

NUKE INFO TOKYO

March/April
2007



Citizens' Nuclear Information Center

No. 117

3F Kotobuki Bldg., 1-58-15, Higashi-nakano, Nakano-ku, Tokyo 164-0003, JAPAN

URL: <http://cnic.jp/english/>

e-mail: cnic@nifty.com

Step Three of Active Tests Begins



Three stacks at Rokkasho reprocessing plant (Photo by Noboru Kobayashi)

government inspections, will be completed without further incident. In reality, a number of procedures must be completed before full operations can start. Both central and prefectural governments must assess the results of the tests and Aomori Prefecture and Rokkasho Village must conclude safety agreements for full operations with JNFL. Given that there are likely to be more incidents and accidents during the

remainder of the tests and

Japan Nuclear Fuel Ltd (JNFL) completed step two of the active tests ("hot tests") at the Rokkasho reprocessing plant on 6 December 2006 and commenced step three on 29 January 2007. The overall schedule was delayed in response to two incidents involving worker exposure to radiation in May and June last year (NIT 113). According to JNFL, the tests were 45% complete at the end of December.

Schedule for start of full operations delayed again

On January 31st JNFL President, Isami Kojima, announced that the active tests would not be completed until October, meaning that the start of full operations would be delayed by 3 months to November 2007. This is the 10th time the schedule has been delayed. However, this date assumes the active tests, including pre-start-up

that various alterations and extensions are being carried out at the plant, we presume that start-up will be further delayed.

One would expect the delay to increase the plant's total cost, but Mr. Kojima said that JNFL would absorb the costs through management efficiencies. Hence, the total cost remained at

Contents

Step three of active tests begins	1-3
Another TEPCO scandal	4-6
Cost of Decommissioning	7,8
Shika-1 uncontrolled criticality	8
Fugen ATR fails strength tests	9
Opposition to US-India nuclear deal	10,11
Plutonium Use Plans	12,13
Who's Who: Kazuyoshi Sato	14
News Watch	15,16

2,193 billion yen. However, further cost increases are inevitable. It is just that JNFL is trying to hide the true cost of reprocessing. (See News Watch re subsequent cost increase to 2,353 billion yen.)

No checks after step 3

During the first two steps, 60 tons of spent fuel was reprocessed in a period of seven months. By comparison, during steps three to five, JNFL plans to reprocess 340 tons in ten months. From the beginning of step three, JNFL has commenced reprocessing a large quantity of BWR fuel. The Head End Building and the Separation Building have two process lines, one for PWR fuel and one for BWR. We are concerned that problems will arise in the BWR line, because only limited experience with BWR spent fuel has been accumulated at the plant on which Rokkasho is based, the French reprocessing plant in La Hague. A large quantity of higher burn-up fuel will be reprocessed, so the amount of radioactivity released will greatly increase. Also, according to the current schedule, vitrification of liquid high-level waste will commence in the latter half of July.

However, the published schedule includes no "hold-point" from steps three through five. At the end of steps one and two there were hold-points, during which JNFL submitted reports which were assessed by the local, prefectural and central governments. Thus, external checks were built into the program. However, from now on, JNFL will proceed from one step to the next on the basis of its own judgment alone. JNFL should be made to release information about the tests for step three onwards, to enable external assessment of plant safety, the state of operations, the quantity of radioactivity released and contamination of the surrounding region.

In this regard, it is worth noting that the Aomori prefectural assembly abrogated its responsibility to carry out its own assessment of JNFL's report on step two. The report was submitted in December and the Nuclear and Industrial Safety Agency and the Nuclear Safety Commission completed their reviews on January 15th and 16th respectively. However, the prefectural assembly failed to exercise its right, as the representative of the people of Aomori, to directly question JNFL and the government about the report. Aomori Governor, Shingo Mimura, gave his approval for JNFL to

proceed to step 3 on January 29th and the tests recommenced later that day.

Retraining for analysis work

Step two continued for 4 months from 12 August to 6 December 2006. It became clear that there were inadequacies in regard to the subcontracting of analysis work and staff training after two instances of internal radiation exposure occurred in the Analysis Building during step one. JNFL was under pressure to take corrective action, so during the first month and a half of step two JNFL trained staff in analysis procedures and tested the accuracy of their analysis. One must ask why such training was not carried out sooner. If it were not for the incidents of radiation exposure, this training would not have been carried out at all. This is a good illustration of the safety problems at the plant.

Production of MOX begun

Sixty tons of spent fuel was reprocessed during step two, including 50 tons of PWR fuel (109 assemblies) and 10 tons of BWR fuel (57 assemblies). During step two, tests commenced in the Uranium Denitration Building and the Uranium-plutonium Co-denitration Building. A total of 212 kilograms of MOX powder (uranium-plutonium mixed oxide powder) was produced, 170 kilograms in November and 43 kilograms in December (figures do not add up due to rounding). A nuclear agreement between Japan and the US prohibits extraction of plutonium by itself, so solutions of plutonium nitrate and uranium nitrate are mixed in a one to one ratio. This is then denitrated to produce a mixed oxide, which is stored as mixed plutonium-uranium powder (see NIT 115). It is planned that a total of 7 tons of MOX will be produced during the active tests. (See pages 13 and 14 for details of the electric power companies' MOX utilization plans released on 23 February 2007.)

Detection of Krypton 85

Monitors have begun to detect the release of krypton. According to JNFL's step 2 report and Aomori Prefecture's "Report on Environmental Radiation from Nuclear Facilities" (2006 Fiscal Year, second quarter (July-September)), on 18 August 2006 elevated radiation levels (beta emitting gases) were detected 4 kilometers south-

