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Citizens' Nuclear Information Center

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Referendum at Kariwa Village: A Strong “No” to MOX Program



Future strategies are discussed at first meeting of local residents since the referendum. (Akata District Community Hall, 30 May 2001. Photo by Kazuyuki Tekemoto. Photos from the Kariwa referendum can be viewed on our web-site <http://www.cnic.or.jp/english/>)

A referendum on the use of MOX fuel at Kashiwazaki-Kariwa 3 was held on 27 May 2001 at Kariwa Village, Niigata Prefecture. There were 1,925 votes against the use of MOX fuel, 53% of the total votes and far exceeding the 1,533 votes cast in approval of the plan. The villagers have clearly expressed their opposition to the plu-thermal program - a Japanese term for burning MOX fuel at commercial light water reactors.

In April 1995, the operator of Kashiwazaki-Kariwa 3, Tokyo Electric Power Company (TEPCO), placed an order to the Belgian company Belgonucleaire for MOX fuel for the plant without any explanation to local residents. When

the time came to lodge an application for approval to use the fuel, TEPCO finally sought agreement from Niigata Prefecture, Kashiwazaki City, and Kariwa Village, and the Governor and

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the Mayors agreed to the plan without consulting local residents. There was no opportunity at this point for the local residents to express their opinions on the plan.

Strong doubts about the technical reliability and safety of nuclear power were prompted by the 1995 sodium leak and fire at the Monju Prototype Fast Breeder Reactor and by the 1997 fire and explosion at the Tokai Reprocessing Plant. Following the 1999 JCO criticality accident, citizens' concerns reached new heights.

In addition, public skepticism about the nuclear industry and the government's nuclear administration was growing due to the industry's concealment of information concerning the incidents at Monju and Tokai Reprocessing Plant, and as a result of the 1999 scandal in which British Nuclear Fuel plc (BNFL) falsified quality control data for the MOX fuel it manufactured for Takahama 3 and 4. The government had approved the use of the fuel, and had the scandal not been revealed, the fuel with falsified data would have been used at the reactors. These stories did much to awake public alarm about the conduct of the nuclear industry.

Moreover, doubts have been growing among local politicians and citizens over the economic and safety justifications of the nuclear fuel cycle. Such doubts led to the postponement of the plu-thermal program by the Fukushima Governor in Feb. 2001, and to the establishment in May 2001 of a one-year review committee on the prefecture's energy policy.

Local residents have become eager to express their opinions on nuclear power. A field study carried out by the JCO Criticality Accident Comprehensive Assessment Committee in JCO's vicinity in Feb. 2000 showed that about 65% of the respondents agreed that "the siting of nuclear facilities should be decided by referenda."

Since August 1998, Kariwa and Kashiwazaki citizens have been approaching village/city assemblies and administrations to hold referenda on the use of MOX fuel. The proposal to hold a referendum passed the Kariwa Village Assembly on 18 April 2001 and was enacted on 25 April.

The proposal had passed the assembly before in Dec. 2000, but was vetoed by the Mayor in Jan. 2001. Despite the failure of the first attempt, the referendum was posted on 17 May and held on 27 May. During those 10 intervening days, two open debates were held between citizens and officials, including the Chief Director of the Agency for Natural Resources and Energy (ANRE) under the Ministry of Economy, Trade and Industry. The residents who gained the opportunity to express their opinions studied hard, evaluated the plu-thermal program, and duly made their decisions.

The residents of a village with seven nuclear power plants (total capacity 8,212 MW), and in which about one in every four households derives its principal income from a Kashiwazaki-Kariwa plant-related industry, have voiced their opposition to the extremely risky plu-thermal program. This result will surely affect the government's nuclear power policy, in particular its nuclear fuel cycle program.

Forced by the result of the referendum, the Governor of Niigata and the Mayors of Kariwa and Kashiwazaki - all of whom had agreed to the loading of MOX fuel during this spring's periodic inspection of Kashiwazaki-Kariwa 3 - unwillingly asked TEPCO not to load the fuel during this periodic inspection. TEPCO subsequently canceled its plan.

Residents have asked for a complete end to the plu-thermal program. All along, the Japanese government and the electric companies have tried to force on the local residents a supposedly proper "understanding" of the program, and have made it clear that they will continue such efforts. The promoters see the outcome of the referendum as a result of their failure in giving an adequate explanation of the program - seemingly forgetting that the Director of ANRE had come all the way from Tokyo to the Village to give the "proper" explanation. In truth, it is now the government's and the utilities' turn to amend their own "understanding" and to listen to what the residents are saying. They must then act on citizens' wishes by putting an end to the plu-thermal program.

By Chihiro Kamisawa

JCO Criticality Accident Court Case Begins

Matters examined; matters left untouched

Problems with the JCO Court Case

JCO Co., which caused the criticality accident on 30 September 1999 and had its license revoked in March 2000, is no longer a manufacturing company but an entity dealing with the aftermath of the accident. It is now busy responding to the criminal court case and compensation claims.

