

Industrial Safety Agency (NISA) announced at a press conference that TEPCO had falsified voluntary inspection reports and concealed it for many years. TEPCO admitted the stated facts at the press conference later in the same day. According to the agency, TEPCO has falsified the inspection records and attempted to hide cracks in reactor vessel shrouds in 13 units of the 17 nuclear power plants owned by TEPCO, including Fukushima I (6 reactors), Fukushima II (4 reactors), and Kashiwazaki-Kariwa (7 reactors). However, the agency maintained that there should be no problem regarding the safety of the nuclear power plants. Ironically, the safety assessment by the agency was based on TEPCO's calculation.

The TEPCO's wrongdoings were exposed as a result of a whistle-blowing by a former engineer at General Electric International Inc. (GEII) in information given to the then Ministry of International Economy and Industry (MITI) (the former body of the Ministry of Economy, Trade and Industry, METI) on July 2000. The tip-offs revealed the falsification of inspection records regarding cracks in a steam dryer, as well as the attempt to hide the repair work for the cracks by the editing of video tapes. This insider's information was never taken seriously by the then MITI (after January 2001, the NISA took over administrative authority from the METI) and the case was left virtually untouched for two years. "We needed a time to protect the status of the whistle-blower and we didn't know whether we had the right to investigate the case," said the agency after the press conference on August 29. On the contrary, it was found later that the METI leaked the whistle-blower's name to TEPCO, which clearly suggests the Ministry failed to support the person who blew the whistle on corporate corruption. While TEPCO had not taken any appropriate measures against the insider's tip-offs, it set up a special joint inspection group in conjunction with GEII on May 2002 to investigate the case, suspecting that there might be more falsification cases in the company.

It has been confirmed that there are 29 cases of falsification, which were related to damage in many parts of the reactor pressure ves-

sel such as core shroud, jet pump, access hole cover, feed water spurger, on-core monitor housing and others. The NISA and the TEPCO published interim reports on September 13 and 17 respectively, which addressed the 29 suspected cases in more detail. Regarding the cracks detected in the core shroud, according to the report, they had been already found at Fukushima I Unit-1 and Unit-4 in 1993, where the cracks in the middle part of the shroud at Fukushima I Unit-2 in 1994 were reported officially as the first case. The magnitude of the cracks in Fukushima I Unit-2 turned out to be far greater and more serious than the ones announced by the official report. It has also become clear that reactors in Fukushima I Unit 1, 3, and 5 have cracks in each shroud, so the claim that no cracks were found in the core shrouds and that they were replaced as a "preventive measure" is completely false.

It is reported that cracks were found in the core shrouds of Fukushima II Unit 2, 3, and 4 and Kashiwazaki-Kariwa, 1 and 3, which is composed of the anti-stress collision crack material (SUS316L) after 10 years of their operation. It is now clear that there were more than 29 falsification scandals.

On September 20, other damage cover-ups in the re-circulation pipe system were revealed in TEPCO's eight nuclear reactors, as well as Onagawa Unit-1 of Tohoku Electric Power Company and Hamaoka Unit-1 of Chubu Electric Power Company. In addition, other cracks in the core shroud were found at Onagawa Unit-1, Hamaoka Unit-4, Tsuruga Unit-1 (Japan Atomic Power Co., Ltd), and Shimane Unit-1. As has been pointed out, this series of cover-ups showed the scandal was not merely TEPCO's particular problem but involved most of the nation's electric companies.

Electric companies have made most data falsifications during voluntary inspection. There have been a growing number of damage cover-ups and data falsifications around 1994 when electric companies had started shortening the time for a periodical inspection having learned from the "success" experience in the U.S. In the same period, similar cracks were found in the core shroud of BWRs in many countries

including the U.S., Sweden, Taiwan, Spain, and Germany, which have become serious issues in such countries. Although similar cases were also found in some of the reactors in Japan, electric companies only partially announced these accidents to the public.

Moreover, TEPCO falsified data from the containment vessel leak rate inspections conducted during periodical inspection at Fukushima I Unit-1 by injecting compressed air into the containment vessel in order to pass the inspection. The falsification of containment vessel leak rate inspections at Fukushima I Unit-1 was revealed at the end of September, one month after the TEPCO scandal, and the TEPCO received the penalty of suspending the operation of Unit-1 for 12 months when it admitted the camouflage with the inspection report. However, it has been pointed out that a similar camouflage method during the inspections has been conducted in other units of the Fukushima II. Has the camouflage only been practiced in Fukushima I Unit-1?

The "healthiness" of Reactor Pressure Vessel (RPV)'s head parts at PWRs should be another focal point. As mentioned earlier in this article, replacements of the core shroud were carried out as a "preventive measure," which means to ensure the "healthiness" of the shroud, at Fukushima I-1, I-3, and I-5. However, TEPCO never reported to the agency that there were cracks in these shrouds. Several electric companies (Kansai Electric Power Co., Shikoku Electric Power Co., and Kyushu Electric Power Co.) have replaced their 11 units of reactor vessel head (all of them are PWRs) as a "preventive measure". Did these reactor vessel heads have any defects at the replacements?