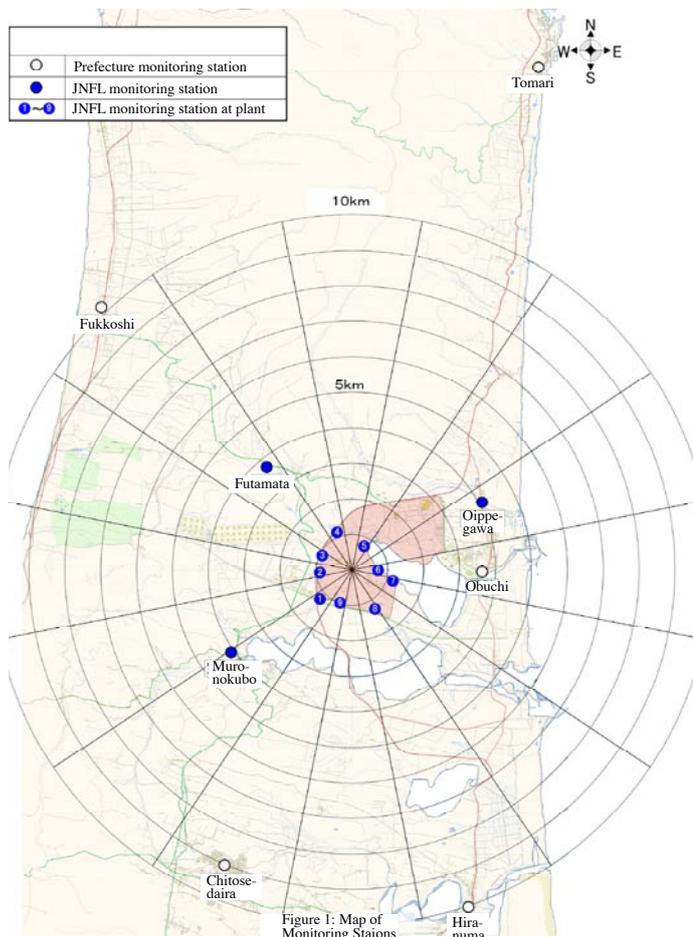


Figure 1: Map of Monitoring Stations

west of the Rokkasho reprocessing plant by a monitoring station in the Muronokubo district of Rokkasho Village (see map). Until then the concentration had remained below the minimum detectable level of 2,000 Bq/m³, but on that day for one hour (22:00~23:00) the average concentration rose to 3,000 Bq/m³. The radiation was detected when spent fuel was being sheared at the reprocessing plant, so it must have been beta rays from Krypton. Elevated levels of aerial gamma radiation has also been recorded 4 to 5 kilometers from the plant at Obuchi, Oipegawa and Muronokubo. JNFL says in its report that this is not a cause for concern, because the radiation recorded was within the range detected before active tests began. However, it is clear that beta levels at least have begun to exceed this range.

Masako Sawai (CNIC)

Continued from page 16 ruptured (see NIT 102, 103, 106). They have been charged for failing to take corrective action, even though they were aware that the location in question had never been inspected since the reactor commenced operations in 1976.

KEPCO senior managers avoided prosecution by claiming that they were not informed before the accident that the pipe had not been inspected. Many residents, including relatives of the deceased, protested the fact that senior managers escaped prosecution and legal experts have criticized the decision on the grounds that it encourages corporate irresponsibility.

Mihama-3 recommenced commercial operations on February 7th. (Adjustment operations began on January 10th.) Since the 2004 accident, KEPCO has been investigating thinning of pipes in the secondary system. According to results released on February 22nd, pipe thickness failed to meet regulatory standards at 66 locations (not including the location that ruptured) in 10 of its 11 reactors. Of these 79% were in 5 aging reactors, which have been operating for over 30 years.

Disposal of TRUs / waste swapping

On March 9th, Cabinet endorsed draft amendments to three laws which will allow transuranic waste (TRU, which the Japanese government calls "long half-life, low heat generating waste") to be disposed of with high-level waste. The draft amendments will now be submitted to the Diet for final approval. The draft amendments also allow swapping of radioactive waste due to be returned from the UK. They will allow high-level waste to be swapped for low and medium-level waste of an equivalent radioactivity content.103, 106). They have been charged for failing to take corrective action, even though they were aware that the location in question had never been inspected since the reactor commenced operations in 1976.

Haiku for the season

*Over dandelions
School-girls tarry on the way home
First sweet temptation*

by Michiko Murai

"Not Again": Yet Another TEPCO Scandal

Over the years there have been all sorts of cases of data fabrication and falsification at nuclear, thermal and hydroelectric power plants. Each time the power companies and plant makers apologize and say that they will lance the wound, but then they go and repeat the same behavior over and over again. When Tokyo Electric Power Company (TEPCO) reported yet another case of data falsification to the Ministry of Economy Trade and Industry (METI) the headline in the Fukushima local newspaper the following day (1 February 2007) was "Not Again!" sigh the local people and the Prefectural government".

The latest scandal began when *Asahi Shimbun* newspaper reported on 31 October 2006 that Chugoku Electric Power Company had falsified data for Doyo Dam on the Matano River. People might assume that the reason for Chugoku Electric's admission was simply that it had made a judgment that the problem could no longer be concealed once it was leaked to the newspaper. However, there was more behind the admission than meets the eye. Even before this, anti-dam activists had been pursuing TEPCO over suspicious data related to its dams. For example, it had recorded flow measurements that could not possibly have been taken, because the locations were inaccessible due to heavy snow falls. Chugoku Electric's admission should be seen against this background.

METI and the Ministry of Land Infrastructure and Transport responded by demanding that all electric power companies check their records. The upshot was that it was discovered that Chugoku Electric was not alone. In fact, it became apparent that all power companies had falsified and fabricated data in relation to such things as subsidence of dam embankments, and alterations to facilities without prior approval.

The next major development came on November 15th, when it was revealed that Chugoku Electric had falsified data in relation to releases of hot wastewater at its Shimonoseki thermal power plant. This led to similar revelations for nuclear power plants owned by TEPCO, Kansai Electric Power Company (KEPCO), Tohoku Electric Power Company and Japan Atomic Power Company (JAPCO). On 10 January 2007 TEPCO submitted a report to METI entitled "Causes of and measures to prevent a repetition of falsification of sea temperature data at the

condenser outlets of Kashiwazaki-Kariwa Nuclear Power Plant, Reactors 1 and 4". The report said, "An investigation of power plants was instigated, because the Shimonoseki thermal power plant case reminded a worker that corrections had been made to sea temperature data." As a result, falsification (referred to by TEPCO as "corrections") was discovered at Kashiwazaki-Kariwa reactors 1 & 4 and Fukushima I reactors 1, 4 & 5.

The hot wastewater referred to here is seawater, which has been used to cool and condense the steam used to drive the turbines of thermal and nuclear power plants. When the steam from the turbine condenses, its heat is transferred to the coolant, which in this case is seawater. The temperature of the seawater is raised in the process. If the seawater released is too hot, it can affect the ecosystem. Therefore, the temperature at both the intake and outlet points is measured and monitored to ensure that the temperature difference is not too great. At some power plants computers were programmed to record a higher than actual intake temperature, while at others they were programmed to record a lower outlet temperature. The readings were thus falsified to show a lower temperature difference than was really the case.

On 31 January 2007 TEPCO released details of data falsification at its nuclear power plants. It admitted to a total about 200 irregularities. A few examples are discussed below.

1. During a periodic inspection in May 1992 at Kashiwazaki-Kariwa reactor number 1 (K-K-1), the day before it was to be tested it was discovered that, due to a fault with the electric motor, the residual heat removal pump (part of the Emergency Core Cooling System (ECCS)) was not working. TEPCO staff made some adjustments to make it appear from the central control room that the pump was working. In this way, they were able to trick the METI inspector into awarding a pass for the inspection.

2. Again at K-K (the reactors are not specified), from around 1995 to 1997, measurements of the concentration of radioactive iodine released from the exhaust stack were made to appear lower than they really were by taking the measurements on the reverse side of the filter. In May 1995 the concentration of radioactivity from rare gases emitted from the exhaust stack of reactor 4 was also falsified.

3. From 1979 to 1998, in order to pass inspections, internal pressure readings for steam pipes connecting the reactor to the turbines at Fukushima I reactor 1 were falsified to match the specifications in the inspection guidelines. It was said that the specifications were inappropriate and that they were later amended so that falsification ceased to be necessary.

There were many instances of malpractice besides these, in relation to periodic inspections and also in other areas. Fabrication and falsification had indeed become standard practice. Investigations are still proceeding and one cannot help feeling that the most serious and dangerous cases are still to come.

Of course, the cases revealed so far are already serious enough. In some cases the management of electric power companies was involved, while in other cases subcontractors were at fault. It is a very serious matter when the whole company, including management, is involved. However looked at from another perspective, it is also very serious when management is not involved. When malpractice occurs at the work site and judgments are made at the whim of individuals, data ceases to have any meaning. We must conclude that all data is suspect and that the basis on which nuclear reactors have been judged to be safe has been completely undermined.