The investigation headquarters set up by the Ibaraki Prefectural Police on 3 October 1999 began on-site investigation, interviewing of JCO employees, and searches of their offices. The charges were for violating the Law on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors, and for professional negligence resulting in injury. Following the death of Hisashi Ouchi on 21 December 1999, the latter charge was changed to professional negligence resulting in death. That one fatality became two with the passing

of Masato Shinohara in April 2000.

Six JCO employees, including Kenzo Koshijima, who was the Chief Director of the Tokai Plant at the time of the accident, were arrested on 11 Oct. 2000. Among those six was Yutaka Yokokawa, one of the three employees at the site of the accident who were exposed to massive amounts of radiation. In a separate action, the Ibaraki Labor Bureau and the Mito Labor Standard Management Bureau sent papers to Mito District Prosecutors Office alleging the violation of the Law on Labor Safety and Sanitary by Koshijima and JCO itself.

Subsequently, on 1 November 2000, the Mito District Prosecutor's Office indicted the six employees and JCO. The first open hearing was held on 23 April 2001 at Mito District Court. Open hearings will be held once or twice a month, and the final trial is to be held within this year. The significant feature of this trial is that the charges are limited to the deaths

Table 1 JCO, its employees and their charges

Name	Position (at the time of the accident)	Charges
Kenzo Koshijima	Tokai Plant Chief Director	1+2+3
Hiromasa Kato	Manufacturing Director and Manufacturing Group Supervisor	1+2
Hiroyuki Ogawa	Manufacturing Section Planning Group Supervisor	1+2
Hiroshi Watanabe	Manufacturing Section Manufacturing Group Workplace Supervisor	2
Kenji Takemura	Manufacturing Section Planning Group Manager	2
Yutaka Yokokawa	Manufacturing Section Manufacturing Group Sub-Supervisor	2
JCO Co.		1+3
Hiroharu Kitani	President	-

1. Violation of the Law on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors
2. Professional negligence resulting in death
3. Violation of the Law on Labor Safety and Sanitary

of the employees. Effects of the exposure of the local residents are not being considered. Also, while one of the exposed employees, Yokokawa, is charged for giving instructions to the two who died, Hiroharu Kitani, the President of the company at the time of the accident, was not charged on reasons that he had only assumed that post three months before the accident and was not aware of on-site operational circumstances. (JCO's main office is located in Tokyo.) Past presidents and Tokai Plant chief directors should be charged as well for allowing such illegal procedures to take place right under their noses. (See Table 1.)

Moreover, due to difficulties in constructing legal prosecutions, the responsibilities of controlling agencies such as the former Science and Technology Agency (STA) and the Nuclear Safety Commission (NSC), as well as the Japan Nuclear Cycle Development Institute (JNC), which made difficult specifications when placing the order to JCO for the uranium solution involved in the accident, will not be questioned by the prosecutors within the framework of this court case.

Despite these limitations on the legal procedure, some new information has emerged in the hearings. For example, in his opening statement, the prosecutor revealed that an internal JCO document showed that JCO employees had discussed the possibility of a criticality accident as early as 1992, but had made no arrangements for prevention.

The Responsibility of JNC and the Government

Although in the interim between the indictment and the first open hearing some of the defendants contested aspects of the prosecutor's case, every one of them pleaded guilty to all charges at that first open session. It is assumed that they are bargaining for a lesser penalty by pleading guilty. However, as the open trials progress, JCO is showing some eagerness to disclose the responsibilities of the

controlling agencies, STA and NSC, and of JNC, a corporation which is largely funded and controlled by the government.

At the second open hearing, held on 14 May 2001, Professor Kazuaki Kato from the Ibaraki Prefectural Medical University testified as a witness for JCO and claimed that "the environmental effects from the neutrons and radioactivity emitted from the accident are negligible." He also asserted that the government "approved the processing operation of JCO and thus had the responsibility to supervise the plant even after giving the approval."

At the third open hearing held on 4 June 2001, Ichiro Matsunaga, who was Chief Technician of JCO in 1984, testified that when JCO applied to STA in that year for approval of amendments to the processing procedures which would make it possible to handle uranium with a concentration of up to 20% at the company's Conversion Test Building, the STA's safety inspection officer altered JCO's application without any consultation.

This officer was an employee of the then PNC (the Power Reactor and Nuclear Fuel Development Corporation; now JNC) but was temporarily transferred to the STA. JCO had applied for permission to pour several consecutive batches of highly-concentrated uranium solution, but STA amended the contents, and the approved application stated that the process would involve only one batch for the entire processing procedure. The STA was most likely aware that JCO would not follow the changes made to the application, but did so in order to make it possible to give approval. (The nuclear chain reaction which caused the accident was triggered when employees were pouring in the seventh batch of highly-enriched uranium solution into a precipitation tank.)

It was made clear in the trials that JCO had no intention of following the STA's modification anyway, but the main argument of Matsunaga's testimony is that the "violation of legal procedures" came about because the STA, on its own initiative, chose to give approval

after modifying JCO's application, into a set of procedural guidelines with stricter safety regulations, despite the company's attempt to seek approval for the process actually used. This incident demonstrates the extent of JNC's involvement in JCO's operation and the government's nuclear administration.

