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Action on Anti-Nuclear Power Day



Musicians Playing Anti-Nuke Songs in Tokyo

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Nuclear electricity was first generated in Japan twenty-five years ago, on Oct. 26, 1963, by the Japan Power Demonstration Reactor. The following year the government and utility companies declared this day "nuclear power day," and since then have centered their public relations activities around this day. In 1977, people opposing nuclear power renamed it, "anti-nuclear day," and it has also become a focus for anti-nuclear demonstrations.

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Action on Anti-Nuke Day

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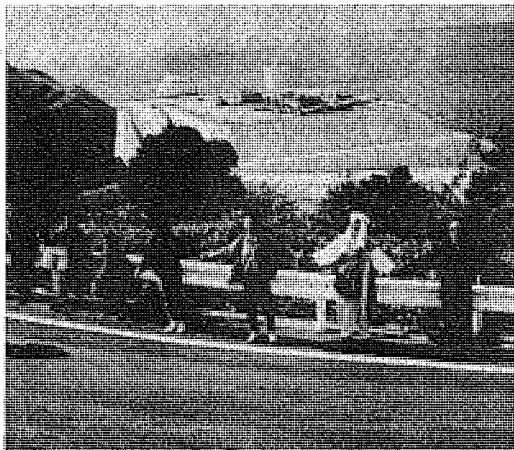


Die-in at Tokai Plant

This year as well, various anti-nuke activities took place throughout Japan on Oct. 26 and on the Sundays before and after it. In Tokyo, there was an outdoor rally on Sunday, Oct. 23, attended by 3,500 people and the enactment of a "Denuclearization Law" was announced.



Children with Anti-Nuke Costumes in Tokyo



Human Chain near Ikata Plant

On Oct. 26, people visited branch offices of the Tokyo Electric Co. in many different communities and demanded a halt to nuclear power development or asked for the answers to the questionnaire they had sent in beforehand. On the same day, in Osaka and some other cities, people formed human chains around the electric companies and their branch offices. At Tokai nuclear power station, people staged a "die-in" in front of the main gate, and in Hiroshima a small group from the electric company's labor union protested with a sit-in.

On Oct. 30, people formed a human chain at Ikata nuclear power station in Shikoku and in Osaka about 2,500 people participated in an anti-nuke rally. □



Scrap Nuclear Fuel Cycle October Action

by Hiroko Chiba

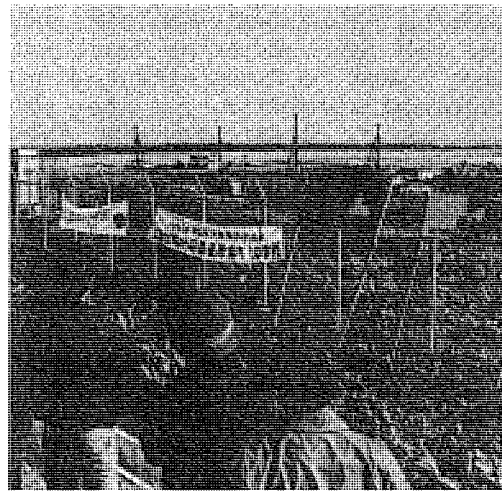
A nationwide rally was held October 8 to 10 to protest against the planned nuclear fuel cycle facility at Rokkasho-mura, Aomori Prefecture. Some 1,300 people gathered, including small children and elderly people, from as far afield as Hokkaido, Tokyo, Osaka, and Kyushu. They all know that if anything happens here, it will not just affect Aomori prefecture but will be a disaster for the entire country.

The planned nuclear fuel cycle facility will include Japan's first commercial uranium enrichment plant, a storage facility for low-level radioactive waste, and a plant for reprocessing spent nuclear fuel. The rally was aimed at cancellation of the uranium enrichment plant, due to start construction at any moment, and the abandonment of the whole plan.

On the first day, a protest meeting was held in a park beside the prefectural government building. After the meeting, everybody went to the government office to talk with the staff and tell them how concerned they were about the plan. A proposition was handed to the governor, Mr. Kitamura. The government building was cordoned off with ropes and guarded by 300 policemen to prevent anyone entering. A crowd of people had gathered outside, but after two hours of talking without any trouble, they started taking the demonstration into the streets. The people watching on the sidewalks encouraged the demonstrators by waving and cheering. In the afternoon, there were lectures, followed by a discussion.