Although each electric power company submitted their interim survey reports on the scandal on November 15 according to NISA's request, the reports only addressed the history of voluntary inspections conducted for the past 3 years. What about the voluntary inspections conducted more than 3 years ago, or the examination records by inspection companies and the periodical inspections other than voluntary inspections? According to several sources, the then MITI has instructed electric compa-

nies to hide accident reports. Although NISA only accused TEPCO, it has never attempted to investigate the MITI itself. The TEPCO scandal only reflects the tip of the iceberg; the depth of the injustice by the electric companies and bureaucrats concerning nuclear power in Japan has not yet become fully resolved. However, the administrative body such as NISA is trying to adversely ease nuclear safety regulations despite the fact that "failure in the regulation" was the primary cause of the scandal.

In order to increase the availability factor of nuclear power plants, NISA has been preparing to simplify periodical inspection procedures. The agency is trying to introduce into nuclear safety regulation the so-called "safety allowance measure", which reflects the assessment of defects during operation. The proposed measure is intended to supplement the present technical standard, which defines the specifications of plant design and modification. The measure is intended to cut costs incurred by the maintenance of aged nuclear plants, and adoption of the standard should directly lead to lower the safety margin of nuclear reactor. Especially for aged nuclear power plants, more severe safety regulations should be established by applying the principle of preservation of order and public safety.

While the TEPCO scandal has had enormous societal impact, local governments of electric power source area, where they have been cooperating in the development of nuclear energy, rage at the scandal, realizing that they have been deceived, and their anger is ever stronger. Prior agreement on the Plu-thermal program was canceled not only by Fukushima prefecture, which has criticized the government nuclear policy, but also by Niigata prefecture. The Plu-thermal program has effectively come to an end. Then, there is no rationale for the plutonium use. What is Rokkasho reprocessing plant for, which has been constructed to start operation in 2005? We should abandon nuclear power, which is only maintained with falsification.

(Chihiro Kamisawa and Satoshi Fujino)

Mechanism of Core Shroud and its function

Core Shroud Design Characteristics

The core shroud in a BWR is a huge stainless steel cylindrical component within the reactor pressure vessel (RPV) that surrounds the fuel assemblies. The core shroud acts as a separator of feedwater and plays an important role in supporting the fuel assemblies to maintain control rod insertion geometry.

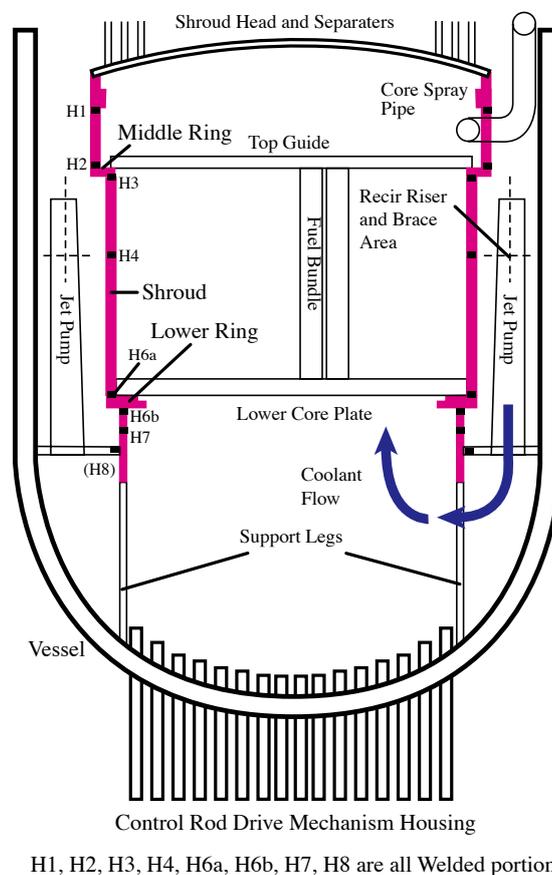
As shown in figure 1's cross-section of BWR reactor design, the core shroud is vertically welded to the RPV in which coolant flows induced downward on the surface of shroud, then upward through the fuel assemblies. The downward flow is the coolant returning back from the turbine. The water fraction is sent to the recirculation pump located outside of the reactor, which helps to feed water back to the RPV where the jet pump riser pipe and the jet pump converts high pressure into high velocity as the fluid goes through them, pushing the water toward the bottom of the vessel. Jet pumps are installed in the annular space between the core shroud and vessel wall where they are attached to the buffer plate.