At the eighth meeting (4 Dec. 1999) of the accident investigation committee set up by the NSC - a committee in which two members were JNC employees - JCO handed in documents which supported the company's claim that JNC's unreasonable specifications had led to the accident. However, this claim was dismissed by one of the Committee members who was employed by JNC, and corrections were duly made to the documents provided by JCO. It seems that JCO's strategy is to plead guilty, but to use the trial process to disclose the joint involvement of the government and the JNC in the circumstances which led to the accident.

Damages Ignored in this Court Case

What is completely ignored in the confrontation between JCO and the government/JNC is the damages caused to local residents. Accord-

ing to Sumitomo Metal Mining Company's announcement on 17 May 2001, as of the end of March 2001, 6,930 (98.9%) of the 7,005 cases seeking compensation for damage caused by the criticality accident were resolved. According to Sumitomo's FY 2000 closing accounts, compensation paid following the accident amounted to about 16 billion yen. However, such compensation was mostly paid for perceived damages incurred by industries. JCO is refusing any negotiation for the compensation of physical and mental damages suffered by local residents as a result of the accident. Also, apart from the three severely exposed employees, other employees who were at the plant at the time of the accident are not counted as subjects for compensation. The Criticality Accident Victims' Group set up by local residents is seeking compensation for damage caused by exposure, but JCO's response was to imply the possibility of negotiation on conditions that members leave the group. JCO and the government, which are trying to place the blame on each other in the court, are working hand-in-hand outside the court to exclude the true victims from the process of restitution. By Satoshi Fujino

ANNOUNCEMENT: Survey Report, "JCO Accident and Local Residents: Damages, Symptoms and Changing Attitudes," now available from CNIC

CNIC has recently published an English translation of a field study conducted on the local residents living in the vicinity of the JCO plant. The study was conducted in February 2000, and was reported in Japanese in September 2000. This English version of the report includes up-dates, as well as graphs, tables, maps, and photos to supplement the findings.

The study consisted of multiple-choice questions, open questions, and a follow-up interview upon the collection of the survey forms by volunteers. Responses to the open questions and the interviews are referred to in the main article preceding the survey data section, which documents the full results of the multiple-choice questions.

The main results were: (1) Residents experienced physical abnormalities and mental symptoms. At the time of the survey, 35% of respondents living within a 2 km radius of the JCO plant complained of physical symptoms. (2) Residents had strong anxiety over the future effects from radiation on themselves and their family members. In addition, residents had concerns over future indirect effects from the accident. For example, a resident of Tokai Village living within a 350-500 m radius of JCO, stated: "I am worried that even if there were no physical damage, my children will be discriminated against in the future just because they lived near the JCO plant ... and will not be able to get married." (3) The lack of information was a factor of anxiety and dissatisfaction during and after the accident. Only 14.1% had accurate knowledge about the JCO plant, and 37.1% were not even aware of its existence. (4) On one hand, about 2/3 of the residents became critical of nuclear power. (5) But on the other hand, about half saw Tokai Village's future as "co-existing with the nuclear industry." (6) Even so, local residents are no longer interested in blindly accepting the national nuclear development plans. Over 60% of the residents felt that the siting of nuclear power facilities should be decided by referenda.

The report is available for free down-loading from our web-site (<http://www.cnic.or.jp/>). Also, please contact our office if you are interested in obtaining a hard copy.

DATA: Significant Incidents at Nuclear Facilities (2000)

Date	Facility	Brief Description of Event
Feb. 14	Ohi-2	Power reduced due to seawater leak into condenser.
Feb. 23	Tokai II	Damage to heat-transfer pipe of feedwater heater found during periodic inspection.
Mar. 16	Takahama-3	Damage to four steam generator tubes found during periodic inspection.
Mar. 31	Genkai-2	Damage to 79 steam generator tubes found during periodic inspection.
Apr. 29	Mihama-2	Reactor automatically shut down due to damage to generator's electro-magnetic exciter.
May 9	Ohi-1	Damage to condenser tubes found during periodic inspection.
May 26	Ikata-2	Damage to 64 steam generator tubes found during periodic inspection.
May 28	Kashiwazaki-Kariwa-6	Reactor manually shut down due to radioactivity leak from fuel rod.
Jun. 2	Ohi-1	Reactor manually shut down due to radioactivity leak from fuel rod.
Jun. 14	Shimane Plant	Low-level radioactive waste incinerator automatically shut down.
Jun. 29	Kashiwazaki-Kariwa-2	Reactor manually shutdown due to steam leak from turbine system.
Jul. 3	Ikata-2	Malfunction at control rod location detection equipment.
Jul. 4	Ikata-2	Steam leak from auxiliary feedwater pump drive piping.
Jul. 5	Fugen	Lubrication oil leak due to crack in lubrication oil pipe of emergency stand-by diesel generator. Generator automatically put out of service.
Jul. 7	Ohi-2	Power reduced due to steam leak from crack at moisture separator-heater drain tank.
Jul.14	Kashiwazaki-Kariwa-4	Reactor manually shut down due to hydrogen leak from cracked insulating hose.