On the second day, a meeting was held at the actual site,

Rokkasho-mura, Kohata. The beautiful green field was decorated with colorful banners, some carrying wishes for a great catch of fish and others with anti-nuke slogans. It was a real festival, with shops selling local products and a rock concert, not to forget the anti-fuel cycle appeals from Dr. Takagi and other local protestors. Afterwards, all the participants went on a 6 km march through the village.



Protestors Watch U-Enrichment Plant Site

The third day was spent distributing anti-fuel cycle plan leaflets to every household in the village.

However, in spite of mounting opposition from people all over Japan and the local residents, construction of the enrichment plant was given the go-ahead on October 14th. The nuclear fuel cycle plan is pushing relentlessly forward. □

Difficulties Mount After 25 Years of Nuclear Power Generation

On October 26, 1963, the first power reactor in Japan (JPDR at Tokai) went critical and started to generate electric power. This year, the Japanese nuclear industry enthusiastically celebrated its 25th anniversary with an "nuclear power day," in the face of a surging anti-uke movement, claiming that its 25-year history has proved the safety of Japanese nuclear power plants.

But on the very next day the worrying announcement came that the Ohi unit one reactor in Fukui had shut down automatically after releasing radioactive gas into the air due to steam generator tube damage. Although, according to the Kansai Electric Power Company, the amount of radioactivity released was small, it came as a shock to the company because the plant had been operating for only three months since its last inspection.

This event is just one indication of the present state of Japanese nuclear power plants. Indeed we now hear reports of accidents almost every week. Damage and defects in various reactor parts are also being discovered in every periodic inspection.

We have already pointed out (NIT, No.3 Jan/Feb 1988) that the cost-cutting trend in the nuclear industry poses serious safety problems. This trend continues unabated. During the periodic inspection of Tokai 2 in August, it was found that a bolt and a washer fixing the fuel assembly to its case (channel box) were missing. The bolt was recovered later but the washer was never found. What is controversial is that the Nuclear Safety Commission has given the

company (JAPCO) permission to restart operation without any further enquiry, even though the detached metal piece is still in the core. It is evident that the company wanted to restart the plant as early as possible in order to achieve high availability and that the Commission also gave preference to economic efficiency over safety.

AGING OF REACTORS

The frequent troubles of nuclear power plants seem to be partly attributable to the aging of reactors. The older reactors have now been operating for more than 15 years and there is now considerable damage apparently due to aging and wear of parts, especially in PWRs. Table 2 lists the damaged and defective PWR parts discovered in recent inspections. Although it is difficult to make a statistical survey, it can be said that the older PWRs are in general being operated with more defects and their safety basis is quite weak. Another hot issue in Japan at the moment is the radiation embrittlement of reactor pressure vessels. Recent results of surveillance tests suggest that the possibility of brittle fracture of reactor vessels cannot be ruled out in some older PWRs.

BWRs are no exception. A typical example is Hamaoka 1, which has an operating history of 13 years. On Feb. 1 this year the plant had to be shut down because both recirculation pumps failed to work simultaneously due to a power failure (NIT, No.4). The power failure was caused by wear in an electromagnetic relay in the power

line. The wear proceeded unexpectedly rapidly while the operating company (Chubu Electric Power Company) had previously guaranteed the relay a life of more than 20 years.

Another incident also considered to be related to aging was reported at the same plant on Sept. 17. This time during the periodic inspection, a hair crack was observed in one of the incore neutron monitor housings which penetrate the reactor pressure vessel at the base. The crack developed just at the point where the neutron monitor penetrates the vessel. A small amount of radioactive primary coolant water had leaked through the crack. Although the amount itself was not significant, the implication of this leak is grave because it is the first time in the 25 year

history of Japanese power generation that a leak has occurred directly from the reactor vessel to the outside. The same problem may occur with other housings or other reactors.

The crack will be repaired from outside the reactor base under a high radiation background. It will be a very hard job since many tubes including control rods and neutron monitors penetrate the reactor base and there is little space to work in. Some experts expect it to be several months or more before the plant can be restarted.

