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Citizens' Nuclear Information Center

Akebonobashi Co-op 2F-B, 8-5 Sumiyoshi-cho, Shinjuku-ku,
Tokyo 162-0065, JAPAN Phone: +81 3 3357 3800 Fax: +81 3 3357 3801
URL: <http://cnic.jp/english/> e-mail : cnic@nifty.com

Former nuclear plant worker Ryusuke Umeda's legal action for workers' compensation Important testimony discloses the harsh reality of the work environment in NPPs

In 1979, Ryusuke Umeda was engaged in periodic inspections of the Shimane-1 and Tsuruga-1 nuclear power plants and suffered a myocardial infarction in March 2000. He filed an application for workers' compensation with the Shimane Labour Standards Supervision Office in Shimane Prefecture in September 2009, and in February 2010, he presented his case to the Ministry of Health, Labor and Welfare (MHLW), complaining about the actual conditions of the work environment at the nuclear plants.^{1), 2)}

However, his application was rejected and the two requests he made for an examination by a review committee were also turned down. In February 2012, he therefore filed a suit against the state with the Fukuoka District Court, demanding reversal of the decisions.

On May 15, former nuclear plant worker Seiji Saito and former radiation controller Hiroshi Masumoto testified before the grand bench of the district court. Mr. Masumoto had worked for Okano Valve Co. as radiation controller since 1963, and was dispatched to a number of nuclear power plants equipped with boiling water type reactors. He was charged with maintenance and management of the reactors. This was the first-ever testimony made by such an official, and is therefore highly significant. We hope that many people will pay great attention to this trial, in which we will hear important and notable testimony. The team of lawyers for the plaintiff is comprised of many passionate young men and women, and heated debates are expected in the trial. (by Mikiko Watanabe)

Report on the Umeda case trial By Lead Lawyer Toshimasa Kabashima

In response to Mr. Umeda's application for workers' compensation, the state pointed out the following debatable points.

1. There is not sufficient scientific data to prove the relation between his exposure to radiation of less than 1-2 Gray and his myocardial infarction.
2. According to a recent epidemiological survey on survivors of the atomic bombings in Hiroshima and Nagasaki, it is not clear if those exposed to radiation of less than 0.5 Sv had a significantly higher risk of developing a cardiac disorder.
3. The 2007 recommendation by the International Commission on Radiological Protection (ICRP)

stated that none of the currently available data show that exposure to radiation of less than 100 mSv will have an impact on non-cancer diseases.

4. Cardiac disorders form a category of diseases associated with adult lifestyle habits, such as smoking, obesity, and high blood pressure, and have nothing to do with exposure to radiation. The fatality rate is 144.4 per 100,000 people.

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5. The plaintiff had several risk factors that might have caused myocardial infarction, including diabetes, hyperlipidemia, and smoking. Given this fact, the refusal of his application for workers' compensation was legitimate and appropriate from the medical viewpoint.

Citing these reasons, that are virtually impossible for a layman such as Mr. Umeda to deal with, the state rejected his ardent attempt to obtain workers' compensation.

Moreover, the state claimed that Mr. Umeda's exposure dose of 8.6 mSv was extremely small, slightly more than the 6.9 mSv dose a person receives when undergoing a computed tomography scan of his chest.

These reasons seem to indicate that the state has a strong interest in rejecting nuclear plant workers' applications for official compensation by any means possible.

Most nuclear power plant workers are believed to be paid relatively high wages while they are working. Nevertheless, once they fall into bad health and become ill due to excessive exposure to radiation, they must stop working. To pay for medical treatment and for living, they are forced to dip into their savings, which is the last resort for them, and tend to run out of money. Consequently, many such workers suffer from both extreme poverty and ill-health.

The employers gain profits from the labor provided by their workers, while the workers are likely to suffer great distress and pain should they sustain injuries or fall ill. The workers' compensation system was originally established to rectify this injustice.

Thus the prevailing practice is that the state designates such a worker's case as a no-fault liability case if the relations between his work and his sickness are evident, and speedily takes the simplest procedures to relieve the ailing worker. This principle should be applied to the case of a nuclear plant worker engaged in regular inspections. If a nuclear plant worker submits evidence to prove that he was exposed to radiation while engaged in the work, and to prove that his sickness has an undeniable causal relation with his exposure to radiation, the state should provide workers' compensation to the worker unless it obtains firm evidence that the sickness was caused by other factors.

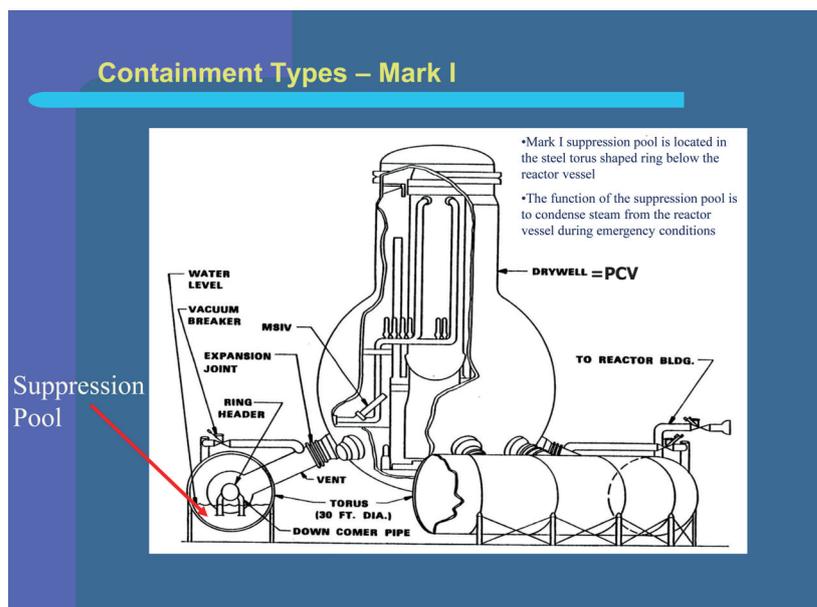
Mr. Umeda's case is Japan's first workers' compensation suit