Date	Facility	Brief Description of Event
Jul. 21	Fukushima I-6	Reactor manually shut down due to earthquake-caused rupture of tube attached to release valve located between high-pressure turbine and low-pressure turbine.
Jul. 23	Fukushima I-2	Reactor manually shutdown due to turbine control oil leak. After reactor shut down, water leak found at control rod drive unit.
Jul. 25	Fukushima II-4	Reactor manually shut down due to radioactivity leak from fuel rod.
Aug. 8	Tokai II	Reactor automatically shut down due to damage from lightning at main transmission line.
Aug. 21	Takahama-2	Secondary coolant leak due to damage to tubes of high-pressure feedwater heater.
Aug. 25	Mihama-3	Degradation of three steam generator tubes by foreign substances found during periodic inspection.
Sep. 14	Sendai-1	Damage to 16 steam generator tubes found during periodic inspection.
Oct. 2	Takahama-4	Damage to 11 steam generator tubes found during periodic inspection.
Oct. 13	Ikata-1	Pipe cracks caused by chlorine corrosion found during high-pressure examination of piping.
Nov. 15	Mihama-3	Coolant leak due to cracks in cleaning feeder pipe of secondary main feedwater piping.
Nov. 19	Rokkasho Reprocessing Plant	Two cooling pumps of safety cooling system automatically shut down in spent nuclear fuel storage pool.
Nov. 21	Kashiwazaki-Kariwa-4	Leakage of hydrogen for turbine generator cooling. Subsequently reactor manually shut down on Dec. 6th.
Nov. 30	Ohi-1,2	Radioactive gases leak during chemical analysis of chemical volume control system tank.
Dec. 2	Ohi-1	Oil leak from turbine steam control valve drive oil piping due to O ring rupture.
Dec. 26	Tokai II	Reactor manually shut down due to coolant leak from reactor recirculation pump mechanical seal.
Dec. 30	Ikata-1	Reactor manually shut down due to steam leak from cracked valve of drain-line attached to moisture separator-heater release valve.

Data: Japan's Radioactive Waste and Spent Fuel Inventory

Radio-waste and Spent Fuel at Nuclear Power Plants (as of March, 2001)

Electrics	NPPs	LLW ¹⁾	SF ²⁾
Hokkaido	Tomari	3,360	240
Tohoku	Onagawa	14,164	190
Tokyo (TEPCO)	Fukushima I	169,932	1,100
	Fukushima II	21,680	1,250
	Kashiwazaki -Kariwa	8,957	1,370
Chubu	Hamaoka	33,496	720
Hokuriku	Shika	1,512	30
Kansai (KEPCO)	Mihama	26,646	280
	Takahama	30,290	800
	Ohi	25,468	670
Chugoku	Shimane	25,508	270
Shikoku	Ikata	13,519	330
Kyushu	Genkai	10,933	420
	Sendai	8,466	570
Japan Atomic Power Co. (JAPCO)	Tsuruga	62,290	430
	Tokai	368	-
	Tokai II	38,762	230
TOTAL		501,351	8,190

1) 200 liter drums 2)tHM

In addition, Japan has sent all of the contracted amount of its spent fuel to the U.K. and France. Japanese utilities have reprocessing contracts with British Nuclear Fuel plc (BNFL) for 4,200 tHM of spent fuel and with the French company COGEMA for 2,900 tHM of spent fuel (in total, 7,100 tHM).

Radio-waste and Spent Fuel at Nuclear Facilities (as of March, 2001)

	Rokkasho			Tokai Reprocessing Plant
	LLW Disposal Center	Vitrified Waste Storage Center	Reprocessing Plant	
LLW (200 liter drums)	133,595	348*		78,723
Vitrified HLW (170 liter canisters)		272		97
Liquid HLW (m ³)				432
Spent Fuel (tHM)			32	87

* Operational waste

Public Opinion Increasingly Against the Kaminoseki Nuclear Plant

By Shoji Kihara,
“Nukes - No Thanks” Hiroshima Citizens' Group

Introduction

Two decades have passed since the plan first emerged to build a nuclear power plant at Kaminoseki. Strong community opposition has prevented construction at the site in Kaminoseki Town, Yamaguchi Prefecture, a small town on the Seto Inland Sea (Setonaikai) whose main industry is fishing. With a population of about 4,500, the town has seen the departure of more of its working-age citizens than most areas in the prefecture, but historically the area made a name for itself in the 1300s as a junction for sea trade with the Korean peninsula.

Twenty years ago, at the end of 1981, the public heard the news of Chugoku Electric's plan to build a nuclear power plant there. The utility conducted many nuclear power plant tours for the officers of the fishing cooperatives and the chamber of commerce, members of the housewives' association, and others. These tours included banquets and gifts. Even some of the people who now oppose construction but went on several such tours in those days say, “Rural people don't travel much, so we looked forward to those trips. People vied for places on the tours.”

