

# NUKE INFO TOKYO

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☞ Citizens' Nuclear Information Center

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## Thousands Gather in Tokyo to Rally Against Nuclear Power Generation



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It was a warm and beautiful spring day, perfect for an outdoor rally and demonstration. Sunday, April 24th was the second day of the campaign marking the second anniversary of the CHERNOBYL ACCIDENT. People kept arriving at the site, Hibiya Park, located in the middle of Tokyo, and the park was soon filled to capacity. The organizers expected 10,000 people and more than 20,000 came! Among them were large numbers of young people and women, drawn to the anti-nuclear power movement for the first time.

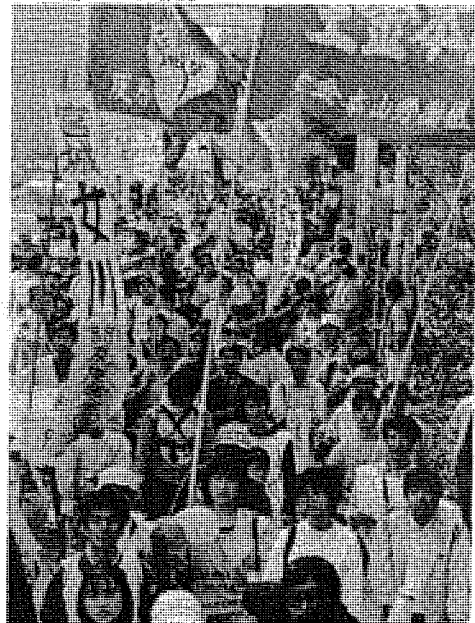


At 11 o'clock the rally started at two different places in the park simultaneously. In the hall, which holds about 2,500 people, several local groups from reactor sites reported on their struggles and asked for more support. Two delegates from Europe, Pal Doj from Samiland in Sweden and Peter Weish from Austria, made speeches. Pal showed some slides of reindeer herding and spoke of how badly this whole area had been contaminated with radiation from the Chernobyl accident, which had forced the Sami people to change their way of life. Peter explained how people had managed to stop nuclear power in Austria and encouraged the Japanese audience now trying to do the same

in this country. Music and dances helped to create a positive atmosphere in the hall. At the end a new proposal was put forward, urging people to work on a legal approach towards abolishing nuclear power through parliamentary means.

Meanwhile at the outdoor concert hall, which holds about 2,000 people, an enthusiastic audience, mostly young people, cheered musicians and dancers. This is the first time some well-known musicians have ever volunteered to play for an anti-nuclear power rally. The hall was literally packed. Speeches were made by long time activists from nuclear plant sites as well as by Pal Doj and Peter Weish.

While these events were going on, people strolled around the booths different anti-nuke groups from all over Japan had set up in the park. Some groups were giving out brochures and others were selling T-shirts and local products such as seaweed and organic vegetables. People played music and danced through the crowd, carrying hand-made banners and paper dragons reminiscent of the Chinese New Year. Happy children ran around and played and the atmosphere was very festive and lively!



At two thirty people started out on a march through Ginza, one of the busiest streets in Tokyo. There were so many people in the park that even an hour later many of them were still waiting for their turn to start. People carried colorful banners and anti-nuke placards, sang songs and danced. There was a tremendous positive energy among the marchers.

For many of the women with small children and some of the young people this was their first experience of a rally or a demonstration. They seemed to enjoy being there, meeting with so many other people as committed to stopping nuclear power as they were. To those who have taken part in the long, hard struggles at nuclear sites, the gathering seemed like a reward or encouragement, proving the stand they had taken against nuclear power in their own communities was right.



The day before the rally and demonstration, on April 23, representatives from 150 anti-nuke groups met with officials from six government agencies, such as the Ministry of International Trade and Industry (MITI), the Science and Technology Agency, and the Health and Welfare Ministry, to protest the government's policy of nuclear power generation. MITI only agreed to meet with ten representatives, so

several hundred people tried to gather outside the building and form a human chain around it. But the police didn't even let them get close to the building. A lot of people protested and argued with the police but they just wouldn't listen. The people remained non-violent and finally gave up the idea of forming a human chain. But the whole scene was covered by the media and shown on TV later that day. It showed that the government and the utility companies were really concerned about the growing anti-nuke movement and that they were trying to suppress it.