Moreover, data falsification, which was carried out so freely, at times involved considerable effort and ingenuity: for example, altering computer programs related to the measurement of sea temperature, or changing the wiring of instruments to deceive government inspectors. Why did they go to such lengths?

The Focus (Shouten) column in the February 9th edition of the *Denki Shimbun* (Electricity Newspaper) makes the following comment. "The production sites of electric power enterprises are all huge assemblies of technicians. For better or worse, these places are governed by the values of technicians....The thing of most concern [to technicians] is protecting the process." If *Denki Shimbun* is right about the values of technicians, it is hard to see how TEPCO's explanation in its 10 January 2007 report has any basis in the "values of technicians". TEPCO claimed that "falsification occurred because passing the inspections became the objective". However, if this is indeed a truer indication of the values of technicians, the problems go beyond the safety of nuclear power

plants. We must conclude that Japan's conception of technology is fundamentally distorted.

But apparently this is not so strange for people associated with the electric power industry. TEPCO advisor Masao Takuma (manager of K-K at the time of the cover-up of the fault in the reactor 1 ECCS) said, "People at the site have great pride in their technology. However, the regulations covering nuclear power are very strict. It seems that this had the opposite effect to that which is intended. People ended up thinking that all that was necessary was to pass the inspections." (*Niigata Nippo*, 2 February 2007)

We find a similar comment in the 8 February 2007 edition of the *Genshiryoku Sangyo Shimbun* (Nuclear Industry Newspaper). "If scientific and rational regulations which everyone could accept were introduced, the incentive for malpractice would be naturally reduced." Apparently they are hoping to repeat their success after the cover-ups which were revealed in 2002. After those cover-ups a "fit for service" rule¹, which allows them to keep operating reactors even after defects have been discovered, was introduced.

The February 15th edition of *Denki Shimbun* goes even further. Here are some extracts. "There is a tendency these days for inspectors to 'crack down on infringements like the pre-war special police.'" "It's as if they were trying to get the last grain of rice out of the lunch box."² "[In the past] nuclear power companies could discuss management of the plant with government officials in advance...Welcoming meetings for the inspectors were held regularly at the site...There was a close connection between the inspector and the inspected." The article celebrates those as the good old days, but it shows no understanding of the fact that it was precisely those days when the malpractices occurred.

TEPCO President, Tsunehisa Katsumata, said at a press conference on 30 November 2006, "Perhaps there were some sort of life skills at play." "There was a time when people thought they would be excused if they didn't follow the proper reporting procedures." Malpractices became the norm in those times.

One question that must be asked is whether malpractice was restricted to those times and no longer occurs today. In its January 31st report to METI, TEPCO excuses itself by saying, "We consider that [these malpractices] had no impact on safety." It adds, "We are in the process of

confirming that falsification such as this is not practiced today." However, the issue is not whether individual incidents directly caused safety problems. It is rather that, based on excuses such as these, safety was undermined by data falsification related to important safety systems such as ECCS and by passing periodic inspections through trickery.

On March 1st TEPCO handed METI another report which included some additional instances of malpractice and a plan for preventative action. The preventative measures plan emphasized creating "a more open corporate culture", but there were few details. An additional example of malpractice related to the failure to report scrams which occurred when reactors were being shut down manually for inspection (Fukushima II-1, K-K-1).

TEPCO claimed after the 2002 revelation of cover-ups related to inspection data that it had created a culture and a system in which malpractices would not occur. It says that the incidents that have emerged this time all predate these changes and that they were not discovered during periodic inspections. However, if these practices really stopped as promptly as TEPCO claims, they must have shown up during periodic inspections. Until 2002 malpractices such as doctoring computer programs were carried out on a daily basis. In order to stop such practices TEPCO would have had to take corrective measures, including returning doctored computer programs to their proper state. They couldn't do this if they didn't know about these malpractices.

This tells us that the TEPCO has not changed its nature since the inspection data cover-up. This time, TEPCO once again tried at first to conceal its malpractice. It euphemistically said that it had "corrected the temperature difference between the intake and outlet points" at the Kashiwazaki-Kariwa NPP. Due to the local outcry against TEPCO's lack of remorse, it chose different words to describe its behavior at the Fukushima I NPP. In that case TEPCO admitted that it had "handled the temperature measurement data inappropriately", but it still refused to admit that it had "falsified" the data. Since then it has admitted that it made a mistake, but the style of its announcements reveals TEPCO's true colors even more clearly than its past malpractices.

In fact, TEPCO's claim that there have been no instances of malpractice since 2002 is false. On 1 June 2005 TEPCO reported a case

at Fukushima I-5 related to the system which controls the concentration of flammable gases. A correction coefficient for a flow control device was "set inappropriately". This situation continued from 1983 to 2005. TEPCO says that this case began before 2002 and that it went unnoticed thereafter. TEPCO is desperate to find excuses, but malpractices which began after 2002 have been discovered in fossil fuel plants and we suspect that it is just a matter of time before they are discovered in nuclear plants too.

According to a *Kyodo News* article published by several Japanese newspapers on February 8th, "A METI executive said, 'If there have been any cases since then [2002], personally I think we should consider revoking their reactor establishment license.'" "What are they waiting for?" one might ask. However, it is probably just as important to question METI's lax inspection system, which was so easily deceived.

On February 16th METI issued a press release in which it listed three areas which needed to be strengthened:

1. Simultaneous observations of the central operations rooms and the actual operation sites;
2. Onsite confirmation before inspections are carried out of such things as whether or not valves are open;
3. Strict examination of measuring instruments.

It makes one wonder what on earth they were inspecting for all these years.

Over and over again METI has demanded that electric power companies "report on their investigations into the causes". However the roots of this massive malpractice go very deep. Getting to the bottom will be no easy matter. Time should be taken to carry out a thorough investigation. A laid back response will achieve nothing.

All power companies are due to announce the final results of their reviews on March 31st. We look forward to more entertainment watching them trying to wriggle out of their responsibilities.

Baku Nishio (CNIC Co-Director)

1. Codes for in-service inspection
2. Idiomatically translated this means something like "Some inspectors go overboard."

(**Stop Press:** See page 8 for information on other power companies released since this article was written.)

Cost of Decommissioning and Disposal of Nuclear Power Plants

The cost of decommissioning and disposal of nuclear power plants is currently being discussed by the Subcommittee for Improvement of the Investment Conditions in Nuclear Power Generation (hereafter the Subcommittee). This is a subcommittee within the Electricity Industry Committee of the Advisory Committee for Natural Resources and Energy (ANRE).

Under the Japanese system, which was introduced in 1988, each power company must establish its own reserve fund. This is based on the notion that (1) decommissioning nuclear power plants is extremely expensive, and (2) since this cost will be incurred after the plant ceases to produce electricity, from the perspective of inter-generational equity, funds to cover this cost should be set aside while the plant is still producing electricity. The system for calculating the amount to be set aside has been changed many times over the years. Under the current system the amount to be set aside is determined each year.