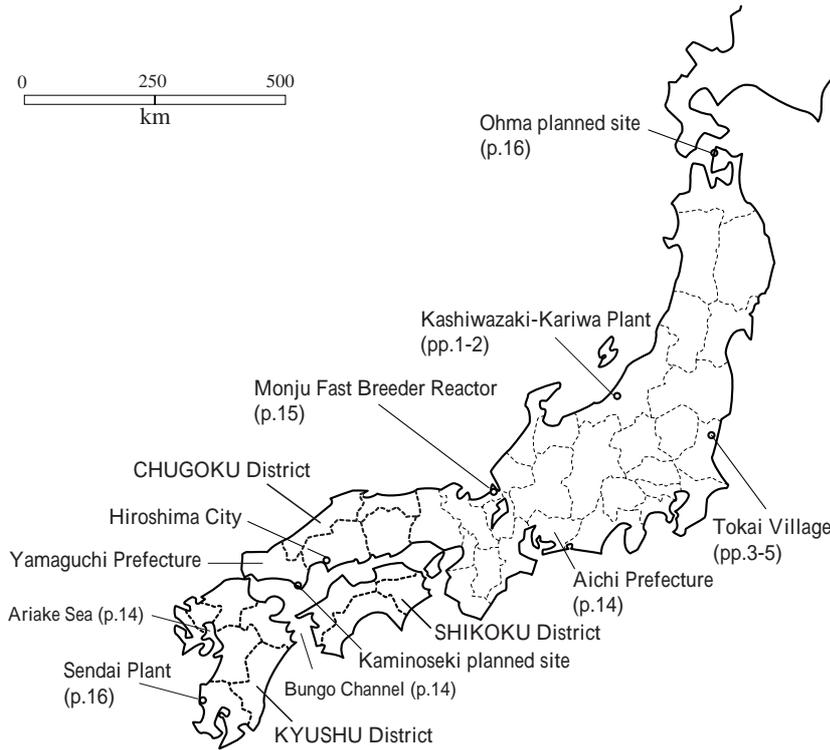
Kaminoseki is 80-odd kilometers as the crow flies from Hiroshima City, where the atomic bomb was first dropped. The town does not offer favorable conditions for nuclear power plant construction in terms of topography, maritime environment, or community consent.

Nuclear power plant construction requires, first of all, that the electric utility own the site. Second, the utility must sign a fishing compen-

sation agreement with the fishermen who own the fishing rights for the marine area that the proposed plant will overlook. And third, the utility needs community consent. Specifically it needs the prefectural governor's consent, but that in turn requires that many of the local citizens consent. At Kaminoseki, none of these three conditions has been satisfied.

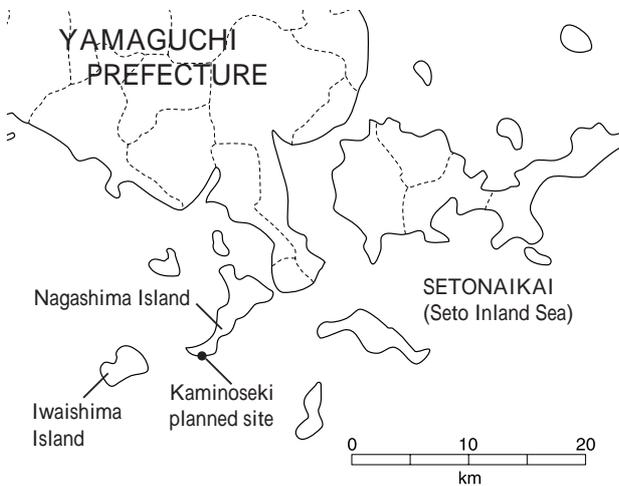
The 1.45-million-square-meter parcel of land that Chugoku Electric wants to purchase includes land owned by people who say they will never sell it for a nuclear power plant, as well as land owned jointly by area citizens and land owned by a Shinto shrine. Land purchased so far by the utility is apparently less than 80% of what is needed. In particular, the land owned by the shrine is where the core of the plant's Reactor no. 1 would be located, but the shrine's chief priest, who has primary authority, insists that the shrine's land will never be sold for a nuclear power plant. Despite intense harassment from shrine parishioners in favor of construction, as well as pressure from administrative authorities to dismiss the priest, the priest continues his opposition with an unbending will, making it quite impossible to proceed with construction.

For construction to proceed, Chugoku Electric also needs the consent of eight fishing cooperatives which jointly hold the fishing rights to the offshore area. The Iwaishima Fishing Cooperative, located in the 3.5-kilometer area directly facing the construction site, has since the very beginning consistently and totally opposed construction. Iwaishima Island is a focal point of the opposition movement



Map of areas and sites referred to in this issue.

owing to the consistent opposition of not only the fishing cooperative, but also 90% of the approximately 700 people living on the island. Iwaishima residents oppose the plant because it would be built right under their noses, and because the marine area near the construction site is a superb fishing ground that supports their livelihoods. Further, many people from this island, who depend on fishing and off-



Iwaishima and Kaminoseki Planned Site

island work to make a living, have prior experience in subcontracting work at nuclear power plants, and are likely to have personal knowledge of the appalling risks of nuclear power. For all of these reasons, residents have become increasingly convinced that they do not want nuclear power to ruin their homeland. Although Chugoku Electric has received opposition actions from the residents over the last 20 years, it has not been able to approach them for any kind of bargaining.