Thus, contrary to the assertions of the nuclear industry that its 25 year history has proved the reliability of Japan's reactors, the industry now faces mounting difficulties.

Jinzaburo Takagi

Damage to PWR parts found in recent inspection

plant	years of operation	SG tube ⁽¹⁾	plugged ⁽²⁾ SG tube(%)	prim. pump ⁽³⁾ bolt	control ⁽⁴⁾ rod	neutron ⁽⁵⁾ detector
Mihama 1	17	✓	24.6			
2	16	✓	6.0		✓	
Takahama 1	14	✓	5.4	✓	✓	✓
Genkai 1	13	✓	13.2			
Takahama 2	12	✓	16.2	✓	✓	
Mihama 3	12	✓	1.6	✓		✓
Ikata 1	11	✓	2.8		✓	
Ohi 1	9	✓	14.1	✓	✓	✓
2	8	✓	0.9	✓		
Genkai 2	7		0	✓		
Ikata 2	6		0	✓		
Sendai 1	4		0	✓		
Takahama 3	3		0			
4	3		0			
Sendai 2	2		0			
Tsuruga 2	1		0			

Note: (1) cracks and thinning of steam generator tubes

(2) most of the damaged tubes are plugged and not used, while some are repaired for use

(3) damage to primary coolant pump blade bolts

(4) expansion and cracks in control rod clads

(5) thinning and expansion of neutron detector guide tubes

Opposition Mounts in Hokkaido

The Hokkaido Electric Power Company, Inc. fueled reactor unit #1 (PWR, 579 MW) of the Tomari Nuclear Power Plant on October 17 against the wishes of the people. Prior to this, on October 3, the signatures of 1,020,000 people (over 12 times the number required by law) demanding a "Hokkaido Citizens' Referendum," in which the citizens of Hokkaido themselves would determine whether or not to operate the reactor, had been delivered to the Election Administration Committee. In this and other ways, the citizens have raised their voices in forceful opposition to the test operation, but Hokkaido Electric has ignored those voices.

Citizens' groups and labor unions protested the fuel charge at the Tomari plant and in front of Hokkaido Electric's main office. On the Sunday coming a week later protesters held a 1,000-person gathering in Sapporo, the capital city of Hokkaido. On the following day in Kyowa-machi, the neighboring area downwind of the nuclear power plant, residents held their first gathering with 200 people. Half of the participants were farmers, and there were many women as well. The people living in the three areas of Tomari Village, and the neighboring Kyowa-machi and Iwanai-machi are at last able to express their own true feelings to the rest of the world. It would seem this is because they have found support in the intensifying national-scale anti-nuclear power movement, and are thus able to feel sure that "we ourselves have the strength to shut down the Tomari nuke plant."

Here too in Iwanai-machi, where

I live, we now see many more anti-nuclear power signs going up than before, and about 650 local residents turned out for a public lecture by a well known anti-nuke author. Preparations for this lecture were made by mothers with children in elementary and junior high school, and it was the first time that so many residents gathered even though we had only a net total of about 10 days for preparation. A friend of mine who has taken part in the anti-nuclear power movement for some time told me, "Before we were the minority, but now we're the majority."

Although it looks as if the procedures leading to actual operation are going according to schedule, we have not yet lost. As a matter of fact, we think it is possible to realize a dramatic victory and stop everything just before the reactor is to begin operating. If this happens, it might become the force to stand Japan's entire nuclear power promotion movement on its head.

We have heard that, also on October 17, Mexico's Laguna Verde-1 reactor (BWR, 675 MW) was fuelled, and that the farmers continue their protests. I would like to see everyone in the world combine forces to prevent the start up of any new nuclear plants, and to make this the first step to denuclearization. (Hideyuki Sato, Iwanai Group for the Study of Nuclear Power Issues) □



Plutonium Shipping

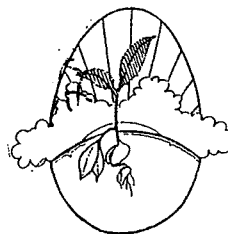
The new Japan-US Atomic Power Treaty was approved by the Japanese Diet in May and went into effect on July 17, 1988. Immediately afterwards, on July 19-20, negotiations were held in Washington DC. to revise the Treaty and allow the transfer of plutonium by sea. The Japanese negotiating team included officials from the Ministry of Foreign Affairs, the Science & Technology Agency (STA), and the Ministry of Transportation, while the American team was made up of officials from the Dept. of State, Dept. of Energy, Dept. of Defense, and Arms Control and Disarmament Agency. Subsequently two more meetings were held, on August 10 to 12 and on Sept. 6 to 9.

