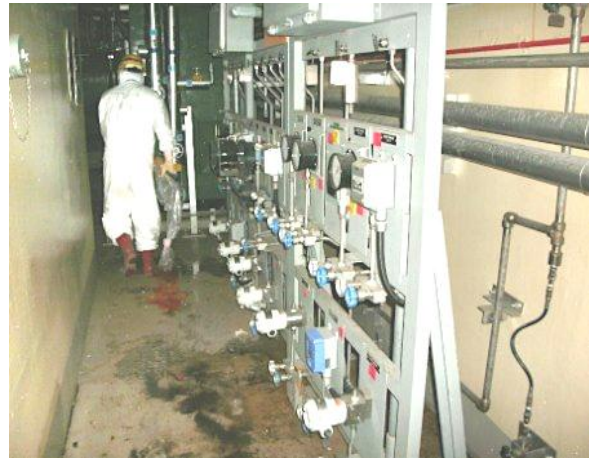


Fukushima Report: No.3

June 30, 2011



Contaminated Water Treatment System



Worker in Reactor Building of Unit-1

1. Current Status of the Damaged Nuclear Power Plant

(1) The injection of cooling water into reactors is continuing at Units 1 through 3. As a result, the temperature around the pressure vessels of the reactors has been kept in a range of 102 degree to 153.9 degree Celsius at the water injection nozzle and the bottom of the pressure vessel. However, unfortunately, stable recycling of cooling water has not yet been implemented. To prevent further hydrogen explosion, the nitrogen gas is continuously injected into Unit 1 containment vessel. Also, the nitrogen gas will be injected into the containment vessels of Unit 2 and Unit 3.

(2) The continued injection of cooling water has resulted in a consistent increase of contaminated water with radioactive substances. How to deal with the contaminated water that has accumulated in the reactor buildings has emerged as the most challenging issue at the Nuclear Power Plant.

(3) The installation and trial operation of the water treatment system to decontaminate the accumulated water was completed by June 26, and this system started full operation on June 28. This water treatment system combines technologies developed by American and French companies. It is the world's first such water treatment system that also removes salt. The system reportedly has a processing capacity of 1,200 tons of water per day. This system was completed in just over two months through partnerships between the relevant engineers from Japan, United States and France

(4) In accordance with the roadmap, workers are starting some works within the reactor buildings, including measuring radioactivity and inspecting and calibrating measuring instruments.

(5) As it is rainy season, some measures are being taken to prevent rainwater coming into the reactor buildings so as to avoid an increase of the accumulated contaminated water, along with the water treatment of the contaminated water.

(6) Measures of spent fuel pool cooling are also implemented. At Unit 2, temporarily heat-exchanger and cooling tower were installed and started to circulate the cooling water from May 31. Similar measures are also scheduled at Reactors 1, 3 and 4 accordingly.

2. Government's Investigation Committee Starts to Investigate

On May 23, the government established the Investigation Committee on the Accidents at the Fukushima Nuclear Power Station of TEPCO (hereinafter referred to as the Investigation Committee), which is in charge of conducting investigation from a neutral standpoint and a multifaceted perspective.

The Investigation Committee will recommend policy measures to prevent the similar accident and to reduce the impact of the accident. It is chaired by Dr. Yotaro Hatamura, a professor emeritus at the University of Tokyo and expert in the field of mechanical engineering who is known for his unique idea of "learning from failure."

At a press conference on June 22, Chairman Hatamura expressed hope to issue an interim report toward the end of this year and complete the investigation by the summer of next year. He also stated that the Investigation Committee will focus on investigating factual evidence and how to prevent future accidents, rather than pursuing the responsibility of the people and organizations involved in the accident (Note).

<Note>:

The June 23 edition of The Wall Street Journal (WEB version) carried an article that included references to a speech made by Chairman Hatamura of the Investigation Committee at the Foreign Correspondents' Club of Japan on June 22.

There are expectations that Chairman Hatamura will play a role similar to Dr. J.G. Kemeny, former President of Dartmouth College who headed the investigation commission on the 1979 Three Mile Island nuclear accident in the United States and who oversaw the compilation of a report that significantly contributed to nuclear power development around the world.

TEPCO is also conducting an internal investigation into the accident.

3. Progress in Compensation Payment and Prospect of the Compensation Scheme

A scheme for compensation for damage caused by the nuclear accident mentioned by our Fukushima Report No. 2 was formally adopted by the government on June 14 and is set to be introduced and deliberated in the Diet (Japan's parliament). Meanwhile, it will be a challenge for electric power companies that will be required to make financial contributions to the compensation fund under this scheme because of their possession of nuclear power stations to explain this additional financial burden to shareholders and other parties concerned and obtain their understanding on it.