The cross section of BWR core shroud (see Figure. 1) shows that there are two support ring structures (top guide support ring around H2 and H3 welded portion and core support ring around H6a and H6b welded portion). The fuel assemblies are held by the

lower core plate on the lower ring and covered with the top guide on the middle ring. Being held by the upper and lower plates, the horizontal geometry of fuel assemblies are fixed and, therefore, the flow of cooling water is maintained.

What would happen if the core shroud collapsed?

Some of the cracks in the core shroud are depicted in Figure 2. The crack lines are drawn on the welded portion, however they are actually observed on the shroud body near the welded position. The core shroud is assembled to envelop the whole fuel assembly in the RPV. Therefore, in case of shroud collapse, it is reasonably possible to hypothesize the situation



H1, H2, H3, H4, H6a, H6b, H7, H8 are all Welded portion

Figure 1. Inside view of reactor pressure vessel in Boiling Water Reactor (BWR); Core shroud weld location and name

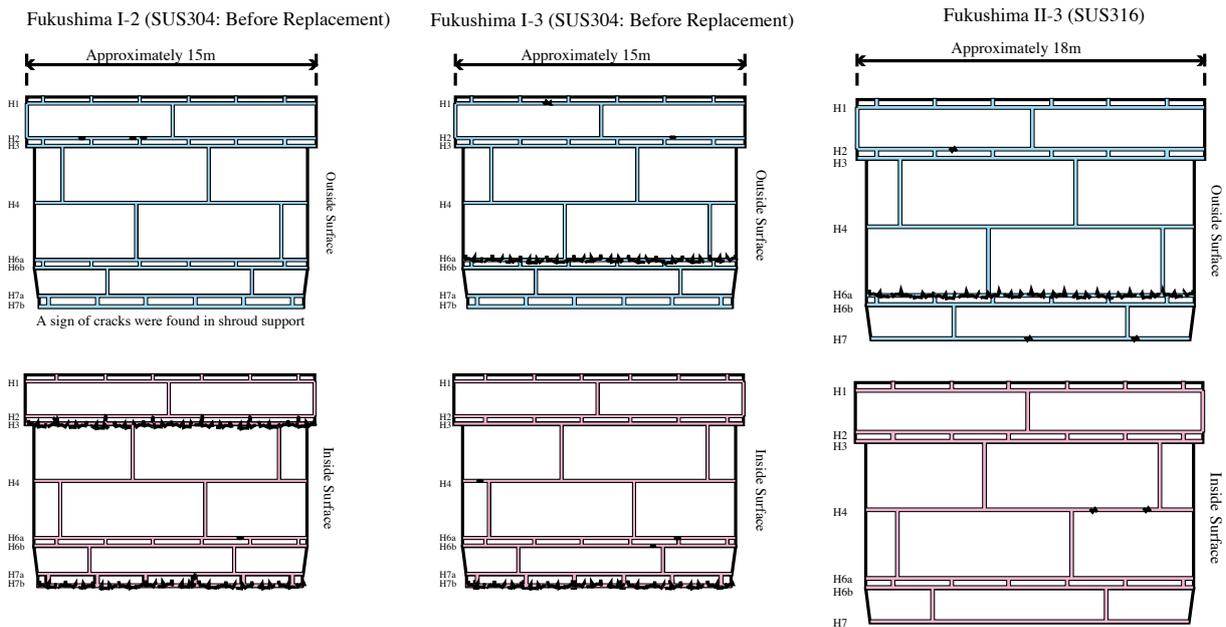


Figure 2. Cracks in core shroud at Fukushima I-2, I-3, and II-3

in which reactor control is not possible due to the loss or damage to the steam separators and steam dryers located on the shroud head.

The U.S. Nuclear Regulatory Commission (NRC) points out in their report that cracks that completely penetrated the shroud affect the flow of water coolant during regular operation, which could lead to a disruption of the coordination of power output and the water flow (NRC, 1996). Also, the NRC warned that significant problems concerning safety could be triggered when the shroud is demolished and separated due to the pipe rupture accident at the main steam pipe or recirculation pipe, which disrupt the function core spray system and control rod drive.

There have never been any safety inspections in Japan that analyze accident simulation assuming cracks in the core shroud. It is not always true that the safety inspection scenario could precisely predict the consequence of an accident resulting from a significant coolant loss accident such as the recirculation pipe rupture in a nuclear power plant with some cracks in its shroud.

According to the NRC report, the fuel rod assemblies in RPV would not be capable of circulating cooling water, because the coolant cir-

culated in the shroud is leaked from cracks in the core shroud, which is also released from the recirculation pipe to the outside of the nuclear reactor. Even if the core shroud is in good condition, being capable of maintaining the circulation of cooling water, cracks in the shroud could ultimately lead to core meltdown, probably the most catastrophic accident that could occur at a nuclear power plant.