In the afternoon, workshops were held on ten different issues such as nuclear fuel transportation, the contamination of food, the nuclear fuel cycle and radioactive waste, and what we can do now to stop nuclear power. Each workshop was filled with people eager to learn and participate. Altogether several thousand people took part in the workshops.

On the evening of 23rd a Women's Festival was held and about 500 women participated in it. Many of them have been actively engaged in the anti-nuclear movement and this was the first occasion for them to get together to exchange information. A lot of them stayed up late talking and sharing.

A Young People's Gathering was also held that evening and several hundred young people from all over Japan attended.

Three days after the rally the Federation of Electric Power Companies placed a full page ad in thirty-three newspapers throughout Japan at an estimated cost of ¥200 million (\$1.5 million)! It now plans to place similar ads every month for at least ten consecutive months. This tremendous amount of money originally comes from people who pay their electric bills to the electric power companies. If the companies have such a surplus, then they should be using it to develop alternative energy sources.

## Pal Doj's Speech

# Chernobyl Has Changed Our Way of Life



Sweden, where I live, was very badly contaminated by radiation after the Chernobyl accident. I am a Laplander (Sami) and a reindeer herder. We Sami people have our own language, culture, and way of life. We live in nature, by nature and together with nature when we are herding the reindeer.

In the summer we usually take the reindeer up to the mountains, but the whole area is now contaminated. We used to camp, catch fish in the lakes and pick berries and mushrooms but none of them are now fit to eat, so we have to drive 30 km to the nearest store to buy food.

In my area, four families own about 2,000 reindeer and we slaughter 400 or so each year. In the winter of 1986-87 all the reindeer we slaughtered were found to be too contaminated to eat. During the winter, reindeer only eat a special kind of moss called lichen. Lichen live as long as 20 to 25 years and absorb cesium from the soil. That is why the reindeer were contaminated so badly.

In the winter of 1986-87, a total of 80,000 reindeer were slaughtered in Sweden. The maximum permissible level of Cesium-137 in food was 300 Bq per kg. Of the 80,000 reindeer, only 12,000 had a level lower than this and some of them had levels as high as 8,000 to 12,000 Bq/kg.

In the winter of 1987-88, 60,000 reindeer were slaughtered and this time 40,000 were found to be below the permissible level. The reason was that last year the government raised the permissible level of Cesium-137 in reindeer meat from 300 Bq/kg to 1,500 Bq. To lower the contamination level as far as possible, several new methods have been tried. What we are doing

in my area is to keep the animals to be slaughtered inside a compound and feed them with uncontaminated hay and pellets. By doing this, we can get the Cesium level down below 300 Bq/kg within three months. The Swedish government gives us money to buy hay and pellets, but this method of handling the reindeer is totally different from our traditional method. It is almost the same as raising cattle and we don't like it at all.

The Swedish government has been handing out a lot of money. They pay for the hay and buy the contaminated reindeer meat. So we haven't suffered economically, but now we find ourselves totally dependent on the government's goodwill. Before the accident the Sami people were independent and nature provided us with everything we needed.

Umeo university has conducted a whole body count to establish levels of Cesium 137 in both reindeer herders and ordinary Swedish people. The results for some reindeer herders were astounding, with figures ranging from 18,000 to 100,000 Bq!

Sweden is going to shut down all its nuclear power stations by the year 2010. The Swedish people took this decision at a referendum held in 1980 and the Chernobyl accident clearly showed our decision had been right. But one thing we learned from the accident was that no matter how far away the reactor is located we can still be contaminated if there is a serious accident. So I would like to urge you to redouble your efforts to stop nuclear power in Japan. We need to abolish all nuclear power stations throughout the world. Thank you. □

## Peter Weish's Speech

### Austria's No To Nuclear Power

In the late sixties, the Austrian government decided to embark on a nuclear energy program and a planning company for nuclear power plants was established.