Different countries employ different systems to secure the costs of decommissioning nuclear power plants. The systems in France and Germany are similar to Japan, in that the money set aside is held by the power companies. In Switzerland power plant operators pay an annual contribution into an independent decommissioning fund. In each case the funds are either tax-exempt, or receive preferential taxation treatment. In Japan the fund is tax-exempt. In America, the Nuclear Regulatory Commission (NRC) requires the licensee to set aside funds (prepaid or paid periodically) into an account segregated from the licensee's assets and outside the licensee's control. Under another system recognized by NRC, the licensee provides a surety bond, letter of credit, or a line of credit to cover decommissioning costs.

This article outlines the Japanese system, including the cost items covered, the basis of the calculation and the total costs. Items currently covered include the following: decommissioning and dismantling; decontamination of pollution arising from nuclear fuel; processing, management and disposal of radioactive waste; and transport to the disposal site. The amount that must be set aside each year is calculated using the following

formula:

Amount for any given year =

(total estimated cost x 90% x accumulated electricity generation ÷ estimated total electricity generation) – amount set aside up until the previous year

"Accumulated electricity generation" is calculated as licensed power output x 40 years x 8,760 hours x capacity factor (76%). From 1988 to 1998 operating life was set at 27 years, but in 2000 that was raised to 40 years. Capacity factor was originally set at 70%, but that was gradually raised to 76% by 2003. Under the above formula, once "accumulated electricity generation" reaches the "estimated total electricity generation", no more money is set aside. For fossil fuel plants, the cost of decommissioning is calculated at the time of decommissioning. The system of calculating an appropriate amount in advance is unique to nuclear power. This amount is multiplied by 90%.

The cost of decommissioning is affected by several factors. For example, changes in policy can lead to changes to the existing method of decommissioning. Other factors include changes in the economic circumstances, technical improvements, changes to the system through legislative amendments. The Subcommittee has been discussing cost changes resulting from legislative and regulatory changes which have affected the cost of waste management and disposal.

The following recent legislative and regulatory changes are relevant:

1. a clearance system has been introduced (see NIT 100, 104, 105, 106);
2. the estimated time required for decommissioning has been changed;
3. a law has been introduced which requires that building materials be recycled.

The Federation of Electric Power Companies (FEPCO) assessed the impact of these changes as follows:

1. The standards set under the clearance system introduced in 2005 were stricter than those proposed by The Nuclear Safety Commission in 1999. The effect of this is to increase the quantity of material to be disposed of as radioactive waste, and hence to increase the cost of disposal. It also

increases the cost of the associated inspections.

2. Under the current calculations, decommissioning commences after spent fuel has been transported out of the site and systematic decontamination begins. However, regulatory amendments in 2005 redefined the commencement of decommissioning as being when spent fuel has been moved from the reactor core to the spent fuel pool. This lengthened the time required for decommissioning and increased maintenance costs. However, surveillance costs were reduced by employing a day time only instead of a 24 hour surveillance system.

3. A new law made it mandatory to recycle waste concrete. The current calculations assume a cost of 1,000 yen per ton. This is based on burial of waste concrete. However, costs will rise to 7,000 yen per ton if the concrete is recycled.

FEPCO's revised cost assessment is based on 1100 MW BWR or PWR model plants. The results of FEPCO's assessment are shown in Table 1 (current costs included by CNIC).

Table 1

Cost of Decommissioning (1,100 MW model plant) (billion yen)

	BWR	PWR	Total for all plants
Decommissioning (current)	40.4	37.6	2,525
Management/disposal of waste (current)	16.1	16.8	
+ (1) Clearance	4.5	0.8	+ 116.6
+ (2) Time for disposal	2.0	1.9	+ 106.3
+ (3) Recycling	3.0	2.7	+ 106.2
Total	65.9	59.7	+ 329

1. Current costs are in 2004 prices.

2. Totals might not add up due to rounding.

3. Total for all plants is in 2002 prices. At the time there were 52 power reactors with a total output of 45,740 MW. There are now 55 power reactors with a total output of 49,580 MW. A total cost estimate for decommissioning 55 reactors has not yet been released.

The Subcommittee requested more details from FEPCO, saying that it is not reasonable to amend the cost estimate just on the basis of the final results of FEPCO's analysis. FEPCO is expected to submit further details at the Subcommittee's March 14th meeting.

Shika-1 Uncontrolled Criticality Incident Cover-up

As stated on page 6, power companies besides TEPCO are due to release details of their reviews into past malpractices on March 31st. However, already more examples of past cover-ups are beginning to dribble out. Revelations of TEPCO's failure to report scrams forced other power companies to acknowledge similar cases. The most spectacular involved an uncontrolled criticality incident at Hokuriku Electric's Shika-1 (BWR, 540 MW).

The incident occurred on 18 June 1999 during a periodic inspection, which continued from April 29th to July 23rd. Preparations were being made to test the reactor's shutdown function. All control rods were supposed to have been fully inserted at the time, but three rods dropped out of position. Hokuriku Electric presumes that an incorrect valve adjustment caused the rods to drop. The reactor went critical and remained in that state for fifteen minutes. The heads of both the reactor pressure vessel and the containment vessel were removed at the time.

The manager of the Shika plant decided not to report the incident to the government and records of the incident were not kept. The Nuclear and Industrial Safety Agency (NISA) has described the incident as "truly deplorable". It is reported that NISA suspects Hokuriku Electric may have violated nuclear-related laws, which mandate that reports be submitted about certain types of reactor incidents.

On the same day that NISA received Hokuriku Electric's confession, it ordered that the reactor be shut down, that a detailed report be submitted and that preventative measures be taken. However, this is like closing the gate after the horse has bolted. Hokuriku Electric's cavalier disregard for safety and its disdain for the regulatory system warrant a stiffer penalty. Clearly Hokuriku Electric is not fit to operate nuclear reactors, so the most appropriate response is to revoke its license.

It is worth remembering that in March last year the Kanazawa District Court concluded that Hokuriku Electric's other reactor, Shika-2, should be shut down for earthquake safety reasons (NIT 112). The wisdom of that verdict has been confirmed by this latest incident. Unfortunately, the company defied the verdict, vowing to continue operating the reactor pending the result of an appeal.

Fugen ATR Fails Strength Tests

On 10 February 2007 the *Mainichi Shimbun* reported that in the course of tests being carried out prior to decommissioning the Fugen Advanced Thermal Reactor (ATR, 165 MW) it was discovered that concrete walls on an auxiliary building did not meet the required strength standard.

Fugen is owned by the Japan Atomic Energy Agency (JAEA) and is located in Tsuruga in Fukui Prefecture. It commenced full operations in March 1979 and was finally shut down in March 2003. Removal of fuel was completed in August 2003. This fuel is gradually being transferred to JAEA's reprocessing facility in Tokai, Ibaraki Prefecture. The plan is to transfer all the fuel by 2011.

On 7 November 2006, JAEA submitted its decommissioning plan for Fugen to the Ministry of Economy Trade and Industry (METI). It is expected that approval will be given in the near future. According to the plan, equipment surrounding the reactor will be dismantled and removed by about 2017. The reactor itself will be dismantled and removed by about 2026, while the buildings will be dismantled and removed by about 2028.

Waste arising during decommissioning is estimated to include 51,300 tons of radioactive waste and 141,100 tons of non-radioactive waste. Over 177,000 tons of concrete from underground structures and foundations are not targeted for disposal. If this is included, altogether around 370,000 tons of waste will be generated. Of the radioactive waste generated so far, about 600 tons is below the "clearance level". After decontamination is completed it is estimated that about 45,900 tons will be below this level. However, there is still no agreed destination for this waste.