(Chihiro Kamisawa)

Reference:

U.S. Nuclear Regulatory Commission. 1996. "Status Report: Intergranular Stress Corrosion Cracking of BWR Core Shrouds and Other Internal Components." Division of Engineering, Office of Nuclear Reactor Regulation. Washington, DC. NUREG-1544

Many press releases concerning the TEPCO scandal are available in English at the following NISA's homepage:
<http://www.nisa.meti.go.jp/english/index.htm>

Govt Agency Proposes “Defects Standards”, and Citizens Protest Against the Plan

In response to the maintenance data falsification scandal concerning the Tokyo Electric Power Co. Inc. (TEPCO), the government immediately set up two committees on September 13. One committee is expected to evaluate how the Nuclear and Industrial Safety Agency (NISA), an affiliate of the Ministry of Economy, Trade and Industry (METI) and responsible for the safety regulation of nuclear energy, handled the tip-off remarks submitted to the agency two years before the scandal emerged. The other committee discussed the possibility of establishing a new regulatory system to prevent similar problems from occurring again.

The former, called the “evaluation committee on the inspection procedure of the TEPCO data falsification,” has been set up under the Minister’s Secretariat in METI and is headed by Mr. Kazuo Sato, the former chief of the Nuclear Safety Commission. Mr. Sato used to work in the Japan Atomic Energy Research Institute. The latter committee is named the “review committee concerning examination of legalizing nuclear safety regulation” and is headed by Mr. Shunsuke Kondo, a professor at the University of Tokyo, well known as an advocate of nuclear energy. As is easily imagined from the chairs’ position, the government was trying to bring an end to the scandal after several meetings and two weeks of public comments. The government proposed amendments of the electricity law at the extraordinary Diet session in mid-November.

Did the evaluation committee succeed in examining NISA’s and the then METI’s handling of the whistle-blower? Judging from the content of the interim report which was released on October 28, the answer is “No”. The report never addresses the responsibility of the persons who were involved in the incidents in the past; rather, it has chosen to focus

on future measures by drawing lessons from the scandal. One of the central issues is that it is extremely problematic when the official at the Natural Resource and Energy Agency does something as inappropriate as calling TEPCO to inquire if the alleged facts are correct or not. This incident shows a back-scratching alliance between the government and the electric industry. Therefore, it was extremely important to inquire into the responsibilities of those who were involved in this scandal.

The report concludes with rather obvious matters, such as clarifying investigation procedures and methods, strengthening investigation capability, and fostering human resources. The status of whistle-blowers was legalized in 1999 with the JCO criticality accident as a turning point. The nature of the problem is whether the allegation can be legalized and who is legally allowed to make such a claim. Under current law, only the employees of a company are eligible to prosecute a company. TEPCO and NISA discussed whether the contract worker should be eligible in the TEPCO scandal case. The investigation was only able to proceed when NISA explained that contract workers should be eligible to make allegations. Since the whistle-blower had already been laid off for another reason, the case did not become problematical. Otherwise, it is doubtful that the status (as an employee) of the whistle-blower would have been guaranteed. The report from the evaluation committee recommends that they use a complaint submission system, but it is still doubtful whether the whistle-blower’s status would be guaranteed.

The modification of the electricity law proposed preventive measures whereby voluntary inspections are incorporated into the law. Under the law, record-keeping of the voluntary inspection is mandatory, stricter penalties are

applied against non-compliance, and the standards for the “allowable reactor defects” are introduced. The review committee also insists on the thorough disclosure of information to the public and states that increasing organizational transparency is important. However, the voluntary inspection data was not included in the subject of information disclosure. The law mandates the preservation of inspection records, but does not require them to be submitted to the administrative agency.

While many western countries introduced “allowable reactor defects” standards in the early days of nuclear power plant management, Japan has not adopted such standards. Mr. Toshiaki Enomoto, the former vice president of TEPCO (he resigned from the company to take responsibility for the scandal) explained why Japan has not adopted allowable standards saying, “there was a strong social and environmental mood against nuclear energy which has been unique to Japan” (Genshiryoku Eye, November 2002). Electric companies and regulatory authorities had agreed on the difficulties in introducing standards that would allow nuclear reactors to continue operating with cracks and rust as long as the level of safety assurance was met, while there was a widespread movement against increasing man-made radioactivity among local residents and citizens. However, as the liberalization of the electricity market progresses, electric power companies will have to adopt the “allowable reactor defects” standards as pressure to cut costs becomes the overriding priority.

With the introduction of the standards, electric companies, for example, will be able to sustain the operation of nuclear power plants even if the core shroud has cracks as long as half its circumference. The nuclear reactors can continue operation under the new standards where previously they would have had to be stopped for repairs. The Japan Society of Mechanical Engineering (JSME) said that the movement towards introduction of “defect standards” was set in motion by the “Agreement on the Removal of Technical Barriers

regarding the Rules of Trade between Global Trading Organizations in 1996”. The JSME insists that the regulatory scheme should be changed from “specific standards” to “performance standards.”