filed by a nuclear plant worker suffering from a myocardial infarction. Since Japanese nuclear power plants became operational, the number of workers engaged in the operation and regular inspections of the reactors may total several hundreds of thousands, but only 48 cases have been filed so far by such workers for the purpose of obtaining workers' compensation on account of exposure to radiation. Of these, 10 cases were officially recognized as work-related ailments, all the plaintiffs in these cases suffered from cancer.

Meanwhile, in suits filed by atomic-bomb sufferers, myocardial infarction was recognized as one of the atomic bomb-related illnesses, and in the class actions launched in and after 2003, some myocardial infarction patients successfully won workers' compensation.

Mr. Umeda was engaged in periodic inspection at nuclear power plants for 43 days in total. He worked for 13 days, from February 6 through February 9, and from March 2 to March 10, at the Shimane nuclear power plant, and later, for 30 days, from May 17 through June 16, at the Tsuruga nuclear power plant. His exposed work hours were 35 minutes per day at the shortest and about three hours at the longest. The company which undertook the periodic inspection work was not able to force him to work longer because the ambient radiation dose level at the work site was too high. Inevitably, human wave tactics (large-scale mobilization of labor) were used.

Mr. Umeda worked mostly in the primary containment vessel (PCV), doing the work of, for example, cutting and removing corroded pipes, welding and fitting new ones, replacing instrument piping, removing shield plugs, installing lead-wool sheets, pasting plastic sheets on the floor, installing scaffolding, scooping up contaminated



Structure of BWR containment

From GE website: <http://files.gereports.com/wp-content/uploads/2011/03/containment-lg.jpg>

water accumulated on the floor in the PCV, and wiping up the water with waste cloth. In addition, he was obliged to do the work of using waste cloth to clean the walls and floor of the reactor pressure vessel (RPV), where the radiation dose level was extremely high, and the work of replacing the instrument piping for meters and gauges connected to the RPV. Besides these, he was engaged in other work, such as cutting and replacing piping in the turbine building and the reactor building, where the radiation dose level was also considerably high.

The bottom-level subcontractor workers were not taught about the harmful effects and dangers of radiation on human bodies while they were conducting these operations. This is why Mr. Umeda worked at the Shimane nuclear power plant in ordinary work clothes, without wearing a mask or carrying an alarm meter. At the Tsuruga nuclear power plant, he worked wearing a radiation protection suit, but took off the mask when it was hard to breathe because of high temperature and high humidity at the site, or when the mask became fogged and made it difficult for him to see.

Furthermore, he continued to work while leaving his portable dosimeter and alarm meter with other people, because he had a strong sense of responsibility and thought that it would disturb the work if the alarm should go off.

Emergence of symptoms of acute radiation injury

After completing his task at the Tsuruga nuclear power plant, Mr. Umeda returned home to Fukuoka City in Kyushu on June 16, 1979. He soon experienced symptoms of nose bleeding, nausea and vertigo from unknown causes. He also felt fatigue, which prompted him to go to several medical institutions. The clinical record that remained in the Kyushu University Hospital shows that Mr. Umeda had visited Kokura Medical Association Clinic, Kenwakai General Hospital, and Mihagino Hospital, all in Kita-kyushu City. The data also said he had visited the Nagasaki University Hospital in Nagasaki City, the Kyushu University Hospital in Fukuoka City, and several other medical institutions, for treatment of fatigue, a sense of exhaustion, palpitations, vertigo, and nose bleeding from unknown causes. These symptoms were commonly seen among atomic-bomb sufferers immediately after the bombing. This means that Mr. Umeda must have been suffering acute radiation sickness at that time.

The Kyushu University Hospital's medical records also revealed that Mr. Umeda received a whole-body counter test at the Nagasaki University Hospital on July 12, 1979, the result showing that radionuclides of cobalt, manganese, and cesium were detected in his body. This proves that he had internal exposure to radiation.

State ignores opinions of medical doctors

When Mr. Umeda filed his application for workers' compensation in September 2008, a radiologist at the Nagasaki University Hospital wrote in his medical report that the gamma-ray spectrum believed to have been emitted from the aforementioned cobalt, manganese, and cesium-137 in Mr. Umeda's body was detected, and that it is highly likely that there were radioactive substances in his body that are not detected under normal conditions (internal exposure). He went on to say that Mr. Umeda had such symptoms as nausea, fatigue, and hemorrhaging at that time, and that a hospital medical examination revealed that he was also suffering from leucopenia. Considering all of these facts, he concluded that it was undeniable that Umeda had received a large exposure to radiation of a level close to acute radiation injury, and that it is also undeniable that his exposure to radiation around 1979 had something to do with the occurrence of the myocardial infarction.

This medical report seems to have been made by taking into account the ruling handed down by the Nagasaki District Court in May 1993 in the suit filed by Nagasaki atomic-bomb sufferer Eiko Matsutani. The ruling stated that if there is a possibility for the plaintiff to have been exposed to radiation, the person should be officially recognized as a patient with A-bomb sickness. With this ruling, Matsutani won the case. The defense council appealed the case to a higher court, but this was rejected in November 1997, and the ruling was finalized in March 2000 after the Supreme Court dismissed the appeal against the ruling.