Construction of the first nuclear power plant in Zwentendorf, about 20 miles up the Danube from Vienna, was begun in 1972 by the German "Kraftwerksunion" (AEG and SIEMENS). It was a boiling water reactor with a capacity of 700 MW(e), and was supposed to generate about 10% of Austrian electricity production.

The big political parties - the ruling Socialist Party and the conservative "Peoples Party" (which at that time was the major opposition party) - were both pro-nuclear. Only the small liberal opposition party had taken a critical stance towards nuclear power.

In autumn 1976 the government launched an information campaign in an attempt to justify and palliate the nuclear program but it had exactly the opposite effect. The prospect of nuclear waste storage stimulated heavy local opposition in the regions suggested for that purpose.

In December 1977, opponents of nuclear power uncovered plans for secret fuel imports for the Zwentendorf reactor and announced direct action to prevent it being transported. To avoid any confrontation, the shipment was postponed to early 1978 and military helicopters were used to transport the fuel elements to the site, which was barricaded by police. It should be noted that all antinuclear demonstrations and direct action in Austria were completely non-violent.

In the subsequent parliamentary hearings, opponents of nuclear power pointed out several questionable

safety aspects of the Zwentendorf site and plant construction. They also showed up the lack of in-depth studies, and radioecological data.

Chancellor Kreisky now did not dare to take the decision to put Zwentendorf into operation. Support from the People's Party was uncertain and Socialist MPs from the westernmost province (Vorarlberg), were not in a position to support their party's nuclear policy. The Vorarlbergers had just (successfully) fought a desperate fight against neighboring Switzerland's Ruthi project which proposed to construct a nuclear power station in the immediate vicinity of the Austrian border. The Vorarlberg population was overwhelmingly anti-nuclear.

In June 1978 the Socialist Chancellor Dr. Kreisky, who had earlier called the nuclear issue an extremely inappropriate one for a referendum, announced a referendum for November 5 and stated that he was sure there would be a clear majority for nuclear power.

The pro-nuclear forces went into the battle with enormous backing. The state-owned utilities alone spent AS 30 millions (US\$ 2 million) of ratepayer's money. Tens of millions were poured into the campaign by the industrialists' association, the trade union umbrella organization and the Socialist Party. The anti-nuclear groups had only their own savings and their commitment, but organized a very effective campaign.

There was little hope for an anti-nuclear majority. But the unforeseeable happened: On November 5 the referendum resulted in a narrow no-majority. Nearly two thirds of the electorate went to the polls. Of the 3.26 million voters, 49.5% voted for, 50.5% against nuclear power. The enthusiasm and personal canvassing of the anti-nuclear movement had now won the day. It was a remarkable event in Austrian post-war history.

The socialist government and political parties reacted immediate-

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## High Concentration of I-129 Found Near Tokai Reprocessing Plant

One of the most serious technical difficulties that a spent fuel reprocessing plant is confronted with is controlling the discharge of certain radioactivities. The difficulty of iodine release control recently attracted public attention when the Kyodo News Service reported that an anomalously high concentration of iodine-129 has been observed in the vicinity of the Tokai Reprocessing Plant of the Power Reactor and Nuclear Fuel Development Corporation (PNC).

According to the report, researchers at the National Institute of Radiological Science (NIRS) have been conducting measurements of I-129 in areas around the plant since 1979 and have found high concentrations of I-129 in pine needles, seaweed and rain water samples collected nearby. The observed concentration of I-129 shows a clear correlation with the distance from the plant. At a distance of 1 km from the plant the ratio of I-129 to natural iodine is as high as  $10^{-5}$ , which is over 100 times higher than the ratios found further away.

The results of this study have only appeared in a scientific journal on the environment published in the Netherlands. They have deliberately not been made available to the Japanese public. It was also revealed that PNC researchers have independently measured up to 100 mBq soil samples collected near the plant. Levels of I-129 per kg detected by PNC show a close correspondence to the I-129 to natural iodine ratios obtained by NIRS.