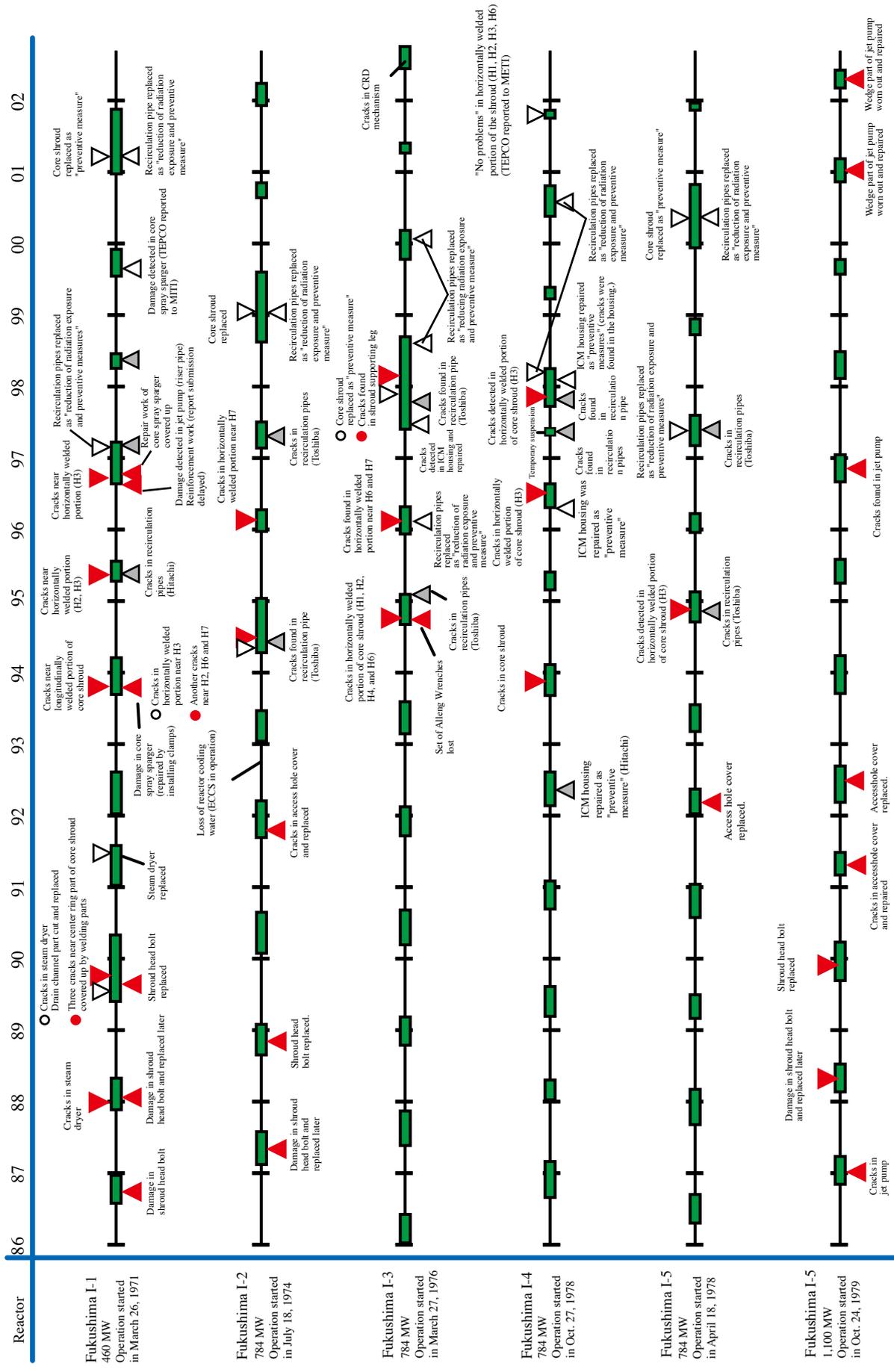
Performance standards are not concerned with the composition of materials as long as the standards are met. While the government has emphasized that the “defect standard” permits utilities to introduce new instruments easily, some say it is likely that utilities will seek cheaper instruments made of degraded material. Nuclear industries will lean towards the use of cheaper materials including imported materials under the severe situation faced by nuclear energy. This leads to a fundamental change in Japan’s nuclear regulatory scheme.

Citizens are mobilizing to organize an opposition campaign against the introduction of the “allowable standards” and claim that introduction of the standards has the potential to result in an increasing number of nuclear accidents. Fukushima prefecture assembly voted to oppose the introduction of the standards on October 11th, and have submitted an opinion paper to the government.