Fugen is now being used for various experiments. One such experiment is being carried out for the Ministry of Education, Culture, Sports, Science and Technology (MEXT) by the Nuclear Safety Technology Center. This experiment is entitled "Experiment to demonstrate the safety of disposal measures for experimental and research reactors". It measures the radioactivity contained in concrete and metals and collects data on the radioactivity of waste from dismantled equipment. Another experiment related to the decontamination of radioactivity in metals was reported in the media on January 26th. It is part of a survey on decontamination technology being carried out by JAEA under commission from MEXT.

The experiment into the strength of concrete mentioned at the beginning of this article was

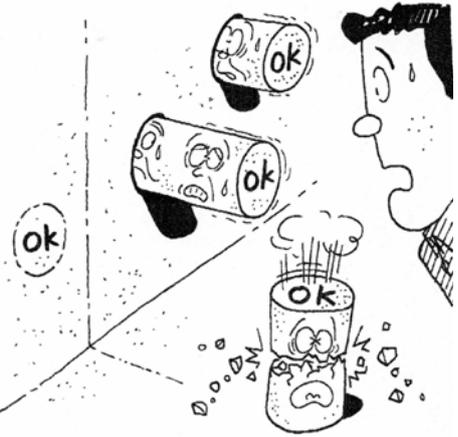
carried out by JAEA under commission from the Japan Nuclear Energy Safety Organization (JNES). It is part of a wider research program subsidized by METI under

which JNES is researching the effects of aging. The intention is that information gathered from samples taken from Fugen before it is decommissioned will be used to inform responses to aging in other reactors.

Thirty-four 10 cm diameter by 25 cm long samples were taken at six locations from the walls of buildings. The walls ranged from 30 cm to 150 cm thick. The results of destructive tests showed that 25 samples at 5 locations failed to meet the required strength standards. The weakest sample was only half the required strength. This was despite the fact that non-destructive tests carried out immediately before the destructive tests showed that the samples met the required standards.

One would have thought that the obvious conclusion to be drawn was that this experiment demonstrates once again that non-destructive tests are not to be trusted. However, the regulator, the Nuclear Industrial and Safety Agency (NISA), has perversely chosen to doubt the destructive tests. It claims that JAEA entrusted the actual testing to a company which did not have the necessary expertise and that the company might have made a mistake in the sampling. In making this claim, NISA is arbitrarily complicating the issue by pinning the blame on JAEA's long-standing practice of relying on subcontractors.

Indeed, NISA seems more concerned about the fact that the results were reported in the media than the results themselves. Citing JAEA's lax supervision, it has requested JNES not to commission work from JAEA in the next fiscal year. Residents of Fukui Prefecture have protested that this is another manifestation of NISA's proclivity for attempting to cover up problems, rather than face them head-on.



Cartoon by Shoji Takagi

Opposition to US-India Nuclear Deal

Letter to Japanese Government by members of Indian and Pakistani Civil Society Groups

Zia Mian, of the Program on Science and Global Security at Princeton University and member of the International Panel on Fissile Materials, visited Japan from January 27th to February 4th to raise awareness of the US-India nuclear deal and the role Japan could play in preventing serious damage to the non-proliferation regime. He brought with him a letter to the Japanese government from members and representatives of civil society groups and peoples' organizations from India and Pakistan. The letter is reprinted below.

1 February 2007

Dear Prime Minister Shinzo Abe and Foreign Minister Taro Aso

We are writing as members and representatives of civil society groups and peoples' organizations from India and Pakistan to urge you to consider how Japan could use its position as an important member of the Nuclear Suppliers Group (NSG) of countries to inform the debate and decision-making within the NSG on the US-India nuclear deal.

To bring the US-India deal into force will require a decision by all the NSG member-states to exempt India from the international rules that govern nuclear trade. Since the Group works by consensus, each of the 45 NSG members (including Japan) must approve the deal. Such a decision would mark a historic shift in nonproliferation policy since the Nuclear Suppliers Group was, in large part, a response to India's use of a research reactor and reprocessing technology received under the Atoms for Peace Program to produce and separate the plutonium for its 1974 nuclear-weapon test.

We describe briefly here our concerns about the US-India deal. We focus in particular on how the deal may enable a significant increase in India's production of fissile material for nuclear weapons and incite a similar effort by Pakistan. Such actions would gravely worsen the India-Pakistan nuclear confrontation and add to the threat already faced by the people of both countries and the world.

In July 2005, U.S. President George Bush and Indian Prime Minister Manmohan Singh proposed that India have the right to import nuclear reactors and uranium for its nuclear power program. The July agreement required the United States to amend both its own laws and policies on nuclear technology transfer, and to work for changes in international controls on the supply of nuclear fuel and technology so as to allow "full civil nuclear energy cooperation and trade with India". In 2006, the US congress made the changes in its laws, and President Bush has signed the legislation.

For its part, India's government agreed to identify some of its nuclear facilities and programs as civilian and separate them from its nuclear weapons complex, and volunteer these civilian sites for International Atomic Energy Agency (IAEA) safeguards in a phased manner by 2014. While India has declared a list of nuclear facilities that will be considered civilian, it has not yet reached an agreement with the IAEA on the appropriate safeguards.

The official list of facilities that would be declared civilian and open to safeguards includes only eight of India's indigenous power reactors that are either operating or under construction (India already has six reactors that are subject to safeguards because they were purchased from abroad). India's remaining eight power reactors, all its research reactors, and the plutonium-fuelled fast breeder reactor program are to be part of the military program and to be kept out of IAEA safeguards. India also claimed the right to classify as either civilian or military any future nuclear reactors that it might build.

A report for the International Panel on Fissile Materials (an independent group of nuclear experts from 15 countries) has estimated that this separation of nuclear facilities and the access to imports of uranium made possible by the deal will enable India, should it choose to do so, to increase its stocks of weapons grade plutonium from the present rate of about 7 weapons worth a year to about 40-50 weapons worth a year (available at <http://www.fissilematerials.org>).

Pakistan has expressed its fears about the US-India nuclear deal. Pakistan's National Command Authority (NCA), chaired by President Pervez Musharraf, has declared that "In view of the fact the [U.S.-India] agreement would enable India to produce a significant quantity of fissile material and nuclear weapons from unsafeguarded nuclear reactors, the NCA expressed firm resolve that our credible minimum deterrence requirements will be met." This suggests a South Asian fissile material race may be imminent. Such a race would be both dangerous and costly, and set back the efforts for peace and development in South Asia.

We believe that the NSG should consider the US-India deal in the light of United Nations Security Council Resolution 1172 (6 June 1998). The Resolution, which was passed unanimously, calls upon India and

Pakistan "immediately to stop their nuclear weapon development programmes, to refrain from weaponization or from the deployment of nuclear weapons, to cease development of ballistic missiles capable of delivering nuclear weapons and any further production of fissile material for nuclear weapons." The Resolution also "encourages all States to prevent the export of equipment, materials or technology that could in any way assist programmes in India or Pakistan for nuclear weapons."

We urge Japan and all members of the NSG to require that any nuclear cooperation with India and Pakistan should meet the conditions laid out in UN Security Council Resolution 1172. At the very least, India and Pakistan should be required to suspend all further production of fissile materials for weapons purposes pending the negotiation and entry into force of a Fissile Material Cutoff Treaty.