Coupled with the radiologist's medical report, there was also an earlier "new guideline on the screening of A-bomb sickness patients" formulated by the Ministry of Health, Labor and Welfare, which states that a myocardial infarction patient with a radiation exposure dose of more than 1 mSv should be readily recognized as suffering from A-bomb sickness. In view of these two factors, the state should have recognized Mr. Umeda as a sufferer of sickness caused by exposure to radiation and granted him workers' compensation.

Nevertheless, the state continues to firmly reject his application, citing reasons that are incomprehensible even for medical experts, and ignoring the radiologist's medical report.

State's response to the trial

Apart from focusing on medical issues, the state conducted examinations of five witnesses who had worked at the nuclear power plant around the same time as Mr. Umeda had.

The following is an outline of their testimonies.

- Within the Shimane nuclear plant, the radiation dose was not high and also the radioactive contamination level was relatively low. The witness had therefore never put on the full-face mask, nor heard the alarm against high radiation dosage setting off within the PCV. He also testified that he had never worn the red-color work suit (the protective gear for high-level radiation areas) there. (This is consistent with Mr. Umeda's recollection.)
- Within the PCV, the radiation dose was high and there was no place where workers could hide dosimeter or other items.
- There were work plans, but no work quota.
- The employers provided radiation-related training repeatedly until the workers gained full understanding of its contents.
- No workers were forced to leave dosimeters with the employer, and no one actually did so.

This testimony was presented apparently with the intention of proving that the 8.6 mSv exposure registered in the record was correct.

Trial of the nuclear plant worker vs. the state

The lawyers for the plaintiff conducted examinations of two witnesses, in addition to the plaintiff Mr. Umeda. One of them was Seiji Saito, who was engaged in the regular reactor operation for a long time as a subcontractor worker, and the other, Hiroshi Masumoto, who was a second-tier subcontractor employee in charge of radiation control. The second-tier subcontractor dispatched the plaintiff and other workers hired by the bottom-level subcontractors to the regular inspection sites.

Mr. Saito suffered a thyroid gland tumor (hematoma), acute myocardial infarction, and bilateral cataracts, while Mr. Masumoto had high blood pressure, stomach cancer, lung cancer, a cataract, narrowing of the aortic (aortal) valve, among other illnesses. Both of them were seriously ill, suffering from a number of sicknesses that were apparently caused by radiation exposure, and they had to testify at the risk of their own lives.

Mr. Saito testified that the workers hired by low-level subcontractors had been severely discriminated against in the radiation-related work sites, so he organized a labor union and fought against discrimination by presenting 20 demands. However, he was attacked by union-busters, he said.

Mr. Masumoto testified that the first-tier subcontractor had measured the air dose of the work site in the morning before the work began, handed the data to the second-tier subcontractor, and the company's radiation dose controller had allocated tasks to each worker.

In the work site, however, workers walked around, used various tools, cut pipes and did other types of work which push up the area's radiation dose to a higher level. Mr. Masumoto said he had allocated work by taking this into account, but many other radiation controllers had not done so. He alleged that he had given only 30 minutes work to each worker when the dose level within the PCV became too high. In such a case, he said he had to use many workers for a minor task of, for example, removing a bolt that was stuck fast in packing on a large valve. He described the real situation of the work site vividly and in detail.

We call on readers to extend greater support to NPP workers seeking workers' compensation

The trial will soon enter the stages of 1) epidemiological analysis of radiation exposure and illness and scientific estimates of exposure dose, and 2) experts' submission of their opinions concerning internal exposure, etc. and their testimonies.

The plaintiff's lawyers obtained support from several dedicated experts, while the state plans to ask experts from the "nuclear village," a tightly-woven network of regulators, utility industry executives, engineers, and academics, to testify. The plaintiff's lawyers are poised to make the trial very realistic and based on facts concerning nuclear plant working conditions and workers' exposure to radiation, and will try to avoid long-winded arguments based on desk theory. We feel that there are bright prospects for victory in this trial.

The plaintiff Mr. Umeda, his lawyers and his supporters' group are determined to step up their efforts to save nuclear plant workers who have been ignored by society for a long time, and to help them restore their human dignity. We hope readers will extend their warm and sincere support to them.

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- 1) Ryusuke Umeda Lodges Historic Workers' Compensation Claim (NIT 135 March/April 2010)
<http://www.cnic.jp/english/newsletter/nit135/nit135articles/umeda.html>
 - 2) Ryusuke Umeda's Worker's Compensation Claim Rejected (NIT 139, Nov./Dec. 2010)
<http://www.cnic.jp/english/newsletter/nit139/nit139articles/umeda.html>

Reference Material:

Japan's Separated Plutonium Inventory (as of end of 2014)

On July 21, 2015, the Japan Atomic Energy Commission (JAEC) released the inventory data for Japan's separated plutonium as of the end of 2014. Compared with the data for the end of the previous year, almost no change has taken place, because no mixed oxide (MOX) fuel was returned to Japan from overseas and the Rokkasho Reprocessing Plant in Aomori, Japan, separated out no plutonium during the year. The only difference is that Japan's UK-stored inventory increased 0.7 ton (694 kg Pu_{tot}). The increase is most likely to have been the result of an allocation of plutonium reprocessed in the country, as in 2013. The amount of spent fuel reprocessed at THORP (Thermal

Oxide Reprocessing Plant), located in Cumbria, England, has not been officially announced, but according to CORE (Cumbrians Opposed to a Radioactive Environment), the plant reprocessed 58.9 tons of spent fuel in fiscal 2014. The separated plutonium is allocated to the contract countries according to the respective contract amounts. A report says that one more ton will be allocated to Japan in the future.