The governor of Aomori prefecture has requested that the government separate NISA from METI to make it more independent from nuclear interests. NISA is located under the Agency of Natural Resources and Energy (ANRE) within the METI. Having received the request from the Aomori governor, the government is trying to put an end to the scandal by seeking a compromise whereby NISA will be promoted to the same level as ANRE. On the contrary, citizens continue to demand that nuclear regulatory administration should be completely independent from ministries and agencies. Measures should be taken to end the collusive relations between government and industry. The citizens’ side calls for the separation of NISA right out of METI, in order to ensure that all information is disclosed and available to the public. (Hideyuki Ban)

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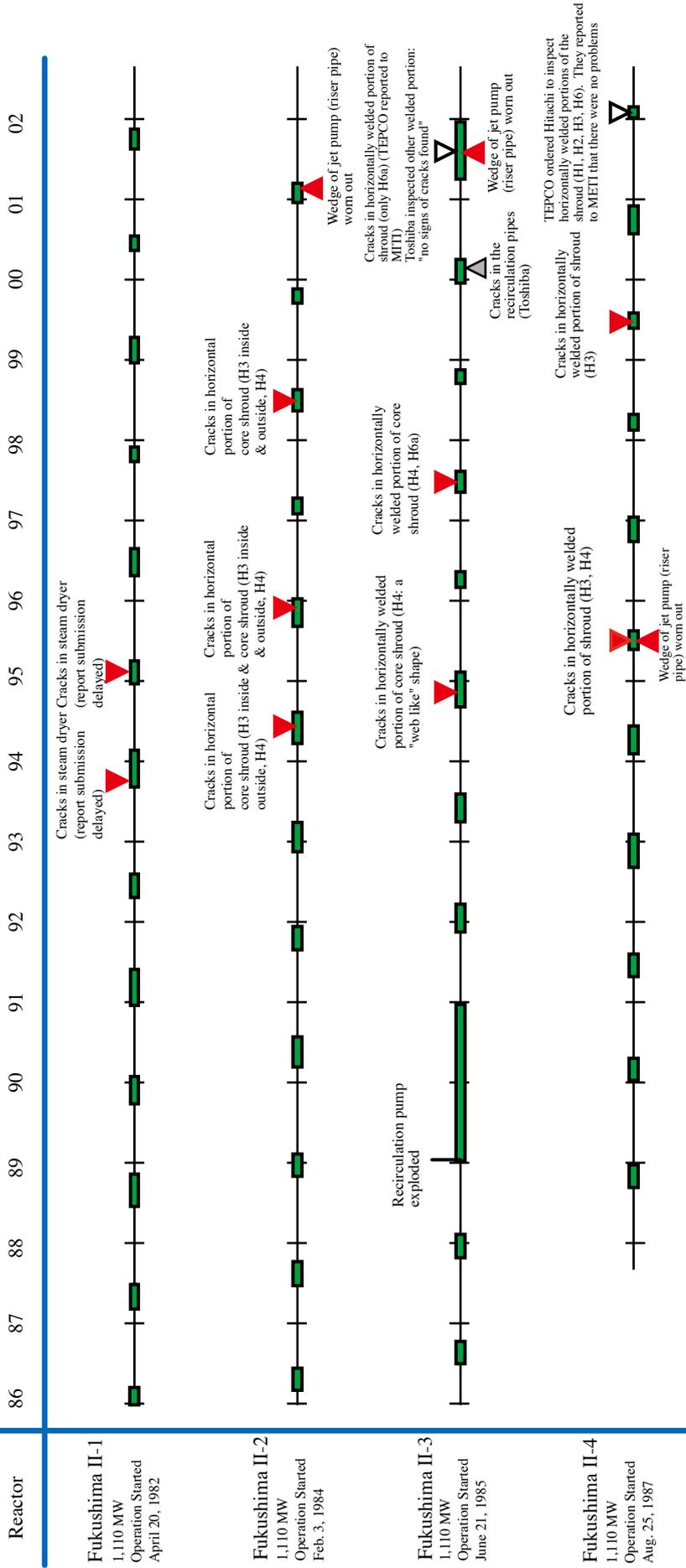
TEPCO's damage cover-ups and data falsification (Fukushima I)



Legend: Temporary inspection period (Green bar), Damage falsification revealed (GE related) (Red triangle), other than GE (White triangle), Official report (White circle)

TEPCO damage cover-ups and data falsification (Fukushima II)

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■ : Temporary inspection

▲● : Damage Falsification Revealed (GE related)

▽△ : Other than GE

▽△○ : Official Report

Anti Nuke: Who's Who Tetsunari Iida: democratizing Japan's energy policy

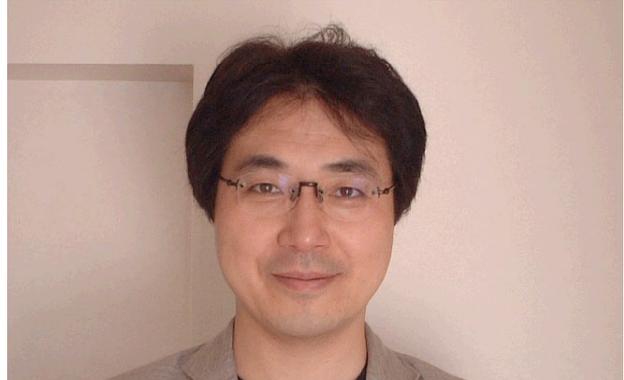
By Eriko Arita, The Japan Times

Tetsunari Iida set himself the task of democratizing Japan's energy policy, which has long been decided only by bureaucrats and electric power companies. The outspoken activist is calling for the adoption of a more flexible and diverse scheme for energy and the introduction of a market mechanism to promote the use of environmentally sustainable energy sources.