Characteristically, the Japanese officials are shifting their stance. The Atomic Power section of the Ministry of Foreign Affairs now says that Japan has always favored shipping over airlifting, and that the air-lifting idea was only brought up to satisfy American government demands. They say one of their concerns over the air-lift is the considerable period of time needed to develop containers that meet NRC regulations. They also stress the need to secure 40 tons of plutonium to fuel the FBR and ATR scheduled to start operation in the 1990s. Plutonium produced at the Tokai reprocessing facility will not meet their needs and will have to be supplemented by plutonium from Great Britain and France. While negotiating for the "Treaty," however, the STA officials had claimed that the principle method of plutonium transport would be air-lifting and that they expected to develop the containers quite soon. They had also said that the FBR and ATR could not be expected to start operation

within the 1990s.

On October 13, the US Congress summarily approved the addition of the new clause, enabling the shipping of plutonium to Japan. The Japanese government claimed that this was only a change in the annex of the "New Treaty" and that it didn't require consultation with the Diet, so the Cabinet approved it at the end of October.

The planned plutonium shipments face a number of difficulties, one of which is the question of how to escort and guard the shipments. When plutonium was shipped from France in 1984, it was escorted by French and American military ships all the way to Japan and the Japanese government simply payed the expense. This time the Japanese authorities plan to send converted patrol boats belonging to the Maritime Safety Agency to escort the shipment. Agency officials, however, say they have received no official request to do so. The Agency does not possess a vessel capable of escorting a shipment all the way from Europe to Japan without calling at a port, neither does it have any plans to build such a ship. In fact, the Agency's patrol boats have never been outside of Japanese territorial waters. A plutonium shipment would face much rougher seas than that. People here will be fighting against both shipping and air-lifting. □



ANTI-NUKE GROUPS

ACTIVE AROUND JAPAN

Women's Group to Stop Nuclear Power at Any Cost

There is an interesting story, about our name. It was about ten years ago. A journalist from one of the major newspapers phoned us and asked for an interview, but he was shocked when he found out what our group was called. "What?" he said, "You are trying to stop nuclear power at any cost? That's crazy. It's not scientific or logical!" and he decided not to write a story about us. It's been 10 years since then and we still think nuclear power should be stopped at any cost.

The reason we formed a group for women only was we felt we couldn't speak up at the anti-nuke meetings and lectures, which were dominated mostly by male activists. That was usually the case ten years ago. Men were scientific, logical, objective, and specific, whereas we women were subjective, sensitive, emotional, and sometimes not very logical. These characteristics women have were always considered bad or worthless in a male-oriented society like Japan. We also felt uneasy in front of men and had a hard time expressing our own views on the nuclear power issue. Women who were feeling like this got together and that was how our group was formed.

As we learned more about the nuclear power issue, we realized that nuclear power was the product of a male-oriented society, which is dependent on oil, worships science, and has made productivity its first priority rather than our lives. In other words, "nuclear power society" seemed to us the ultimate goal of a male-oriented society. We also realized women help to support this

society, so we tried to raise our consciousness and see women's characteristics in a positive rather than a negative light. Then we started to create a culture and movement of our own.



Members Stage Die-in on the Street

We also learned, through campaigning against nuclear power, that there is so much injustice in our society: the autocracy of the government, which makes decisions without consulting the people, the government bureaucracy the discriminatory social structure, and the tightly controlled food production and distribution system, for instance. We now see the anti-nuclear power movement as a means of not only abolishing nuclear power but also reevaluating all aspects of our way of life, including relations between women and men. So the anti-nuclear power movement really is a "revolution" to change our whole lives!