The Tokai Reprocessing Plant, Ibaraki, Japan transformed liquid-state plutonium nitrate to solid-state plutonium oxide. Reprocessing facilities in Japan are required to comply with the new, stricter regulation standards

established after the Fukushima nuclear accident of March 11, 2011. However, a five-year moratorium has been allowed to those facilities, during which the transformation of liquid-state uranium and plutonium are planned to take place. The above-mentioned transformation into solid-state plutonium oxide was performed according to this plan.

During a discussion at the JAEC Commissioners' meeting of July 21, 2015, an opinion was heard (from Yoshiaki Oka, JAEC Chairman) that, although plutonium inventory data had been released in the unit of kilograms since 1993, it may be necessary to introduce a new perspective because the international situation has changed from the time when the data releases began. More specifically, there were the simultaneous terrorist attacks in the US on September 11, 2001, followed by other terrorist incidents. His statement was rather vague, but it may possibly lead to a review of the release of detailed data, and we need to pay close attention to such a possible change in the future.

(Hideyuki Ban,
Co-Director of CNIC)

1. Japanese Inventory of Separated Plutonium											
		2010		2011		2012		2013		2014	
		JAEA	JNFL	JAEA	JNFL	JAEA	JNFL	JAEA	JNFL	JAEA	JNFL
Reprocessing Facilities	Plutonium nitrate etc.	672	281	669	283	668	283	664	283	577	284
	Plutonium oxide	80	3,329	83	3,329	83	3,329	84	3,329	131	3,329
	Total Plutonium	753	3,610	752	3,612	751	3,612	748	3,611	709	3,613
	Total Fissile Plutonium	500	2,347	499	2,348	498	2,348	496	2,347	467	2,348
	Balance	-1	2	-3	2	-1	0	-4	0	-87	1
Plutonium Fuel Fabrication Plant	Plutonium oxide	1,916		1,941		1,939		1,937		1,974	
	Plutonium in test or fabrication stage	1,026		976		978		981		983	
	New fuel etc.	424		446		446		446		446	
	Total Plutonium	3,365		3,363		3,364		3,364		3,404	
	Total Fissile Plutonium	2,334		2,333		2,333		2,333		2,361	
	Balance	-8		-2		1		0		28	
Nuclear Reactors and Other Facilities	Joyo	134		134		134		134		134	
	Monju	31		31		31		31		31	
	Commercial Reactors	1,600		959		959		2,501		2,501	
R&D facilities	Critical experiment etc.	444		444		444		444		444	
	Total Plutonium	2,208		1,568		1,568		3,109		3,109	
	Total Fissile Plutonium	1,549		1,136		1,136		2,133		2,133	
Total Plutonium	9,936		9,295		9,295		10,833		10,835		
Total Fissile Plutonium	6,730		6,316		6,315		7,309		7,310		

2. Overseas Inventory of Separated Plutonium											
Held Overseas	Recovered in UK	17,055		17,028		17,052		20,002		20,696	
	Recovered in France	17,970		17,931		17,895		16,310		16,278	
	Total Plutonium	35,025		34,959		34,946		36,312		36,974	
	UK: Fissile Plutonium	11,643		11,616		11,622		13,526		13,939	
	France: Fissile Plutonium	11,730		11,692		11,655		10,604		10,572	
Total Fissile Plutonium	23,373		23,308		23,277		24,130		24,511		
3. Separated Plutonium in Use											
Supply	Separated Plutonium	0	0	0	0	0	0	0	0	86	0
Used	for Monju	412		0		0		0		0	
Loaded	Reactors	1,462		640		0		0		0	

Name of Reactor etc.		Stored Plutonium		Loaded Plutonium	
		Separated Plutonium		Separated Plutonium	
		Total(kgPu)	Fissile (kgPu)	Total(kgPu)	Fissile (kgPu)
Japan Atomic Energy Agency	Joyo	134	98	261	184
	Monju	31	21	1,533	1,069
Tokyo Electric Power Co.	Fukushima Daiichi Unit3	-	-	210	143
	Kashiwazaki-kariwa Unit3	205	138	-	-
Chubu Electric Power Co.	Hamaoka Unit4	213	145	-	-
Kansai Electric Power Co.	Takahama Unit3	901	585	368	221
	Takahama Unit4	184	110	-	-
Shikoku Electric Power Co.	Ikata Unit3	198	136	633	436
Kyushu Electric Power Co.	Genkai Unit3	801	516	677	468
R&D facilities	Fast Critical Assembly	331	293		
	Deuterium Critical Assembly	87	72		
	Experiment Critical Facility and Transient Experiment Critical Facility	15	11		
	Other R&D facilities	11	9		

The Mystery of Japan's Growing Stockpiles of Separated Plutonium

Masafumi Takubo, Kakujoho Website¹⁾ Operator

At a regular meeting of the Atomic Energy Commission (AEC) of Japan on July 21, the AEC secretariat presented a report saying that Japan's separated plutonium stockpile had increased by 0.7 tons to 47.8 tons as of the end of 2014, from 47.1 tons the year before (about 37 tons held in Britain and France and 10.8 tons in Japan). The report explains that the 0.7 ton increase was the amount separated during 2014 and added to the stockpile, and that, including this, approximately 20.7 tons of separated plutonium are stored in Britain, with the remainder of about one ton of plutonium scheduled to be separated and added to the stockpile by about 2018.

This means that Japan's stockpile has, in fact, reached nearly 49 tons. This happens to be about the same as the amount of plutonium separated in the U.S. nuclear weapons program that the government has declared to be in excess of military needs. While the U.S. is struggling to find ways to dispose of its surplus plutonium, Japan's plutonium stockpile continues to grow, although the Rokkasho reprocessing plant is still not operating, and despite completion of physical reprocessing of Japan's spent fuel in Europe. This article examines the reasons for that increase.