As the leader of the non-governmental organization Green Energy Law Network, Iida has collaborated with citizens and some 250 bipartisan lawmakers for the past few years in drafting legislation to promote the use of renewable energy. The bill set rules for electric power companies to purchase electricity generated from renewable energy sources. However, the Diet enacted another bill on the use of renewable energy drafted by bureaucrats in June, which ruined the efforts of the NGO and the lawmakers. "The target for the use of renewable energy specified in the law is too low," Iida claims. "The law does not promote the use of renewable energy but rather restricts it."

While European countries such as the U.K. and Germany aim at increasing use of electricity from renewable sources to 10 percent of the total power supply by 2010, the Japanese government's legislation targets at only 1.35 percent, according to Iida. The leader of the NGO points out other problems of the law, such as allowing use of power generation from wastes which emit carbon dioxide. He also criticized the legislation as "the law of bureaucrats' freehand." Iida said that he continued to appeal to the government to improve energy policy and aimed to propose a bill to revise the law in future. Referring to the fact that the government is trying to legislate for securing supply of nuclear power, Iida said that he would oppose that movement, too.

Iida, who is also senior researcher in charge of environmental and energy policy at the Japan Research Institute Ltd., and a lecturer at a university in Kyoto, is calling for initiatives by local governments to decide their own energy policy. Participating in the panel of Nagano Prefecture on the issue of global warming and also that of Fukushima prefecture on energy policy, Iida has proposed promoting the use of renewable energy at local level. In recent years, increasing number



of prefectures are becoming more positive in forwarding sustainable energy policies, for example, by adapting ordinances for promoting renewable energy, the researcher said.

Before turning to the citizens' movement to proceed with sustainable ways of energy use, Iida was working in the nuclear power industry. He was in charge of managing radioactive wastes at a steel maker and was also sent to an institute where he worked with bureaucrats from the government ministries. However, he had doubts about the industry and the government, which put priority in building nuclear power plants and forced local areas to accept radioactive wastes. "I thought the industry is a 'rotten world,'" said Iida. "When I knew all about the industry, I felt that it was fruitless to continue the work there all my life." Quitting the company, he studied energy policies in Lund University in Sweden, where people decided to get rid of nuclear power, which had accounted for 50 percent of the power supply in the country.

Since coming back to Japan, Iida has actively spoken out on the energy issues in the mass media and introduced energy policies of Northern Europe to the public; last spring he translated a book by the Danish energy expert Jorgen S. Norgaard, which proposes a sustainable society and way of life. He also proposed an alternative energy plan to both the administration and citizens. "I want to succeed in democratizing the energy policy of Japan," said Iida. "Not just promoting a big political movement or asserting a claim loudly, I would like to make steady progress by promoting such substantial efforts as the citizens' initiative to build windmills," he said.

NEWS WATCH

Prefectural Governments of Niigata and Fukushima Completely Retract their Prior Consent to the Plu-Thermal Program

In response to the revelation of Tokyo Electric Power Co.'s series of nuclear reactor damage cover-ups and false reports, the prefectural governments of both Niigata and Fukushima, where the use of MOX fuel in thermal reactors (the so-called Plu-thermal program) had been planned, completely retracted their prior consent to the program.

In Niigata, as reported in NIT No. 91, the head of Kariwa village was holding "dialogue meetings" with villagers in an attempt to overturn the outcome of the plebiscite, which took place in May last year and in which 54% of the effective votes were against the program. On August 29, the last day of the "dialogue," TEPCO's dishonest acts were revealed. On September 6 Kashiwazaki City Council decided to retract their prior consent to the use of MOX fuel for Kashiwazaki-Kariwa 3. On September 11 Kariwa Village Council followed suit. On September 12 the governor of Niigata Prefecture, the Mayor of Kashiwazaki City and the head of Kariwa Village met and agreed to retract their prior consent, and each of them notified TEPCO in writing of the retraction of their consent.

