ITER project, and even some nuclear fusion researchers have expressed fears that investing this much in the ITER may prevent the flow of funds to other researches.

We need to stop the research on nuclear fusion as a future electricity resource. What we really should do is change our lifestyle of mass-consumption. Nuclear fusion is the same as nuclear power in that it masks the need to reconsider Japan s excessive energy consumption. As the ITER is an international project, successful local opposition would have a much greater effect than if the research project was limited to a single country. Citizens voices are the most important force to steer the nation away from the irrational development of nuclear fusion. By Tadahiro Katsuta

Data: Central Ministries Reform



The reform of central ministries has created a new structure for nuclear policy, starting from January 2001. The Ministry of International Trade and Industry (MITI) was renamed Ministry of Economy, Trade and Industry (METI). The Science and Technology Agency (STA) was combined with the Ministry of Education and reorganized as the Ministry of Education, Culture, Sports, Science and Technology (MEXT). According to the government's explanation, the METI deals with nuclear policy in terms of energy policy, and the MEXT deals with nuclear policy in terms of science and technology. However, the boundary is not clear. Before the reform, practical use of nuclear energy was under the control of MITI, and research and development of it was under the control of the STA. It seems that in the new structure the METI controls the development and practical use of nuclear energy, and the MEXT controls the research of it, thus at the least it is clear that the METI plays a stronger role.

The Agency for Nuclear and Industrial Safety (ANIS) was newly set up under the Agency of Natural Resources and Energy (ANRE), and will be in charge of nuclear regulation within the METI. At the time of the MITI, nuclear regulation was not separated from nuclear promoters within the ANRE. The Atomic

Energy Bureau and the Nuclear Safety Bureau of the STA has disappeared, and there is no bureau in the MEXT which has the word 'nuclear' in its name.

The Atomic Energy Commission (AEC) and the Nuclear Safety Commission (NSC) were moved to the Cabinet Office. These commissions hold the right of decision with regard to nuclear energy, and the Prime Minister is obliged to respect their decisions. The NSC set up an administration office for the first time, while the AEC has no such office. The Director General of the STA used to serve concurrently as the AEC's chairperson before the reform, but the chairperson will now be chosen from among members of the commission in the new structure. The commission is now more strongly independent.

The Petroleum Council and the Electric Utility Industry Council have been abolished and reorganized as subcommittees under the Advisory Committee for Natural Resources and Energy, which is a consultancy body for the Minister of METI. The Electric Power Development Coordination Council, which used to authorize construction of power plants, was reduced to a subcommittee. The Japan Nuclear Cycle Development Institute (JNC) is now under the control of both the METI and MEXT, but the METI has a stronger influence on it.

By Baku Nishio

Anti Nuke Who's Who

Sakae Sugiyama

An Activist with a Green Future in Mind

By Kiyono Takama

Sakae Sugiyama is the Chairperson of the Hokkaido Green Fund, a non-profit organisation set up in July 1999 for the purpose of establishing a citizens electrical power plant.

She was born in Tokyo, but moved to Sapporo City, Hokkaido, when her husband was transferred there in 1981. There she joined an egg purchasers cooperative. This in turn spawned the Hokkaido Seikatsu (Livelihood) Club Cooperative, of which she became a director. In 1986 she became the second Chairperson of the Club and continued in that role for 12 years.

During the year in which she became Chairperson, the Chernobyl disaster occurred. Fearing radioactive contamination of food, some co-op members began a campaign calling for Japan's withdrawal from nuclear energy and she became a part of that campaign.

Unfortunately, they were unable to get past the brick wall of the government's pro-nuclear energy policy. When asked, 'If we give up nuclear energy, how do you propose that we make up the difference?', she was frustrated by her inability to offer a clear alternative. Ms. Sugiyama reflects that even when they appealed for energy conservation measures, they failed to have much impact on public opinion.

At this time, she became aware of the American green electricity fee system. She was attracted to this system, in which citizens put solar panels on their roofs, and donated \$4 a month as a green electricity fee. Californian electricity companies had introduced this system so that they would be able to rebuild their operations in the event that nuclear power was discontinued.

Members of the Livelihood Club had supported the campaign to withdraw from nuclear energy and now they wondered if somehow they couldn't introduce a Japanese version of the green



electricity fee. Together they studied and debated the issues.

Out of this emerged a new anti-nuclear energy campaign. People who agreed with the idea paid an extra 5% on top of their electricity bill into a fund, the purpose of which was to build a citizens cooperative green energy power station. Five percent of their electricity bill represented on average about 400 yen per household per month, an amount which could easily be covered by conserving electricity. The campaign was able to kill two birds with one stone: it promoted energy conservation and it funded green energy alternatives.

A year and a half after the campaign started, there are already more than 1,000 members, and last Spring they began construction of the much-awaited citizens wind power station. The members' 5% contribution alone wasn't sufficient to cover the construction costs, but when they put out a call for investors, many people came forward. As Ms. Sugiyama cheerfully says, ordinary citizens are realising their dream of a withdrawal from nuclear energy through their own efforts.

NEWS WATCH

Waning Enthusiasm for Nuclear Power R&D

On 20 Dec. 2000, Japan Atomic Industrial Forum, Inc. (JAIF) published the FY1999 survey results for the nuclear industry. Sales increased to ¥1.68 trillion, the first increase in four years, but the figure is lower than two years before. JAIF observes that the outlook is not clear.