When reporting on September 16 of last year that Japan's plutonium stockpile as of the end of 2013 had increased by about 3 tons to about 47 tons from 44 tons at the end of 2012, the AEC secretariat explained the net increase of 2.3 tons as follows: "We have been told that because reprocessing has proceeded at Britain's reprocessing plant, about 2.3 tons was added newly to the allocation ... of plutonium scheduled to be returned to Japan, or to the stockpile, in 2013." In response to the question "Would this mean that the reprocessing plant in England is still operating?" from acting chairperson Nobuyasu Abe, they said, "Yes, the U.K. reprocessing plant is still operating." This sounds as if they were explaining that 2.3 tons of plutonium were actually separated in the reprocessing of Japan's spent fuel in 2013. (The remaining 640 kilograms of the approximately

three ton increase are in the mixed oxide (MOX) fuel of Genkai NPS Unit 3. AEC had made this amount disappear from the data just because it was loaded into the reactor in 2011, but it reappeared in the data when it was retrieved unused from the reactor in March 2013, so there was no actual increase.)

At that time, the acting chairman seems to have accepted the secretariat's explanation, but in fact, we know from Britain's records that reprocessing of spent fuel from Japan's light water reactors at THORP (the Thermal Oxide Reprocessing Plant) was completed in September 2004 (reprocessing at the B205 facilities of the particular kind of spent fuel from the Tokai Daiichi NPS was completed in January 2006). According to the contract, the "allocation" of plutonium to the client is performed with no regard to the actual time of the physical reprocessing, and that is how an allocation of 2.3 tons to Japan came to be added in 2013.

In response to a query on this issue from the office of House of Representatives member Tomoko Abe, the secretariat admitted on November 13, 2014 that it had received an explanation from the Federation of Electric Power Companies that the 2.3 tons had not actually been reprocessed and separated from Japan's spent fuel in 2013. They went on to state, "According to the nuclear power plant operators, as of 2013 there was about one ton of plutonium remaining to be allocated to Japan from spent fuel sent to Britain." Regarding France, on December 1 the secretariat finally responded that they'd heard from the operators that no additional allocation was scheduled in the future. What the above story signifies is that not only has the total of 3.3 tons (2.3 tons plus 1 ton together) not been touched upon by the government's plutonium supply and consumption plans revolving around the pros and cons of initiating operations at the Rokkasho Reprocessing Plant, but also that the AEC secretariat itself does not understand the situation.

Let's take another look at this year's explanation. "In the U.K, approximately 20.7 tons of separated plutonium is held including approximately 0.7 ton which was separated and added to the stock in 2014. Approximately 1 ton of plutonium from the remaining spent fuel consigned to the U.K. will be separated and added to the stockpile by 2018, when the reprocessing facility in the U.K. is scheduled to be closed" (original English statement). This sounds as if the amount actually reprocessed and separated from Japan's spent fuel in 2014 was 0.7 tons; and that the amount, in addition to that, that still remains to be separated from Japan's spent fuel is about one ton. It also means that as of the end of 2013, an allocation of a total of 1.7 tons remained. This is clearly inconsistent with last year's reply from the secretariat, including their explanation of the actual timing of reprocessing.

In a statement on November 20, 2014 to a local group monitoring the British reprocessing plant, the Nuclear Decommissioning Authority (NDA) of the U.K. clarified that the reprocessing of Japan's "standard" light water reactor fuel had been completed in 2004, but that there was a very small quantity of Japanese material – in the form of fuel that has undergone Post Irradiation Examination (PIE) at Sellafield and, because of its 'difficult' form, will now undergo 'virtual reprocessing' rather than being put through THORP. In NDA's proposal for virtual reprocessing, rather than physical reprocessing, "a radiologically equivalent amount of waste" and "an equivalent amount of nuclear materials" "will be allocated and then returned to the customer as if the fuel has been reprocessed." The U.K. government agreed to this procedure officially on October 16, 2014. According to data the British Department of Energy and Climate Change presented at a stakeholders meeting on January 9, 2015, there were 1.39 tons of unprocessed spent fuel belonging to Japan. The plutonium content should account for less than one percent of that amount, although the degree to which virtual reprocessing is related to the mystery described above is unclear.

Unfortunately, it cannot be said that there is a high level of concern among Japan's citizens about the fact that Japan is planning to start operations at the Rokkasho Reprocessing Plant, which has a capacity to separate eight tons of plutonium a year—enough for 1,000 nuclear warheads under the calculation method used by the International Atomic Energy Agency (IAEA), without even providing a clear explanation of why its plutonium stockpile has been increasing.

Under an agreement with Russia in 2,000, the U.S. promised to dispose of 34 tons of surplus weapons grade plutonium. Intending to make MOX fuel from it for irradiation in light water reactors, it began building a MOX fuel production plant in Savannah River, South Carolina in 2007. The plant has been subject to construction delays and cost overruns, so on September 8, 14 former U.S. governmental energy and national security-related officials and specialists requested the Secretary of the U.S. Department of Energy to scrap the plan and introduce different disposal methods.²⁾ The letter emphasized that from a nonproliferation point of view such a policy would put the U.S. in a much better position to urge Japan to put off its startup plan for the Rokkasho Reprocessing Plant. The signatories included former U.S. Assistant Secretary of Defense Joseph Nye, who has also been a candidate for ambassador to Japan and has great influence on U.S. policy toward Japan. How will Japan's government and anti-nuclear movement react to this?