In Fukushima, on September 2, the council members of Okuma-machi, where Fukushima I-3 is located, unanimously decided to retract their prior consent. On September 8 the mayors of four towns where Fukushima I and II are located, agreed to freeze the Plu-thermal program. At the press conference held on September 19, the governor of the prefecture expressed his regret, saying that the prior consent was a mistake and that "his feeling of regret was stronger than that of Niigata." On September 26 he officially announced "the complete retraction of the program" at the prefectural council meeting. The prefectural council on October 11 decided to submit a written statement to the national government

requesting, "not to implement the Plu-thermal program in Fukushima prefecture, as its precondition has lapsed."

Even with the Unscheduled Suspension of Reactor Operations, There is Still a Plentiful Supply of Power

Coupled with the operation stoppage for inspection after the revelation of frauds and periodical inspections, all four of Chubu Electric Power Co.'s reactors and 9 of Tokyo Electric Power Co.'s 17 reactors had their operations suspended. Even in such a serious situation, there is still electricity to spare. Thus, some people question the necessity of relying on nuclear power. Due to excess capacity, in the last several years an increasing number of thermal power stations have been discontinued or had their operation suspended. The Agency of Natural Resources and Energy considers that if some of the suspended thermal power stations were to resume operation in the peak period of power demand in winter, "an adequate reserve rate of 8-10% could be secured."

The fact that more than five reactors were forced to be suspended due to the fraud revelation, has shown us a new problem in terms of the instability of nuclear power as an energy supply source. With nuclear power plants, the situation might occur where all the other reactors in a plant had to be stopped due to an accident in one reactor; or all reactors of the same type may have to be stopped for inspection. Because many reactors may have to be stopped all at once, it has been pointed out that nuclear energy is unstable. Even with a small accident such as a short of a power line or changes in voltage and frequency caused by lightning, a reactor would instantly be stopped in order to protect the equipment. In this regard, too, nuclear power is unreliable. In addition to these problems, reactors have been suspended due to the fraud revelation. The instability of nuclear power as an energy source tells us that "it is safer for us not to depend on nuclear power."

A New Plan to Separate NISA from Nuclear Promotion Administration

The Nuclear and Industrial Safety Agency (NISA), which is in charge of safety regulations for nuclear plants and other nuclear-related facilities, has been positioned as a special organization affiliated to the Agency of Natural Resources and Energy (ANRE), an extra-ministerial bureau of the Ministry of Economy, Trade and Industry (METI). ANRE is in charge of nuclear promotion administration. Before the government ministries and agencies were reorganized in January 2001, there were several sections within ANRE which were in charge of nuclear promotion and regulations. Some of those sections in charge of regulations were put into NISA as an "independent" organization. However, there was a criticism that, as seen from the above-mentioned position, NISA had little independence.

A new plan has suddenly appeared to separate NISA from METI and transfer it to the Cabinet Office. The strongest advocate of the plan is Morio Kimura, the governor of Aomori Prefecture. At the consultation meeting with the government about the nuclear fuel-cycle policy, held on October 10, the governor made a request for the independence of NISA, stating that it was necessary to recover confidence in nuclear safety administration. He further showed a hard stance, saying that if the government does not meet the prefecture's expectation, it might refuse to accept that spent fuel be transported to the Rokkasho reprocessing plant, presently under construction, and that a "grave decision" might be made on the start of operation of the plant. The Nuclear Safety Commission (NSC) is set up in the Cabinet office, but Governor Kimura has shown a negative view on the integration of NISA and NSC.

The Fukushima Energy Policy Review Committee Publishes an Interim Report

On September 19, the Fukushima Energy Pol-

icy Review Committee, an internal organization of the prefectural government, set up in May 2001 by the governor of Fukushima Prefecture (the chairperson is the governor), released "an interim report." The committee was set up to facilitate the region's autonomous development without being influenced by the way the state and utilities are moving through their energy policies like a bulldozer. It first held a "meeting to listen to the opinions of the prefectural residents," and decided the themes of the committee, a wide range of which include: 1) an ideal approach for science, technology and human society in the 21st century, 2) energy policy, 3) policy for nuclear power and 4) regional development. The committee has met 22 times for review in accordance with these themes. Eleven of the meetings were held with scholars and specialists to exchange views. One meeting was with members of the Atomic Energy Commission.

The report questions the promoters' rationale for nuclear power, such as "little release of carbon dioxide," and "low costs," and strongly criticizes the policy of reprocessing spent fuel to use plutonium, since this does not help save resources but increases excess plutonium. Based on these criticisms the report demands that the government "stop sticking obstinately to a fixed policy," "thoroughly implement free access to information and have people participate in policy decision making," and "review the nuclear fuel cycle policy and ask the public about the future policy."

On October 7, Governor Eisaku Sato met with the chairpersons of the Atomic Energy Commission and the Nuclear Safety Commission. At the meeting the governor strongly asserted that the nuclear fuel cycle policy, including the MOX fuel plan, should be reviewed from the beginning. METI expressed reluctance at the separation of the agency from the METI, and at the future prospect of the plan is not certain.

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