TEPCO has opened a call center in Tokyo, 4 consultation offices in Fukushima Prefecture and 8 consultation offices in 8 prefectures regarding compensation for the damage caused by the Fukushima nuclear accident, and upon the request of people affected by the accident, the company has started making payment of compensation to help them meet their immediate needs. As many as more than 1,000 TEPCO employees are involved in the procedures for the payment of compensation.

4. Impact on Other Power Plants and Other Regions

(1) Impact of the shutdown of Hamaoka Nuclear Power Station

Prime Minister Kan's request for the shutdown of Hamaoka Nuclear Power Station is beginning to have a significant impact on the regions that host nuclear power stations.

In Japan, nuclear power stations are required to suspend operations in order to undergo periodic inspection, with the maximum allowable continuous operation set at 13 months. In addition, the restart of suspended nuclear power stations requires the consent of the heads of the municipalities and the governors of the prefectures where they are located. Some heads of municipalities and governors of the host regions demanded that the government clarify its policy on the restart of suspended nuclear power stations.

In light of these circumstances, on June 17, the Minister of Economy, Trade and Industry requested consent to restart suspended nuclear power stations while reassuring the nuclear host communities about safety. However, the situation remains difficult. The government is starting to take concrete actions to reassure the nuclear host communities. On June 26, representatives of the government (Nuclear and Industrial Safety Agency) visited the region where Genkai Nuclear Power Station of Kyushu Electric Power Company is located and held a briefing session for representatives of local residents.

(2) Yellow flags for electric power supply across Japan this summer

(i) Supply-demand forecasts by electric power companies.

Table-1 below shows forecasts of the supply-demand power balance this summer that have been compiled by electric power companies in light of the situation of the nuclear host communities.

Table-1 Forecasts of the supply-demand balance by electric power companies [MW]

Power co.	Peak Demand	Generation Capacity	Reserve Margin (%)
Hokkaido	6,090	4,910	24.0
Tohoku	13,000~13,800	12,300	5.4~ 10.9
Tokyo	55,000	55,200	0.4
Chubu	26,370	27,730	5.2
Hokuriku	5,540	5,640	1.9
Kansai	30,370	29,380	3.3
Chugoku	11,650	13,130	12.7
Shikoku	5,700	5,770	1.2
Kyushu	16,690	17,280	3.5

Peak Demand : Maximum three-day average at generation end
(Maximum one-day for Tohoku and Tokyo)

Generation Capacity: Assuming no restart of nuclear plants after periodic inspection

Optimal Reserve Margin : 8~10%

Given the circumstances surrounding nuclear power generation as described above, the worst-case scenario is that nuclear reactors to be suspended for periodic inspection all reactors now in operation are scheduled to undergo periodic inspection accordingly this year and next will remain shut down after the inspection due to the host communities' refusal to give their consent to the restart. According to the present schedule, all nuclear reactors now in operation will be suspended for periodic inspection by next spring.

(ii) Order for restricting the use of electricity entering into force on July 1

Calling for a 15% reduction in the use of electricity compared with the peak demand of last year, the government has instructed large industrial users of electric power to conserve the use of electricity as an obligation and has also requested citizens to make electricity conservation efforts.

On July 1, a legally binding order for restricting the use of electric power will enter into force in the northern half (Service area of Tohoku EPCO and TEPCO) of Honshu, Japan's main island. This will be the first time since 1974, when the first oil crisis required the restriction. Facilities related to medical care, railway, airport terminal buildings, water and sewage services, shelters for the evacuees stated by the law, no-entry zone, planned evacuation zone and emergency evacuation preparation zone set by the Fukushima Daiichi Nuclear accident will be exempted from the order or subject to less stringent restriction.

(iii) Procurement of alternative fuels to impose a heavy economic burden

Following the shutdown of Fukushima Nuclear Power Station, TEPCO rushed to restore thermal power plants damaged by the devastating earthquake and tsunami. TEPCO also is installing new gas turbines and bringing together emergency power generators from around the world in an effort to ensure sufficient electricity supply this summer. While electricity-saving efforts are expected to reduce demand, the supply shortage arising from the shutdown of nuclear reactors will be covered mainly by LNG-fired thermal power generation. Although procurement of LNG and other alternative fuels has proceeded, there are concerns that the procurement cost of alternative fuels will impose an enormous burden.

Mr. Mita, Chairman of Chubu Electric Power, flew to Qatar in order to secure the procurement of additional LNG on the day after the Prime Minister requested the shutdown of Hamaoka Nuclear Power Station.

The additional fuel costs to be shouldered by TEPCO and Chubu Electric are estimated at ¥700 billion and ¥250 billion, respectively.

(3) Future nuclear policy and energy mix to be seriously influenced

In addition to the above mentioned short-term impacts, possible change in the future energy mix policy and the traditional nuclear development line will give a deep impacts on the future Japanese economy.

*** Next Fukushima Report No.4 will cover the mid to long-term energy policy as well as the status of Fukushima Daiichi Nuclear Power Station.**