1) <http://kakujoho.net/>

2) <http://www.npolicy.org/article.php?aid=1292&tid=5>

The Controversial Restart of the Sendai Nuclear Power Station

On August 11, 2015, Kyushu Electric Power Company activated Sendai Nuclear Power Station Unit 1 (PWR, 890 MW, located in Satsumasendai City, Kagoshima Prefecture, commissioned in June 1984), and the reactor began power generation and transmission on the 14th. The company started regular operation of the NPS in early September. This marked the first restart of a nuclear power reactor in Japan that has been approved under the new government regulation standards established after the accident at the Tokyo Electric Power Company's Fukushima Daiichi Nuclear Power Station. However, the approval process for the restart included serious defects, and the restart is therefore far from acceptable.

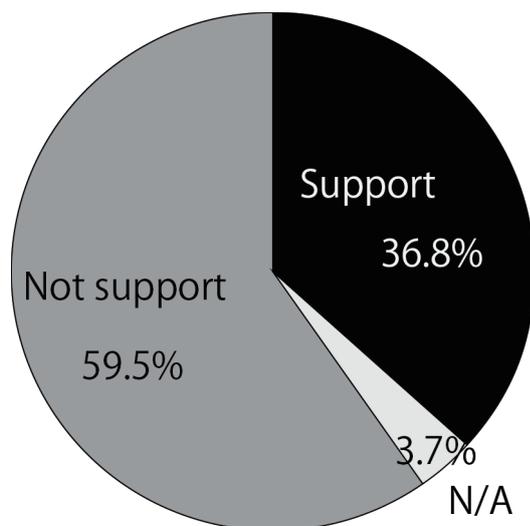
Firstly, the restart is against public opinion, which seeks a nuclear-free society. It was a response to these opinions that the government Basic Energy Plan the Abe Cabinet finalized in April 2014 stated, "Japan will reduce dependence on nuclear power energy as far as possible." The Japanese government, however, seems to be launching political measures that would increase dependence on nuclear power. Before the restart of the Sendai reactor, the government should have at least formally decided on the

policy of realizing freedom from nuclear power, determined by when that freedom would be achieved, and should have clarified how long residents in the vicinity of the nuclear power station would be exposed to nuclear risks.

The second problem is that the Sendai NPS Unit 1 is old; 31 years have passed since it was commissioned. Old reactors show deterioration in the characteristics of their materials and equipment function, and it is stipulated that those that have been in service for more than 30 years have an assessment to rate their aging. The governmental Nuclear Regulation Authority (NRA) used to take the position that the aging assessment and the restart approval are unrelated, but probably because of severe criticism, NRA gave the green light to the operator's Aging Technical Assessment Report for the Sendai NPS Unit 1 reactor on August 5, 2015, immediately before the planned restart date of the reactor.

The original version of the report was submitted in December 2013, but it was only on July 3, 2015 that the operator turned in the revised version, which reflected the results of the reactor's qualification assessment based on the new regulatory standards. It is doubtful that a substantial investigation of the report was possible within only one month.

Thirdly, the qualification appraisal of the Sendai NPS is highly problematic in terms of the assessment of influences from volcanoes and the determination of the basic earthquake ground motion, on which seismic design is based. Having five calderas (large volcanic craters) within a radius of 160 kilometers from the Sendai NPS makes it one of the most vulnerable to the risks of a gigantic volcanic eruption in Japan. However, the volcanic influence assessment of the Sendai NPS was extremely inadequate. As an example, the assessment states that a gigantic eruption is predictable by volcano monitoring, which volcanologists say is impossible. In addition, Kyushu Electric Power Company determined the reactor's basic earthquake ground motion without evaluating the factors



Question; Do you support a restart of the Sendai Nuclear Power Station?

Result of the opinion poll by Minami-nippon Shimbun in May 2014.

that are supposed to be evaluated, with NRA simply confirming the basic earthquake motion.

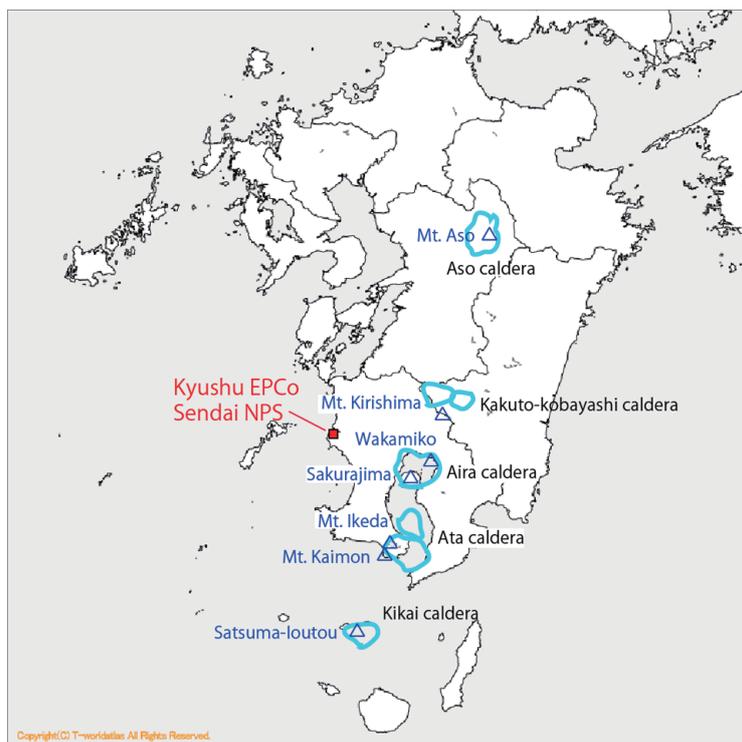
Finally, the evacuation program for locals includes considerable problems. Kagoshima Prefecture has not performed an evacuation drill for an NPS accident since October 2013. The evacuation program is the final safeguard for the protection of locals from exposure to radiation in the case of an NPS accident, and an evacuation drill should have been conducted immediately before the restart of the reactor to ensure that the population can be safely evacuated. However, the prefecture prioritized the restart over the drill. In addition, for those who need assistance to evacuate, the prefecture has mapped out a program for the nursing homes located only within a radius of 10 kilometers (17 homes) of the reactor. Can the lives of residents be protected in this way?