We ask that you share these concerns with other members of the NSG and to do what you can to ensure that the Indo-US nuclear agreement does not add to the dangers that already exist from nuclear weapons in South Asia.

A partial list of the signatories to this letter is below.

Cc: Speaker of the House of Representatives (Mr. Yohei Kono)
President of the House of Councilors (Ms. Chikage Oogi)

Selected signatories, India

Dr. M. V. Ramana, Centre for Interdisciplinary Studies in Environment and Development, Bangalore
Achin Vanaik, Member, National Coordination Committee, Coalition for Nuclear Disarmament and Peace (CNDP), New Delhi
Sukla Sen, Member, National Coordination Committee, Coalition for Nuclear Disarmament and Peace (CNDP), Mumbai
Praful Bidwai, Movement in India for Nuclear Disarmament, New Delhi
J. Sriraman, Movement Against Nuclear Weapons, Chennai
Dr. Anna George, National Institute of Immunology, New Delhi
Vineeta Bal, Saheli Women's Resource Centre, New Delhi
Harsh Kapoor, South Asia Citizens Web
M.Muthukannu, Indian Social Action Forum (INSAF), Puducherry
G.Sugumaran, Federation for People's Rights (FPR), Puducherry

Selected signatories, Pakistan

Dr. A. H. Nayyar, President, Pakistan Peace Coalition, Islamabad
B.M. Kutty, General Secretary, Pakistan Peace Coalition, Karachi,
Karamat Ali, Director, Pakistan Institute for Labour Economics and Research, (PILER), Karachi
Imtiaz Alam, Executive Director, South Asia Free Media Association (SAFMA), Lahore
Dr. Pervez Hoodbhoy, Professor of Physics, Quaid-i-Azam University, Islamabad
M. Ziauddin, Editor, Dawn, Karachi
Dr. Aly Ercelawn, Citizens' Alliance in Reforms for Efficient and Equitable Development (CREED), Karachi
Dr. Aly Ercelawn, Citizens' Alliance in Reforms for Efficient and Equitable Development (CREED), Karachi
Dr. Saba Gul Khattak, Executive Director, Sustainable Development Policy Institute, Islamabad
Aslam Khwaja, Pakistan Social Forum, Hyderabad
Anwar Abbas, Habib Education Trust, Karachi

The US-India nuclear deal has not attracted the attention in Japan that it has in the US and India, but the recognition that Japan can play a key role as a member of the NSG is gradually spreading. Questions have been raised in the Diet and the Mayors of Hiroshima and Nagasaki have both written to the Prime Minister expressing their concern. On March 6th, Saga Prefectural Assembly agreed unanimously to send a letter to the government expressing its concern about the potential for the deal to provoke a nuclear arms race between India and Pakistan and calling on Japan to play a leadership role in the debate at the NSG. Other prefectures and local authorities are considering sending similar letters.

We are aware of various moves by NGOs to influence the international debate, particularly in NSG countries. CNIC will co-sponsor a meeting on May 4th during the 2007 NPT Preparatory Committee in Vienna. The meeting is entitled "The US-India Nuclear Deal and the Future of the NPT: a Role for the Nuclear Suppliers Group?" We hope the meeting will be a rallying point for NGOs around the world who are concerned about this issue.

Japan's Plutonium Use Plan for 2007 Fiscal Year

On 23 February 2007 the Federation of Electric Power Companies (FEPCO) published a compilation of Japan's electric power companies' "plutonium utilization plans" for the 2007 Fiscal Year (1 April 2007 - 31 March 2008). CNIC has translated the document into English (see below). The 2007 plan follows the same lines as the plan published on 6 January 2006. (The figures in an updated version published on 3 April 2006 were slightly different from the 6 January version.)

Once again no indication is given of by when the plutonium separated at the Rokkasho reprocessing plant will be used up. The only conclusion that can be drawn is that the plutonium separated at Rokkasho will simply increase the size of Japan's already huge plutonium stockpile (43.1 tons at last count).

At first glance the last column of the table below appears to address this issue. However a more careful reading reveals that in fact no start and finish dates have been established. The table indicates that 2012 is the very earliest that companies might start using the plutonium separated at Rokkasho. However, the reality is that they could not possibly use the plutonium separated at Rokkasho before this date, even if they wanted to. That is because this plutonium cannot be used until it has been turned into MOX fuel at the Rokkasho MOX fuel fabrication facility. According to the current schedule, this plant will not be operational until October 2012. Even then, plutonium returned in MOX fuel from overseas will be used first. It is worth noting in this context that no plutonium utilization plans have been published for plutonium held overseas. That is another major problem with Japan's plutonium program. However, in regard to the information provided in the table below, the main points to understand are that (1) there is no chance that power companies will begin in 2012 to use the plutonium separated at Rokkasho, and (2) no final date has been established by which that plutonium must be consumed.

The biggest difference from last year's plan is that the amount of spent fuel projected to be reprocessed in FY2006 (up to 31 March 2007) is greatly reduced:

6 January 2006 projection for FY2006: 258

tons U (273 tons U including FY2005)

3 April 2006 projection for FY2006: 238 tons U (none in FY2005)

23 February 2007 projection for FY2006: 140 tons U

This reduction is the result of delays in starting the active tests and subsequent delays caused by problems which arose in the course of the tests. The projection for FY 2007 is 392 tons U. It is intended that spent fuel will be reprocessed faster as the active tests proceed.

The document is called a "utilization plan". In reality it is just a statement of how much plutonium has been separated so far, how much is projected to be separated in FY2007 and how it will be allocated between the various companies. The idea of actually using this plutonium is still at the level of theory rather than practice.

The only electric power companies with all the necessary central, prefectural and local government approvals to use MOX fuel are Kyushu Electric and Shikoku Electric. Others are at various stages along the way towards obtaining those approvals. However, the new revelations of data fabrication and falsification which have emerged in the last couple of months are likely to make it more difficult for electric power companies to obtain the consent of prefectural and local governments. Tokyo Electric Power Company (TEPCO), in particular, faces major hurdles, as more and more information emerges about how it misled the governments' safety inspectors.

To date the power companies have produced nothing which deserves the name of a "plutonium utilization plan". There are no grounds for confidence that the plutonium separated at Rokkasho will actually be used. It will simply be added to Japan's plutonium stockpile. By rights active tests at the Rokkasho reprocessing plant should never have been started. At the very least Japan Nuclear Fuel Company, the owner of the Rokkasho reprocessing plant, should not be allowed to reprocess any spent fuel belonging to TEPCO. TEPCO is so deeply mired in scandal that it is hard to foresee it ever using its allotted plutonium. (Indeed, it is doubtful that it even wants to, but that's another story.)