In April 2000, in the face of such opposition, Chugoku Electric signed fishing compensation agreements with the Management Committee for

the Joint Fishing Rights, which consists of the eight fishing cooperatives. Despite the disapproval of Iwaishima Fishing Cooperative, the seven other cooperatives used the Committee to force through the agreement. Chugoku Electric has paid half of the agreed compensation to the cooperatives, which is about 6 billion yen. Iwaishima Fishing Cooperative refused to accept the compensation, and the money has been deposited with the Regional Legal Affairs Bureau. In fact, Iwaishima Cooperative has taken the Management Committee and Chugoku Electric to court, demanding that it “repeal the fishing compensation agreements.”

Opposition to the Kaminoseki nuclear power plant is always the overwhelming majority view in any type of survey conducted on local residents’ opinion. The Governor of Yamaguchi Prefecture has stated in the Prefectural Assembly that “Regarding the issue of the Kaminoseki plant, I’d like to reflect on local opinions from Kaminoseki Town, and the two cities and five other towns in the vicinity.” Many opinion polls and surveys have been con-

ducted in the locality, and the results have always shown that close to 60% of the respondents were against the plan. An opinion poll conducted by the Asahi Newspaper in December 2000 revealed that even in Kaminoseki Town, where a pro-nuclear Mayor was elected, respondents against the plant outnumbered those in favor of it.

Planned Site is a Prime Ocean Treasury

From December 1994 to February 1996, during the process of seeking plant construction approval, Chugoku Electric conducted an environmental assessment of the planned site. Subsequently in April 1999, the company submitted an environmental impact assessment report to the former Ministry of International Trade and Industry (now the Ministry of Economy, Trade and Industry, or METI). However, the report made no mention at all of the rare species that live in the vicinity of the planned site (see pp.13-14). It was clear that this assessment was no more than a ritual procedure to make the construction of the plant possible. However, as a result of activities opposing the



Photo 1. On 8 Oct. 2000, the first underwater study of the area was conducted by scientists belonging to the Ecological Society of Japan. The study was organized by the Association for the Preservation of Nagashima's Nature (see pp. 13-14), and was observed by citizens and five members of the House of Representatives.
(Source: <http://www2.ocn.ne.jp/~haguman/nagasima.htm>)

construction of the plant, the attention of the world's natural scientists was drawn to the area as a treasury-house of the marine environment. According to the plant's construction plans, about 150,000 m² of the offshore area will be reclaimed. The local marine ecosystem will thus be completely destroyed if this plant is built.

Yamaguchi Governor Agrees to the Government's Consultation, with Some Conditions Attached

On 6 April 2001, while procedures for construction approval were still in motion, METI consulted the Yamaguchi Governor for his opinion on the ministry's applying for the inclusion of Kaminoseki plant in the national electricity source basic development plan. It seems that this consultation came as a surprise even to the Governor, and the newspapers reported his reaction with terms like "puzzled" and "why now?"

Following this development, citizens began protests and direct demand actions targeted mainly on the Yamaguchi Prefectural Office (see Photo 2). Aware that the Governor's response was due to be given on 25 April 2001, citizens began round-the-clock sit-ins in front of the Prefectural Office from the 16th. On some days, about 150 people came from Iwaishima, the center of the opposition movement, to join the sit-in at the Prefectural Office. The opposition spread through Yamaguchi Prefecture, Chugoku District, Kyushu District, and to Shikoku District, and about 400 messages and telegrams were sent from across the country. Many donations were also sent.

Nevertheless, on 23 April, though attaching to his response 21 conditions on safety, environment preservation and other matters, the



Photo 2. The nation's attention was on Kaminoseki while determined citizens continued their sit-in in front of the Prefectural Office.

Governor agreed to METI applying for the inclusion of Kaminoseki plan in the nation's electricity source basic development plan. We cannot understand why the Governor agreed to METI when he states in his written response that "depending on future performance [by the central government on the attached conditions], [I will] reserve the right to defer cooperation with secretarial work and to exercise other Prefectural rights [such as refusing to give approval to reclaim land]." The governor's response did not make any mention of Iwaisima, and the residents strongly felt that they had been "betrayed" by the Governor. On 12 June,

upon receiving the Governor's agreement, the government incorporated the Kaminoseki plan into the nation's electricity source basic development plan and it appears as though plans for the construction of additional nuclear plants have moved one step forward for the first time since the 1999 JCO criticality accident at Tokai Village, Ibaraki Prefecture.

However, this incident brought about unprecedented public attention to the Kaminoseki issue. On 9 May,

a "Nation-wide Gathering Against Plans for the Kaminoseki Plant" was held in Tokyo, and many people from across the country came to join the protest. It was the first time that a nation-wide event had been held in connection with Kaminoseki since the construction issue arose.

In the face of progress made in the deregulation of the electricity market, there are many even within the electricity industry who are unenthusiastic about costly nuclear energy. We are convinced that by coordinating opposition efforts and rising public support for a nuclear phase-out, the Kaminoseki plan can definitely be stopped.