In addition, there is the problem of nuclear plant workers who are exposed to radiation during work. While they are exposed to radiation even during regular reactor operation, NRA raised the exposure limit under emergency conditions (from 100 mSv/year to 250 mSv/year) on August 5. This

limit is applicable only to those who agree to the limit in advance. However, workers will nevertheless be subjected to the risks of exposure to radiation, and the new limit is an infringement of human rights.

As NRA Chairman Shunichi Tanaka mentioned, there is no absolutely safe nuclear power station. In addition, as the Fukui District Court stated in its decision on the petition filed to bar the restart of the Ohi Nuclear Power Station Units 3 and 4, located in Fukui Prefecture, “an organization involved in an undertaking that may cause tremendous harm to the lives and bodies of many people and their resources for living once an accident occurs shall be required to ensure safety and high reliability in accordance with the severe degree of the possible harm.” However, concerning the restart of Sendai NPS, the national government, NRA, Kyushu Electric Power Company, and local municipalities have all treated safety and reliability extremely casually. NRA should withdraw the approval of the restart of the Sendai NPS Unit 1 and Kyushu Electric Power Company should shut it down.

(Hajime Matsukubo, CNIC)



Volcanoes in the region of Kyushu EPCo Sendai Nuclear Power Station

Group Introduction

Japan NGO Network for Nuclear Weapons Abolition

Masayoshi Naito*



Members and colleagues of the Japan NGO Network for Nuclear Weapons Abolition in front of the Atomic Bomb Dome in Hiroshima

The Japan NGO Network for Nuclear Weapons Abolition is a loose-knit consultative body linking civil society organizations and individuals in Japan who are working to eliminate nuclear weapons. It was launched in 2010 to follow up the lobbying activities by civil society during the course of the Tokyo Forum for Nuclear Non-Proliferation and Disarmament (1998-99) and the International Commission on Nuclear Non-proliferation and Disarmament (2008-10).

Co-facilitated by Akira Kawasaki (Peace Boat), Terumi Tanaka (Japan Confederation of A- and H-Bomb Sufferers Organizations), Masao Tomonaga (Nagasaki Global Citizens' Assembly for the Elimination of Nuclear Weapons), Masayoshi Naito (Japan Association of Lawyers Against Nuclear Arms) and Haruko Moritaki (Hiroshima Alliance for Nuclear Weapons Abolition), the members of the network meet regularly to discuss the issue of nuclear weapons abolition, focusing in particular on the following four agenda items:

1. An international institutional framework to delegitimize nuclear weapons, including a treaty prohibiting those arsenals;
2. Reducing the role of nuclear weapons in security policy;

3. New measures to ensure nuclear nonproliferation while safeguarding the civilian use of nuclear energy;
4. A regional security system ensuring a peaceful nuclear-weapon-free Northeast Asia.

The network organizes opportunities to exchange views between civil society and the government of Japan, inviting both working-level officials and higher-level policy makers to take part. It also promotes advocacy activities for the general public, lobbies Diet members and works with international organizations toward the shared goals.

As this year marks the seventieth anniversary of the atomic bombings of Hiroshima and Nagasaki and also coincides with the once-every-five-years Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the network has been working intensively. In April, just prior to the NPT Review Conference, it held a dialogue with officials from the Foreign Ministry of Japan to hand over requests from civil society, followed by a press conference. It also organized a public seminar on September 26, the International Day for the Total Elimination of Nuclear Weapons, working with the United Nations Information Centre in Tokyo.

* Facilitator of the Japan NGO Network for Nuclear Weapons Abolition

One of the challenges the network faces is how it can better reach out to ordinary people. Since the end of the Cold War era, perceptions of the imminent threat and personal relevance of nuclear issues have receded. Many people seem to at least passively accept the idea that nuclear weapons are a necessary evil. Others seem to feel hopeless and powerless in the face of this vast and complex problem, which they assume can only be addressed by governments and authorities. This also applies to the issue of nuclear energy in Japan, as public interest in the 2011 nuclear disaster in Fukushima seems to have started to fade with time.

This makes the voices and efforts of *hibakusha*, A-bomb survivors in Hiroshima and Nagasaki, as well as survivors from Fukushima more relevant. It is crucially important to learn from them about what actually happened at that time and during the aftermath. The work of the network needs to help communicate their first-hand living memories and cries of the soul and inspire more people to work together to ensure a safer world free from nuclear risks and dangers.

Considering what is discussed in the nuclear debates and how people look at nuclear weapons today, the network is working hard to

communicate with the general public and media the ongoing humanitarian discourse over nuclear weapons. Such efforts could help the government to go further in working with the international initiative to explore an international legal framework to prohibit nuclear weapons based on the humanitarian imperative. Meanwhile, innovative efforts for a nuclear-free Northeast Asia have important implications for the global efforts to bring into existence a world without nuclear weapons.