Philip White (NIT Editor)

Federation of Electric Power Companies of Japan (23 February 2007)

Utilization Plan for Plutonium Recovered at Rokkasho Reprocessing Plant (Fiscal Year 2007)

Owner	quantity to be reprocessed *1	quantity held *2			reactor(s) to utilize recovered Pu	purpose (to be used as fuel for Light Water Reactors) *3	projected quantity to be used annually *9 (tons Pu/year) *6	time planned to start using Pu *10, and approximate time required to use Pu *11
Hokkaido	-	0.0	0.1	0.1	Tomari .N.P.P.		0.2	In or after FY2012 about 0.5 years equivalent
Tohoku	8	0.0	0.1	0.1	Onagawa N.P.P.		0.2	In or after FY2012 about 0.4 years equivalent
Tokyo	184	0.3	0.8	1.0	On the basis of attempting to recover the trust of local residents, plan to utilize 3 to 4 reactors belonging to TEPCO.		0.9-1.6	In or after FY2012 about 0.6 to 1.1 years equivalent
Chubu	34	0.1	0.2	0.2	Hamaoka N.P.P. reactor 4		0.4	In or after FY2012 about 0.5 years equivalent
Hokuriku	-	0.0	0.0	0.0	Shika N.P.P.		0.1	In or after FY2012 about 0.1 years equivalent
Kansai	125	0.2	0.5	0.6	Takahama N.P.P. reactors 3 & 4, plus 1 or 2 reactors at Ohi N.P.P.		1.1-1.4	In or after FY2012 about 0.4 to 0.6 years equivalent
Chugoku	20	0.0	0.1	0.1	Shimane N.P.P. reactor 2		0.2	In or after FY2012 about 0.6 years equivalent
Shikoku	-	0.0	0.1	0.2	Ikata N.P.P. reactor 3		0.4	In or after FY2012 about 0.4 years equivalent
Kyushu	20	0.1	0.3	0.4	Genkai N.P.P. reactor 3		0.4	In or after FY2012 about 1.0 years equivalent
JAPCO	-	0.0	0.1	0.2	Tsuruga N.P.P. reactor 2, Tokai 2 N.P.P.		0.5	In or after FY2012 about 0.4 years equivalent
J-power	392	0.7	2.2	2.9			4.4-5.4	
Grand Total	392	0.7	2.2	2.9	Ohma N.P.P.		5.5-6.5	

More details will be added as the plutonium program proceeds and the MOX fuel fabrication plant comes on line.

- *1. The 'quantity of Spent Nuclear Fuel planned to be reprocessed' is in accordance with the reprocessing plan put together by Japan Nuclear Fuel Limited.
- *2. Listed under the 'quantity of Pu held' are the quantity of plutonium that is projected to be held by each company at the end of FY2006, the quantity projected to be recovered at the Rokkasho reprocessing plant in FY2007, and the total of these two quantities, which is the quantity projected to be held at the end of FY2007. The recovered plutonium will be allocated to each electric power company in proportion to the amount of fissile plutonium contained in the spent nuclear fuel they sent to the Rokkasho Reprocessing Plant. Consequently, plutonium may be allocated to some companies whose plutonium was not actually reprocessed in that year. However, when all spent fuel has been reprocessed, the amount of plutonium allocated to each company will correspond to the amount of fissile plutonium contained in the spent fuel that they sent for reprocessing.
- *3. Besides the amount to be used in LWRs, some plutonium will be transferred to JAEA to be used in their research projects. The amount to be transferred from each power company to JAEA will be announced when it is decided.
- *4. Figures are rounded, so totals do not add up in some places.
- *5. Because actual allocation to each electric power company will take place after active tests are completed, the projected quantity of Pu held at end FY06' shown here is an estimate of each company's portion of the projected quantity of plutonium to be recovered and stored from the spent fuel reprocessed at the Rokkasho reprocessing plant in FY2006. The estimate reflects the change made in the 'Variation Report for the Reprocessing Plant Construction Plan' announced by Japan Nuclear Fuel Ltd on 31 January 2007. The quantity to be reprocessed in FY2006 was altered from 238 tons U to 140 tons U. Hence the estimate here differs from the projected allocation for FY2006 (1.4 tons Pu) shown in the 'Utilization Plan for Plutonium Recovered at Rokkasho Reprocessing Plant (Fiscal Years 2005-2006)' published by the Federation of Electric Power Companies on 3 April 2006.
- *6. The amount of plutonium to be allocated is shown in terms of fissile plutonium. The amount allocated to each company is rounded to the first decimal place, so in some cases a value of 0.0 is shown.
- *7. Because the allocation to each electric power company will not be completed in FY2007, the 'projected quantity of Pu to be recovered in FY07' shown here is an estimate of each company's portion of the projected quantity of plutonium to be recovered and stored from the spent fuel reprocessed at the Rokkasho reprocessing plant in FY2007.
- *8. 'Projected quantity of Pu held at end FY07' equals 'projected quantity of Pu held at end FY06' plus 'projected quantity of Pu to be recovered in FY07'. Figures are rounded to the first decimal place, so the totals do not add up in places.
- *9. The 'projected amount to be used annually' shows the amount of plutonium contained in MOX fuel to be loaded according to the plans provided by each electric power company, adjusted to a yearly basis. In some cases the amount of plutonium to be used includes plutonium recovered overseas.
- *10. The 'time planned to start using Pu' is after 2012, when the planned MOX fuel fabrication plant, located next to the Rokkasho Reprocessing Plant, is planned to start operating. Until the MOX plant commences operations, recovered plutonium will be managed and stored at the Rokkasho reprocessing plant in the form of uranium-plutonium mixed oxide powder.
- *11. The 'approximate time required to use Pu' is calculated by dividing the 'projected quantity of plutonium held at end FY07' by the 'projected quantity to be used annually'. (Note that because some plutonium is to be transferred to J-Power and JAEA, and because in some cases the quantity to be used includes plutonium stored overseas, the actual time taken might not match the span shown here.)
- *12. The amount to be transferred from other power companies to J-Power will be announced after it has been decided.

Anti-Nuke Who's Who

Kazuyoshi Sato: calm, but tenacious

by Michiko Furukawa*

Kazuyoshi Sato was born in 1953 in Naraha Town, Fukushima Prefecture. Naraha is the site of Tokyo Electric Power Company's (TEPCO) Fukushima II nuclear power plant.

He passed his elementary and middle school days the same as any other child, although apparently when he was a little boy he played mainly with girls.

He went to High School in neighboring Iwaki City and it was during those years that he became involved in the movement against construction of the Narita Airport. As a result of his participation in the movement, he was suspended for playing truant from school. He protested the injustice of the decision, but was expelled for his troubles three months before graduation.

For ten years, from 1972 to 1982, he fought the decision in the courts. He demanded that the decision to expel him from school during those impressionably years be reversed. In the end the case went to the Supreme Court, which ruled against him. Such an unjust decision might seem unthinkable now, but that was the way things were in those days.

Perhaps the tenacity with which he engages in issues now, not yielding to anyone no matter how powerful they may be, was cultivated in those days.

He first became involved in nuclear energy issues in 1973, during a hearing in regard to construction of the Fukushima II power plant. In 1988 he helped to establish the nuclear phase-out network, and he still carries on the struggle to this day.

The previous governor of Fukushima Prefecture opposed the government's nuclear energy policy. On a national level he was a governor whom we could be proud of. It would be no exaggeration to say that it was Kazuyoshi's determined anti-nuclear activism that set him straight.

Kazuyoshi is also involved in other issues, such as citizen-based environmental campaigns dealing with the problems of electro-magnetic

radiation and the disposal of radioactive waste.

He won a seat on the Iwaki City Council in 2004. His number one campaign promise was, "I will prevent nuclear accidents and environmental pollution."

These days his duties as a city councilor keep him very busy, but he never misses the monthly negotiations with TEPCO.