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 (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, HANGENPATU-NEWS. Due to costly processing fees on personal checks, 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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Correction: (NIT 83 p.3) Masahiro Takubo (f) -> Masafumi Takubo (t)

Anti-Nuke Who's Who

The Association for the Preservation of Nagashima's Nature

A group with a mission to protect the "Ultimate Paradise"

By Midori Takashima (Representative of the Association)

The Association for the Preservation of Nagashima's Nature was founded on 29 September 1999, and currently has about 150 members. It is an environmental organization set up to protect the natural environment of Nagashima, the planned site for Kaminoseki nuclear plant, which has a unique ecosystem and natural riches that are worth the world's attention. The organization has conducted joint studies with groups of experts from societies such as the Ecological Society of Japan. It also holds public functions and gatherings in the interest of citizens and sells products illustrating the rare species of the area.

"The ultimate paradise" is the nickname scientists have given to the proposed Kaminoseki site in Nagashima. The area has three main features.

1. It is a treasure house of rare creatures:

(i) Species of world significance such as the Yashimaishin (a type of mollusc) live there (Fig. 1. All figures except Fig. 3 provided by the Association for the Preservation of Nagashima's Nature.). These shell creatures hold the key to understanding the evolution of the snail.

(ii) In comparison to the fact that the number of Sunameri (the smallest whale in the world) living in the Setonaikai (Seto Inland Sea, see maps in p.10) is now only 15% of what it was 20 years ago, the area that would be affected by the construction of a nuclear power plant at Kaminoseki is the only area where Sunameri has not only maintained its numbers but rears its young (Fig. 2). This whale is classified as a protected species by the Ministry of Environment.

(iii) By the beginning of the 1990s, there were only 200-300 pairs of Peregrine Falcons



Fig.1 Yashimaishin



Fig. 2 Sunameri (*Neophocaena phocaenoides*)



Fig. 3 Peregrine Falcons
(*Falco peregrinus*, *Hayabusa* in Japanese)

Source: <http://www.gfnet.co.jp/~dive/hayabusa.html>



Fig. 4 Namekujiuo (*Branchiostoma belcheri*)



Fig. 5 Amakusaumikochou (*Gastroperon bicornutum*)

in the whole of Japan (Fig. 3). Peregrine Falcons nest and breed in this area.

(iv) After 1980, the Ariakekai (Ariake Sea) and Aichi Prefecture were the only places where Namekujiuo (a fish listed as endangered by the Fisheries Agency) had been sighted (Fig. 4). This chordate breeds in this area.

2. Due to the Black Tide flowing from the Bungo Channel, many warm-current and ocean species, including Amakusaumikochou (a type of mollusc), are living in this area (Fig. 5).

3. In this area, 75% of the seashore has been maintained in its natural state (cf. Yamaguchi Prefecture as a whole, 23%; and the Seto Inland Sea as a whole, 21%). Village laurel forests are in good condition. Overall, the natural environment has remained largely undisturbed.

Chugoku Electric's Environmental Impact Assessment (Preliminary Paper) of the area, submitted to the former Ministry of International Trade and Industry (MITI) on 27 April 1999, was criticized for the following elemen-

tary oversights:

(i) It did not mention Sunameri or Namekujiuo;

(ii) It said nothing about the Peregrine Falcon, other than that they have been seen flying in the area;

(iii) It overlooked rare shell species.

Supported by the Yamaguchi Prefectural Governor and the Director of the former Environment Agency, the MITI took the unprecedented step of advising Chugoku Electric to undertake a supplementary investigation. However, the supplementary report of 18 October 2000 (Interim Report) concluded, without any scientific justification, that "the impact on the environment will be small". Then, without adequate deliberation, the MITI and Yamaguchi Prefecture made it clear that they "basically accept the interim report". The supplementary investigation was a ceremony for "fitting *geta* sandals to a failure"*.

At its 2000 meeting, and again at its 2001 gathering, the Ecological Society of Japan passed a motion calling for the assessment to be done afresh. The Association for the Preservation of Nagashima's Nature is also appealing to the administration and spreading the word about Nagashima's natural environment and ecosystem. The association has been building interest and support throughout Japan and internationally through such activities as joint studies with scientists, a tour of inspection for an inter-party group of parliamentarians (see p.11) and by networking with a wide range of environment groups. The question is this: will we stop the first new nuclear industrial development of the 21st century, and leave to the children of the future the incalculable benefits of this wonderful ecosystem - something which we can be proud of - or will we leave behind the burden of living in fear of nuclear after-effects? Our responsibility to the children of the future is great indeed.

* This is a Japanese proverb which means, to raise the marks of a failed student so that s/he can pass, just as putting sandals on increases a person's apparent height.

NEWS WATCH

Views of Japanese Electrics on U.S. Pro-Nuclear Policy

On 17 May 2001, the U.S. President George W. Bush announced the National Energy Policy, promising to work out policies for promotion of nuclear energy as well as expansion of the use of fossil fuel. To this the Japanese power industry has taken a cool stance.

Asked at the regular press conference held on 18 May if the U.S. policy would make it easier for them to construct more nuclear reactors in Japan, Hiroji Ota, President of the Federation of Electric Power Companies, stated that there would not be an immediate change, but that he is hopeful of a steady penetration of the effect. To another question, "Do you expect that the construction of nuclear reactors will actually be promoted in the U.S.?" he answered as follows: "Although there was no regulation to prohibit the construction of reactors, no reactor was built. It is not the government who would be in charge of building. Managers used to short-term competition will not try, as nuclear plants require an enormous amount of investment and take time to recover the costs. Without a change in management philosophy, it won't happen."