□



Construction of Commercial Uranium Enrichment Plant Started

Construction of the commercial uranium enrichment plant, the first facility of the planned nuclear fuel cycle complex in Rokkasho-mura, Aomori Prefecture, started on Oct. 14. Construction work was carried out amid protests by opposing residents, who were taken by surprise by the sudden start.

Utility Companies Declare Embargo on South African Uranium

Japan's utility companies have reportedly imposed a total ban on uranium imports from South Africa and Britain's Rio Tinto Zinc. RTZ is believed to handle uranium from Namibia, which is illegally occupied by South Africa. Five utility companies, Tohoku, Chubu, Kansai, Chugoku and Kyushu, have announced that they will not renew their contracts and therefore stop importing uranium from South Africa and RTZ. However, Tokyo Electric Power Company has no intention of banning imports from RTZ, claiming it believes RTZ's assurance that it is not handling uranium from Namibia.

Kansai Electric Co. Increases Uranium Imports from Australia

Kansai Electric Power Co. signed two contracts last August increasing the level of its uranium imports from Australia. Under one contract, the company is to receive a "small amount" of uranium from Olympic Dam in 1989. The other contract allows it to receive 400sT per year of U_3O_8 from 1988 to 1992 from Ranger Mine, the rights of which are 10% owned by JAURD (Japan-Australia Uranium Resources Development Co., Ltd.). Kansai Electric Power Co. is the biggest share-holder in JAURD. Under the terms of a contract drawn up in 1978, Kansai, Shikoku and Kyushu Electric Power companies are already entitled to receive a total of 15,000sT of U_3O_8 from Ranger Mine during the period 1982 to 1996.

Kyushu Electric Power Co. also signed two contracts with Australian companies in November, one is with ERA Co. to purchase 280sT during the three year period 1989 to 1991, and the other is with ODM Co. to purchase 200sT from 1989 till 1992. These moves to increase the volume of uranium imports from Australia are due to Japan's decision not to renew its contract with South Africa.

Heavy Water Leakage at Nuclear Power Plant in South Korea

One of the 380 pressure tubes of Wolsung 1 reactor (Candu, 678 MW) developed a crack in August, which resulted in the leakage of two tons of heavy water from the primary system. The accident was revealed in October. It is reported that only 980kg of heavy water was

recovered and the remainder was lost.

This is the only Candu reactor in Korea. The other six are pressurized water reactors, and their total output is 5,037 MW. The Candu reactor seems to have suffered repeated problems, including malfunction of the moisture separator and heavy water leakage due to valve malfunction. The crack in the pressure tubes appears to be the first incident of its kind. Nothing is really clear, however, since the report on the heavy water leakage is one of very few accident reports that the Korean government has ever made public.

Ministry of Health & Welfare Reveals Data on Contamination of Imported Foods

The Ministry of Health and Welfare has published the results of its radioactivity inspection of imported foods. A total of 15,232 items were inspected at quarantine stations and the National Institute of Hygienic Sciences during the period November 1, 1986 to April 30, 1988. Among them, 1,309 (8.6%) were sent for further measurements and the classified data made public. Private inspection agencies, designated by the Ministry of Health and

Welfare, also examined 5,328 items of imported foodstuffs between May 1, 1987 and April 30, 1988. 3,378 of these items were classified by type of food and radiation level.

Of the total 18,610 items inspected, 1,284 (about 7%) exceeded the level of 11Bq per kg. This has to be considered a fairly high percentage. In addition, quite a number of items with contamination levels less than 50Bq per kg probably passed through the quarantine stations without being picked up, since the primary inspection at these stations is done with a scintillation survey meter, which sometimes fails to detect radiation levels of less than 50Bq per kg. As many as 274 items or 1.5% of the total number, exceeded the level of 101Bq per kg.

The permissible level (for Cesium 134 plus 137) for imported foods is 370Bq/kg and the Ministry has never previously issued any data on foods with contamination levels lower than this. People had been pressing for the release of this data and the Ministry has finally responded. However, they have not indicated the names of the contaminated food items, merely classifying foods into eight different categories, such as meat and milk products, vegetables and fruits. 553 items were classified as "others," effectively disguising their real identity.

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