He doesn't give the impression of being a fervent person. During his activities as a city councilor, or in his negotiations with TEPCO, he always remains calm, but his penetrating questions go to the core of the matter.

He might not be fervent, but he is persistent and consistent. He is quick off the mark and when it comes to researching a point, he doesn't do things by half. To observe his activism is to be filled with admiration. In fact, watching his relentless work program one worries about his health.

Despite being such a busy person, he loves to go walking in the country-side, stopping along the way to eat some of his wife's delicious home-made food, or to spot kingfishers speeding along country streams. And he loves to sing songs with his friends. He truly is a very gentle man.

** Michiko Furukawa is a member of the Phase-out Nuclear Energy Fukushima Network.*



NEWS WATCH

Fate of Japan's reprocessed uranium

Electric power companies are currently engaged in negotiations about the fate of 6,400 tons of uranium recovered from reprocessing in Europe. The uranium belongs to Japanese utilities, but is held in France and the UK. Negotiations are proceeding to have it fabricated into new fuel, with the various processes split between Kazakhstan and Russia as follows: conversion in Kazakhstan, enrichment in Russia, reconversion and fuel fabrication in Kazakhstan. According to the 21 February 2007 edition of the Yomiuri Shimbun, the Japanese government, along with the electric power companies, approached Russia two years ago about the possibility of having this uranium re-enriched. (Russia has the world's largest uranium enrichment capacity.) Russia indicated that it was willing to undertake the work and negotiations have been proceeding since then.

When Japanese Prime Minister, Shinzo Abe, met his Russian counterpart, Mikhail Fradkov, on February 28th, they agreed to advance discussions towards signing a nuclear cooperation agreement between their two countries. On the same day, Japanese NGOs, CNIC and Green Action, and Russian NGO, Ecodefense, issued a joint press release demanding that both governments "withdraw from negotiations over enriching Japanese uranium in Russia". The agreement will push the burden of dealing with the special problems of reprocessed uranium onto Kazakhstan and Russia. If, as expected, the Russian uranium enrichment plant in Angarsk serves as the main enrichment plant, the depleted uranium that remains will add to the growing radioactive waste stockpiles near World Heritage listed Lake Baikal.

JBIC approves finance for Kazakhstan uranium mine

On 12 March 2007 the Japan Bank for International Cooperation (JBIC) announced that it had signed a loan agreement for a uranium mining project in the Suzak District of South Kazakhstan. The project is to "develop a new uranium deposit

in West Myunkduk, Southern Kazakhstan, and produce and sell uranium products from that mine."

JBIC classified the project as Category B. A project is classified as Category B "if its potential adverse environmental impact is less adverse than that of Category A projects. Typically, this is site-specific, few if any are irreversible, and in most cases normal mitigation measures can be designed more readily." According to JBIC's environmental examination report, "the project site has neither sensitive characteristics nor is located in or near sensitive areas as indicated in JBIC Environmental Guidelines."

However, CNIC has received information from contacts in Kazakhstan which suggests that the project might not be as environmentally benign as JBIC claims. Although the national atomic company Kazatomprom has created an entity that is working on social programs (Kazatomprom Demeu) in Southern Kazakhstan, many problems remain. Problems include limited public access to ecological information and possible impacts on environment and public health, absence of transparency in the uranium extraction industry's activities, and organization of public hearings on environmental impact assessment for uranium extraction projects without involvement of all interested and affected parties. Kazatomprom officials claim that the negative impact of uranium mines is close to zero, due to remoteness of the mines from villages (15-20 kilometers). However, people from villages that do not work for Kazatomprom, say that the water in their wells is not clean, and has an acid-like taste. Also, biodiversity and ecosystem impacts in these desert regions are not measured.

Another cost increase for Rokkasho reprocessing plant

On February 20th, Japan Nuclear Fuel Ltd submitted an application to the Minister of Economy, Trade and Industry for extensions to four facilities at the Rokkasho reprocessing plant. The four facilities are as follows: No. 2 uranium

oxide storage building, MOX transport container monitoring building, No. 2 low active waste (LAW) treatment building, and No. 3 LAW storage building. In addition, work is planned on an underground connection between the reprocessing plant and the MOX fuel fabrication plant. Construction on the latter is due to commence in October 2007. The extensions will cost 160 billion yen, bringing the total cost for the Rokkasho reprocessing plant to 2,353 billion yen.

Citizens demand referendum on Genkai pluthermal

On January 22nd, a petition signed by 49,609 people (number confirmed by city, town and village electoral committees) demanding a referendum by residents of Saga Prefecture on Kyushu Electric Power Company's pluthermal plan for its Genkai-3 reactor (PWR, 1180 MW). The governor submitted the proposal for a referendum ordinance to the prefectural assembly, but he appended his opinion that such an ordinance was not necessary. The assembly rejected the referendum proposal on February 2nd.

HLW dump developments

On 25 January 2007 the mayor of Toyo Town in Kochi Prefecture submitted an application to the Nuclear Waste Management Organization (NUMO) to become a candidate for a high-level waste dump. In fact, he resubmitted the application that he had submitted in March 2006, but on that occasion NUMO did not accept it (see NIT 116). The mayor chose to resubmit the application despite a petition opposing the dump, which was submitted on January 15th by 2,179 people (over 60% of residents). Six of the ten members of the local council oppose the proposal, so the Mayor rushed to resubmit the application before they formally endorsed the petition.

On February 9th the local council endorsed

the petition and passed a resolution calling on the mayor to resign. However, the mayor has refused to resign. The prefectural assemblies of Kochi Prefecture and neighboring Tokushima Prefecture passed motions opposing the dump and on February 6th the governors of both prefectures submitted statements of opposition to NUMO and the Agency for Natural Resources and Energy. All the surrounding local governments in both prefectures have also passed resolutions opposing the dump. Nevertheless, on February 28th NUMO applied to the Minister of Economy Trade and Industry for permission to proceed with a "document study".

After the document study, approval of both the governor and the mayor is required in order to proceed to an "outline study", which involves boring. However, only the mayor's approval is required for the document study. The document study will take two years and a total of 2 billion yen in subsidies will be paid by the central government to Toyo Town and the surrounding municipalities. However, unless the prefecture submits an application for the surrounding municipalities' portion of the subsidy, Toyo Town can receive the full 2 billion yen. The mayor sees this subsidy as a revenue source for the town, but he is not considering continuing past the document study.

Prosecution for 2004 Mihama-3 accident

On 26 February 2007 the cases of five employees of Kansai Electric Power Company (KEPCO) and an employee of a KEPCO subsidiary were sent to the Fukui District Public Prosecutors Office. They are accused of professional negligence in the Mihama-3 (PWR, 826 MW) accident, which occurred on 9 August 2004. Five people died and six others were injured in the accident, in which a main condensate pipe in the secondary coolant system *Continued on page 3*

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. 00140-3-63145, Genshiryoku Shiryou Jouhoushitsu. Due to costly processing fees on personal checks, when sending the subscription fee from overseas, please send it by international postal money order. Alternatively, you can ask us to send you details regarding bank transfers. We would also appreciate receiving information and newsletters from groups abroad in exchange for this newsletter.

Translators: Philip White

Proof Readers: Tony Boys, Yukio Yamaguchi, Baku Nishio

Editor: Philip White

Printed on 100% recycled paper