Iodine-129 is an extremely long-lived radioactive isotope of iodine with a half-life of 16 million years. It accumulates in the human thyroid and causes thyroid tumors as well as hypothyroidism, a thyroid disease that may lead to

growth defects.

The observed high concentrations of I-129 strongly suggest that the iodine processing chemistry and filter systems in use at the Tokai plant are not effective. If iodine release continues at the present rate, the I-129 concentration in the nearby environment will soon reach a level where thyroid exposure among residents exceeds the 9 mrem/year upper limit set by the PNC safety report. Even larger accumulations of I-129 can not be ruled out because the amount of spent fuel treated by the plant is now going to be increased.

The Tokai reprocessing plant has a capacity of 210 ton/year for treatment of spent nuclear fuel but the actual performance record has been well below 100 ton/year ever since it started operating in 1981.

The I-129 problem at the Tokai reprocessing plant also throws serious doubt upon the safety of the second reprocessing plant now being planned for Rokkasho-mura, Aomori. The plant will have a capacity of 800 tons of uranium per year, four times as large as the Tokai plant, but will rely on essentially the same chemical procedure for the processing of iodine. The licensing application for the plant is likely to be made in November this year. □

### PETER WEISH'S SPEECH

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ly: A few weeks after the referendum - on December 15th 1978, the Austrian parliament unanimously passed a law prohibiting the use of nuclear energy for the production of electricity. One of the last industrialized countries without nuclear power, Austria was now the first industrialized country to abandon it. □

## Important Incidents and Accidents at Nuclear Power Plants in 1987

(P:PWR, B:BWR, G:GCR)

Date	Plant	Short Description of Event
Feb. 2	Ikata 2(P)	Failure of fittings to a fuel assembly found during periodic inspection.
Feb. 4	Ikata 2(P)	Cracks found in 17 welds of turbine-related parts.
Feb.10	Tokai 1(G)	Failure to refuel during operation.
Feb.11	Tokai 1(G)	Shutdown due to leak of coolant sealing oil.
Feb.16	Tsuruga 1(B)	Automatic shutdown due to recirculation pump failure.
Feb.19	Fukushima I-5(B)	Manual shutdown due to abnormal rise of temperature in recirculation pump sealing.
Mar.10	Tsuruga 2(P)	Power reduced to 85% due to defect in main steam regulation valve.
Mar.12	Mihama 3(P)	Cracks found in twelve steam generator tubes during periodic inspection.
Apr.20	Tokai 2(P)	Leak of radioactivities from a fuel assembly found during periodic inspection.
Apr.23	Fukushima I-1.2.3(B)	Automatic shutdown due to earthquake (The earthquake caused an abnormal rise in power.)
Apr.23	Ohi 2(P)	Cracks found in a fuel assembly fitting during periodic inspection.
May 12	Ohi 1(P)	Sudden fall of water level in a steam generator due to error signal.
May 28	Mihama 3(P)	Manual shutdown due to primary coolant leakage from a loose thermometer plug.
Jul.12	Tsuruga 1(B)	Difficulty in achieving rated turbine output of 357 MWe.
Jul.15	Ohi 2(P)	Disclosure that primary coolant leakage had lasted for more than a year.
Jul.28	Tokai 2(P)	Short circuit in recirculation pump cable.
Jul.30	Tokai 2(P)	Recirculation pump stopped due to failure in protective circuit.
Jun.11	Takahama 1(P)	Manual shutdown due to abnormal vibration in a steam generator (later found to be caused by detached fitting).
Aug. 3	Mihama 2(P)	Cracks found in 8 steam generator tubes.
Aug.28	Hamaoka 1(B)	Automatic shutdown due to defect in a recirculation pump control circuit switch.
Oct. 1	Tsuruga 1(B)	Abnormal rise in neutron flux while testing; automatic shutdown.
Oct. 5	Mihama 2(P)	Deformation and thinning of control rod clads found during periodic inspection.
Nov.12	Takahama 2(P)	Cracks found in 613 steam generator tubes.
Nov.12	Tokai 1(G)	Disclosure that a metal part in the core had become detached.
Dec.18	Ohi 1(P)	Manual shutdown due to detached fittings in a steam generator.
Dec.23	Genkai 1(P)	Cracks found in 447 steam generator tubes.
Dec.26	Ohi 2, Mihama 3(P)	Shutdown for inspection due to steam generator accident at Ohi 1.