Research and development (R&D) expenditure by private enterprises continued to decrease for both the mining/manufacturing sector and electricity utilities: the former decreased by a further 21% from the previous half-year period, which had recorded the lowest figure in the past ten years. The number of researchers decreased by 41% in the past decade. This shows the lowering of enthusiasm among the private sector for nuclear power R&D.

Nuclear Budget Decided

The government budget bill for fiscal 2001 was decided. The nuclear budget consists of ¥314.4 billion for the Ministry of Education, Culture, Science, Sports and Technology (MEXT) and ¥160.4 billion for the Ministry of Economy, Trade and Industry (METI). The METI is to spend ¥107.6 billion of its money (67% of its budget) on siting promotion measures. The budget for the Japan Nuclear Cycle Development Institute (JNC) accounts for ¥134.9 billion (43%) of the budget of the MEXT.

Further Delay Likely for Fukushima MOX Program

On 8 February 2001, TEPCO's vice president announced that the company would freeze all plans to construct additional power plants for 3-5 years, including the construction of nuclear plants (Fukushima I-7 and I-8, and Higashidori 1 and 2). However, the company's president held a sudden press conference the next day and maintained that nuclear plants were exceptions to this new plan.

Following these announcements, Fukushima Governor Eisaku Sato expressed his concerns over the safety of nuclear power and announced that the prefecture's nuclear program will be reviewed over a one-year period. Fukushima has 10 nuclear plants and had plans to be the first to use MOX fuel.

Now that Fukushima may postpone its plans to use MOX fuel, concerns are being raised in Niigata Prefecture, which is to receive the MOX fuel currently under transportation, and is second in line for burning MOX. On 19 February, the director of the Niigata Prefectural Commerce, Industry, and Labor revealed that if Fukushima freezes its MOX plans, Niigata will do the same. Niigata governor has been saying on numerous occasions that he does not want the prefecture to be the first to use MOX.

Ordinances to Refuse Spent Fuel Intermediate Storage

On the islands off the southern part of Kagoshima Prefecture, where some efforts have been made to invite the construction of spent fuel storage facilities, municipal councils, one after another, set up ordinances to ban radioactive substances from their districts. Following such ordinances by Yaku Town and Nishino-omote City in March and July 2000, respectively (see NIT 77 p.11), Naka-Tane Town and Kami-Yaku Town both established similar ordinances on 28 Sep. and 26 Dec. 2000, respectively. The practice seems to be spreading.

Move Toward Restart of Monju

On 8 Dec. 2000, JNC submitted a request to Fukui Prefecture and Tsuruga City for permission to conduct safety inspections on improvement work for the prototype Monju Fast Breeder Reactor, which on that very day five years ago experienced a sodium leak and fire, and has been shut down ever since. Following debates at the prefectural assembly and the city council, and upon getting approval of the prefectural gov-

ernor and the city mayor, the application for safety inspections will be presented to the state government.

On the following day, 9 December, 600 people from both inside and outside the prefecture gathered at the seashore facing Monju and held a rally pledging to prevent Monju's resumption of operation. On 16 Nov. 2000, upon careful examination of inside information that the development of the steam generator's pipe inspection device had run into difficulty, the Fukui Prefectural Citizens Against Nuclear Power Plants and CNIC released the revelations to the mass media. (See news section of our English web-site. <http://www.cnic.or.jp/>)

Radioactive Material Scattered at Train Station

On 20 Dec. 2000, compounds of iodine 125 were scattered around a ticket gate of the Takatsuki Station on Japan Railway (JR) line, in Takatsuki City, Osaka Prefecture. This was done by a staff member of the Central Pharmaceutical Research Institute of the Japan Tobacco Industry (JT). He was arrested on the spot, but was not indicted as he was considered to be non compos mentis at the time of the incident and was taken to a mental hospital.

In spite of the fact that this took place in a busy railway station, JR and the police merely sealed off the site, and left the scattered substances alone and uncovered for five hours until some officers from the Science and Technology Agency came to remove them.

Ikata 2 Lawsuit Ruling

For 22 years, citizens have been opposed to the plans and the subsequent construction of Ikata 2 (PWR, 566 MW) by Shikoku Electric Power Compa-

ny. They filed a lawsuit against the state government to cancel the construction permit. On 15 Dec. 2000, the Matsuyama District Court in Ehime Prefecture handed down its decision on this case, rejecting the plaintiffs' argument. The ruling did, however, clearly recognize that there had been a mistake in the safety inspection which had been the basis of the permit. This is because the plaintiff themselves ordinary area residents questioned and cornered a state witness without the aid of lawyers, and showed that the witness's assumption that earthquakes would not breach the safety of the nuclear plant was mistaken. Nevertheless, the ruling saved the state, arguing that the judgment to give the construction permit based on the safety inspection was appropriate at the time.

Proposal for Plebiscite on MOX Use Vetoed by Kariwa Mayor

On 26 December 2000, the Kariwa Village Council in Niigata Prefecture, where the Tokyo Electric Power Company (TEPCO)'s Kashiwazaki-Kariwa nuclear plant is located, adopted by a vote of 9 to 8 a proposition to hold a plebiscite on whether or not to accept MOX fuel in the Unit 3 reactor (BWRx, 1100 MW). However, the mayor, who won the November 2000 election with support of TEPCO, vetoed the proposal and sent it back to the council. The proposal was then rejected by the council on 5 January 2001. In this re-examination of the proposal, more than a two-thirds majority was required to adopt it. On the same day, however, the council passed a resolution with a majority demanding a plebiscite. The villagers have begun a signature campaign to materialize the plebiscite by the direct claim method. The direct claim method requires signatures of 1/50th of the constituency.

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