Keidanren Proposes Pro-Nuclear Policy

On 22 May 2001, Keidanren (Japan Federation of Economic Organizations) expressed its views on the nation's energy policy for the first time in 14 years. In this announcement it proposed to promote nuclear power, putting more emphasis on a stable supply of energy rather than responding to environmental problems. Specifically, it suggested caution in deregulating the electricity industry and introducing environmen-

tal taxes. This view is quite similar to the Basic Bill on Energy, which the Liberal Democratic Party (LDP) is working to pass as legislation to be introduced by a Diet member. The bill was officially compiled on 18 May 2001 by the LDP's Subcommittee on a Comprehensive Energy Policy, and it is due to be submitted at the next Diet session.

Move Begins for Monju Re-start

On 8 Dec. 2000, the Japan Nuclear Cycle Development Institute (JNC) asked Fukui Prefecture and Tsuruga City for prior agreements relating to JNC's applying for safety reviews of plans for the remodeling of Monju Prototype FBR (280 MW) - a necessary step prior to resumption of operation of the plant. Monju had stopped its trial operation due to the sodium leak and fire accident on 8 Dec. 1995.

On 21 May 2001, the LDP executive board members in the Fukui Prefectural Assembly met with the Governor, and told him that they as a faction approve JNC's applying for safety reviews. This was in response to a reply by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) to the LDP members two days before, on 19 May. The ministry revealed that it was prepared to make the utmost efforts for regional development measures, such as provisions of special subsidies which LDP members had proposed as a condition for allowing the initiation of safety reviews. On 22 May 2001, the Fukui Prefectural Citizens Union, the largest faction after the LDP, told the Governor that they would leave the decision up to him on conditions that "[the Governor] will handle the safety reviews completely separately from the re-start of operation" - a virtual approval.

On 5 June 2001, the Governor gave his approval, and on the following day JNC applied to the Ministry of Economy, Trade and Industry (METI) for the safety reviews of its remodeling plans for Monju.

Kagoshima Governor "Defers" Allowing EIA for Sendai 3

On 6 April 2001, the Governor of Kagoshima Prefecture announced that he will "defer" the decision on allowing Kyushu Electric, which had sought permission from the Prefecture on 8 Sep. 2000, to conduct an environmental impact assessment for the planned site for Sendai 3. However, since he further stated that he did not intend to give a second response, his announcement was virtually a refusal.

The reason for this negative response lies in the split in the opinions of the heads of Sendai City and eight neighboring municipalities: four are in favor, three are against, and two deferred. Prefectural citizens' opposition, including fisher people, is part of the background to this dispute.

Referring to Kyushu Electric's FY 2001 power supply plan (released at the end of March), which stated that operations would be suspended at thermal plants with a total output of 1.5 million KW - about the same scale as planned Sendai 3 (advanced PWR) - the Governor expressed doubt about the need for the reactor.

Draft Outlook for Long-Term Energy Supply and Demand

The Advisory Committee for Natural Resources and Energy, an advisory organ serving the METI, has been trying to compile the draft of the Outlook document assessing the long-term energy supply and demand by the end of June. The draft is now being finalized.

Although it is called "long-term," the limit of the assessment is FY2010, not so far in the future. However, one of the two proposals presented as targeted cases, the de facto target case (trial calculation I or Case I), has reference values for FY2020 attached. Trial calculation II (Case II), prepared as an alternative to Case I, assumes

no additional construction of nuclear reactors, and the Outlook openly reveals its intention to present Case II as "an unrealistic case."

In Case I, the ultimate energy consumption will be about 400 billion kl in crude oil equivalent, almost equal to FY1999's actual amount of 409 billion kl. In Case II, it will be 380 billion kl. The amount of primary energy supply will be 602 billion kl in Case I, and 580 billion kl in Case II. Nuclear power is to supply 93 million kl in Case I and 70 million kl in Case II. The Outlook projects that in Case II the production output of the manufacturing sector will be reduced by 4.2%, affecting the employment of 2.28 million people. However, no grounds were given for these figures.

In the draft Outlook it is proposed that power source should be shifted from petroleum to natural gas and that a tax should be imposed on coal. The power industry is opposed to these proposals. Further twists and turns are expected before the draft is finalized.

Preparatory Work for Ohma Nuclear Plant Suspended

Electric Power Development Co., Ltd. (EPDC), which has been trying to build an advanced BWR (1,383 MW) in Ohma Town, Aomori Prefecture, announced in April 2001 that preparatory work, including the construction of a port which had begun a year earlier, would be suspended. The company plans to load this reactor entirely with mixed uranium-plutonium oxide (MOX) fuel.

In connection with the proposed construction of this reactor, the Agency of Natural Resources and Energy had been conducting a safety review since Sep. 1999, but preparatory work on the plant began without waiting for the results. There is a piece of land of about 1.2 hectares within the site, in the area where the reactor core would be located, whose owner refuses to sell. In May 2000, the owner built a green house for strawberries to express his strong will not to sell the land. Since there is no prospect of the EPDC acquiring this piece of land, the preparatory work on the plant had to be suspended.