## NEWS WATCH



### Fishermen's Co-op Stops Nuclear Reactor Plan

On March 30 a local fishermen's cooperative association (Gyokyo) in Hidaka-cho, Wakayama Prefecture decided to refuse the marine assessment which the Kansai Electric Power Co. was trying to conduct with a view to building PWRs in the area. With the cooperative association's decision, the company's plan has now collapsed.

Women in the town began a sit-in three days before the association's general meeting. Encouraged by their lead, fishermen opposing nuclear plant construction took a strong stand at the meeting and the board of the association, which had originally decided to agree to the assessment, were forced to withdraw their proposal.

### Load Factor in 1987 Unusually High

The average load factor of Japan's 32 commercial reactors in fiscal 1987 (excluding the two which began operation during the fiscal year) was 76.0%, the highest ever. This figure is nothing to boast about, however, it merely shows how excessively the plants are now operated and how carelessly they are controlled.

One reason why the power companies have managed to raise the operating rate is that they have shortened the regular inspection period for these reactors. Five years ago, regular inspection used

to take an average five months but recently the period has been shortened to four months. Another reason is that they have continued operating reactors even when abnormalities have occurred.

### PNC Submits Report on Proposed HLW Storage Site

On April 15th PNC (Power Reactor and Nuclear Fuel Development Corporation) submitted to the director of the Science and Technology Agency, the result of a survey of the geological stability of the proposed construction site for a high-level nuclear waste storage facility in Horonobe-cho, Hokkaido. The report concludes that "there is no specific problem with the planned location," but, in reference to opposition from surrounding towns and villages and the Governor of Hokkaido, it adds that "we should exercise caution in making the final decision and take the social situation into consideration." In March, just before the submission of the report, neighboring town councils passed resolutions opposing the plan. Meanwhile the Governor has announced that he is "against the plan regardless of the assessment report."

### Nuclear Law Amended

The Law for the Regulation of Nuclear Source Materials, Fuel Materials and Reactors is going to be partially amended so as to prepare Japan for becoming a signa-

tory to the Convention on the Physical Protection of Nuclear Material. The amendment bill was introduced in the Diet on March 11, and passed the House of Representatives on April 22, opposed only by the Japan Socialist Party. One problem with the bill is that although it refers to the need for the agencies and businesses concerned to take the necessary steps to safeguard nuclear materials, it does not mention any specific measures to be taken. A further problem is that a new clause has been added to the law, concerning "crimes which would cause danger to a people and property by using nuclear materials" and suggesting heavy punishments for people committing such "crimes." There are fears that the new law may be abused to conceal information on safety and to repress the anti-nuclear movement. Thus, it may violate the principles of national nuclear power policy, which commit Japan to the peaceful use of nuclear energy and to making information public.

## U Enrichment Plant Starts Operation

On April 25th the uranium enrichment demonstration plant at Ningyo-toge, Okayama prefecture, started operating at half capacity, to produce 100 ton SWU/year. Built

by PNC, the plant uses a centrifuge separation method and is unlikely to be cost-competitive with imported enriched uranium. Some utility company officials fear, however, that they may be forced to buy Japanese uranium despite the higher cost.

## JNFI Applies for LLW Disposal Licence

On April 27, Japan Nuclear Fuel Industries, Inc. (JNFI) submitted an application to the Science and Technology Agency for permission to build the low-level radioactive waste disposal facility the company is planning in Rokkasho, Aomori Prefecture. The plan calls for the construction of ferroconcrete buildings several meters underground for the final disposal of up to 3 million drums of radioactive waste. JNFI has applied this time for permission to bury 200,000 drums as a first phase of the operation.

The planned site has various drawbacks including a high water table, which may result in underground water penetrating into the facility and/or leakage of contaminated water. The fact that JNFI has been working hard to develop water blockage technology shows that the company itself is well aware of the danger.

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