The network is also shedding light on the issue of accumulated plutonium separated from spent reactor fuel in Japan. Over the years, Japan has accumulated about 47 tons of plutonium, enough to build thousands of nuclear weapons. This situation considerably diminishes the international community's confidence that Japan will never attempt to develop nuclear weapons, also undermining the existing nonproliferation regime as other countries may want to follow Japan's example. In this sense, the network is keen to raise public awareness about this issue, including that of Rokkasho Reprocessing Plant, in the context of achieving a nuclear-free world.

For further information, please contact [*nuclear.abolition.japan@gmail.com*](mailto:nuclear.abolition.japan@gmail.com).

NEWS WATCH

Takahama Unit 3 Reactor Hustled into Pre-operational Inspection

On August 17, Unit 3 at KEPCO's Takahama NPP (PWR, 870 MW) began undergoing pre-operational inspections toward restart. The Fukui District Court issued a provisional injunction on April 14 this year against the restart of both Units 3 and 4 (also PWR, 870 MW; see NIT No. 166). Despite this, far from being halted, preparations for their renewed operation have been forcibly implemented.

KEPCO has been appealing the provisional injunction, seeking to have it overruled before the planned reactor restart date in late November, but the Fukui District Court has not indicated a target for conclusion of proceedings. Moreover, even if the proceedings are concluded, there is a strong chance that the appeal will be rejected.

Former TEPCO Executives Face Mandatory Indictment

Legal proceedings against former TEPCO chairman Tsunehisa Katsumata and former vice-presidents Sakae Muto and Ichiro Takekuro for professional negligence resulting in injury or death were dropped by the Tokyo District Court a second time, despite a decision by a prosecutorial inquest committee favoring prosecution. The Fifth Tokyo Inquest of Prosecution, which had examined the case, decided a second time on July 17 that the case should be prosecuted. Because of that decision, indictment became mandatory, with lawyers to be appointed by the Tokyo District Court acting as prosecutors.

Future proceedings are expected to investigate the cause of the Fukushima nuclear accident and determine who was responsible.

Policies Promoting Return to Contaminated Areas Gaining Headway

Four and a half years after the Fukushima nuclear accident, with 110,000 people still forcibly evacuated from the region, aggressive policies neglecting the victims' actual circumstances and the current state of damage, while promoting their return to the area, are gaining strength.

Even though the conditions for their return have not been met, the evacuation orders are being lifted one by one, with the orders for the town of Naraha, which had been entirely evacuated, lifted on September 5. In a cabinet decision on June 12, the Japanese government decided to lift the evacuation orders for all remaining areas by March 2017, except for areas with extremely high levels of radiation. TEPCO will thereby be able to cut off compensation for mental suffering to the residents of areas under evacuation orders in March 2018.

Basic policy revisions to the Law on Support for Victims, Including Children, of Nuclear Accidents were approved by the cabinet on August 25, to the effect that, "Conditions for renewed evacuation from areas not under evacuation orders do not exist, and thus it would be appropriate to scale back or eliminate areas receiving support." The disaster victims have taken issue to this as trivializing the accident and forcing them to accept exposure to radiation.

Decontamination Waste Stored On-Site at Over 100,000 Locations

The waste generated by decontamination efforts after the Fukushima nuclear accident, amounting to about 2.3 million cubic meters, is being kept at temporary storage sites. Of that, no more than about 0.5%, or roughly 10,000 m³, has been transported in a pilot (test) project to interim storage facilities. The temporary storage sites are full, and places to put the wastes generated by further decontamination work are running out. As of the end of March of this year, the number of local storage sites, such as the gardens of houses, the grounds of schools and parks, etc., had reached 102,093. One year prior to that, at the end of March 2014, there were 53,057 such sites, so the number nearly doubled in one year. The relevant prefectural staff surmised that the number would continue growing in the future at about the same pace.

Fukushima Fishing Cooperatives Approve Marine Release of 'Decontaminated' Groundwater

As a countermeasure to contaminated water at the Fukushima Daiichi NPS, TEPCO's "sub-drain" plan for decontaminating and discharging contaminated groundwater collected from wells around the buildings into the sea was officially approved by the Fukushima Prefectural Federation of Fisheries Cooperative Associations on August 25 at a closed-door directors' meeting held in Iwaki. Present at the directors' meeting were Shigehiro Tanaka of METI, who serves as deputy director-general for policy planning and coordination as well as inspector-general for decommissioning and special countermeasures for contaminated water, and Yoshiyuki Ishizaki of TEPCO, representing the Fukushima Revitalization Headquarters. Chairman Tetsu Nozaki submitted written responses to five demands the fishing cooperatives had presented as conditions for their approval of the plan.

The responses, which were obvious and require little confirmation, included "striving to prevent marine contamination, strictly observing the operational targets" and "water containing tritium after treatment at the Multi-nuclide Removal Facilities (ALPS=Advanced Liquid Processing System) not to be disposed without the understanding of all parties involved, but held in tanks on the nuclear plant grounds." The directors in attendance indicated their consensus and voted unanimously to accept the plan.

On the same day, President Hiroshi Kishi of the National Federation of Fisheries Cooperative Associations conferred with Economy, Trade and Industry Minister Yoichi Miyazawa to convey the decision for acceptance. After that Kishi conferred with President Naomi Hirose of TEPCO. He relayed the acceptance of the plan as a "tough decision," and hand-delivered a letter requesting strict observance of the operational targets.

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. It is published in html and pdf versions on CNIC's English website: <http://cnic.jp/english/>

Please write to us at cnic@nifty.com if you would like to receive email notices when new editions are published.

Editor: Nobuko Tanimura

Translators: Sumie Mizuno, Pat Ormsby, Mayumi Nishioka

Proofreaders: Tony Boys, Yukio Yamaguchi, Hajime Matsukubo