

# Plant Status of Fukushima Daiichi Nuclear Power Station

May 18 2012

Tokyo Electric Power Company

## <1. Status of the Nuclear Reactor and the Primary Containment Vessel> (As of May 18 at 11:00 am)

Unit	Status of Water Injection		Bottom Temperature of Reactor Pressure Vessel	Pressure of Primary Containment Vessel*1	Hydrogen Density of Primary Containment Vessel
Unit 1	Injecting Fresh Water	Core Spray System: Approx. 2.0 m <sup>3</sup> /h	31.1 °C	105.6 kPa abs	A system:0.00 vol% B system:0.01 vol%
		Feed Water System: Approx. 4.5 m <sup>3</sup> /h			
Unit 2	Injecting Fresh Water	Core Spray System: Approx. 5.5 m <sup>3</sup> /h	48.9 °C	14.57 kPa g	A system:0.33 vol% B system:0.32 vol%
		Feed Water System: Approx. 2.9 m <sup>3</sup> /h			
Unit 3	Injecting Fresh Water	Core Spray System: Approx. 5.0 m <sup>3</sup> /h	59.6 °C	0.28 kPa g	A system:0.16 vol% B system:0.16 vol%
		Feed Water System: Approx. 1.9 m <sup>3</sup> /h			

\*1: absolute pressure (kPa abs) = gauge pressure (kPa g) + atmosphere pressure (normal atmosphere pressure 101.3 kPa).

[Unit 2] May 18 2:23 PM: We found that the water injection amount to Unit 2 reactor was decreasing. The amounts of water injected from the water supply system (from 2.9m<sup>3</sup>/h to 3.0m<sup>3</sup>/h) and the reactor core spray system (from 5.5 m<sup>3</sup>/h to 6.0 m<sup>3</sup>/h) were increased accordingly.

[Unit 6] May 15 2:20 PM: As to the exhaust inside the Unit 6 Primary Containment Vessel (PCV) which had been conducted by opening the equipment hatch before, in order to do it directly from PCV, we started up PCV fan which had been stopped after the earthquake. Until 2:46 PM on May 16, PCV fan continued operating for a short period of time.

May 18 2:12 PM: Upon our analysis of  $\gamma$  nuclides measurement result (at the main exhaust stack), it was confirmed that the fan operation did not negatively affect the detection level. At 2:12 PM on May 18, the fan was restarted for a continuous run.

## <2. Status of the Spent Fuel Pool > (As of May 18 at 11:00 am)

Unit	Cooling Type	Status of Cooling	Temperature of Water in Spent Fuel Pool
Unit 1	Circulating Cooling System	Under operation	22.0 °C
Unit 2	Circulating Cooling System	Under operation	22.4 °C
Unit 3	Circulating Cooling System	Under operation	21.5 °C
Unit 4	Circulating Cooling System	Under operation	33 °C

[Unit 4] May 17 1:20 PM - 2:50 PM: Hydrazine was injected to the spent fuel pool.

## <3. Status of Water Transfer from the Basement Floor of the Turbine Building etc.>

Unit	Draining Water Source	Place Transferred	Status
Unit 2	Unit 2 T/B	Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)]	5/15 8:35 AM – Being transferred

[Unit 3] 8:05 AM on May 11: Transfer of the accumulated water in the pit to Unit 2 Turbine Building basement was started in order to fill concrete in the pit of Unit 3 circulating water pump discharge valve. At 11:45 AM on the same day, transfer was stopped. Since groundwater may flow into the pit when the water level becomes low, water transfer may be done as necessary.

**<4. Status of the Treatment Facility and the Storage Facility > (As of May 18 at 7:00 am)**

Facility	Cesium Adsorption Apparatus	Secondary Cesium Adsorption Apparatus (SARRY)	Decontamination Instruments	Water Desalinations (Reverse Osmosis Membrane)	Water Desalinations (Evaporative Concentration)
Operating status	Shutdown	Operation *	Shutdown	Operating intermittently according to the water balance	Operating intermittently according to the water balance

\* Cleaning of filter is in progress.

- June 8, 2011 -: Large tanks to store contaminated and decontaminated water are transported and installed.

**<5. Others>**

- October 7, 2011 - : Continuously implementing water spray using water after purifying accumulated water of Unit 5 and Unit 6 to prevent spontaneous fire of trimmed trees and diffusion of dust.
- February 23, 2012 - : Test of drawing water in the Unit 6 sub drain to the temporary tank through the temporarily storage tank was implemented.
- March 6, 2012 - : Test of drawing water in the Unit 5 sub drain to the temporary tank through the temporarily storage tank was implemented.
- March 14, 2012 - : In order to prevent the diffusion of ocean soil, we started the full-scale covering work of seafloor by solidification soil (covering material).
- April 25, 2012 - : For the purpose of preventing further contamination to the ocean through grounder water, we started a full-scale construction of water shielding wall.
- May 16, 2012: While installing the data logger (data collection equipment used for measuring the thermometer direct current resistance) in Unit 1, we found that the wiring (positive) for RPV upper cover flange thermometer (TE-263-66B1) connected to the digital recorder and the stud bolt thermometer (TE-263-67A1) is done in an opposite manner. The wiring was redone properly. These temperatures are not included in the monitoring list of the technical specification (Article 138 and 143).
- May 16, 2012

Around 1:30 PM: We found that data was missing in the portable monitoring post at the main entrance of the power station. Upon investigation, it was assumed that the issue is caused by abnormality of the transmission system between the Main Anti-Earthquake Building and the monitoring post, as the reading was confirmed.

At 3:00 PM: The monitoring panel was reset for recovery and the monitoring post started working properly. The missing data (at 2:00 PM and 2:30 PM) was acquired by dose rate measurement, and the result showed the same level of dose rate as that of before the issue arose (Approx. 22µSv/h).

Around 4:30 PM: At around 4:30 PM on the same day, data reading was failing on the Main Anti-Earthquake Building monitoring panel of the portable monitoring posts at the main entrance and west entrance. At 6:00 PM on the same day, the transmission of the portable monitoring post at the main gate was recovered. As for the monitoring post at the west entrance, alternative measurement was done by a worker, and monitoring was continued utilizing a wireless monitoring post system during the night.

- May 17, 2012: The monitoring post at the west entrance was recovered at 11:35 AM after a worker wiped off the water on the cable connection part and removed and inserted the cable. At 12:30 PM on the same day, the data reading on the Main Anti-Earthquake Building monitoring panel failed again. At 12:55 PM, the issue was resolved by resetting the monitoring panel. As the data acquired at 12:30 PM and later was confirmed on the wireless monitoring post system, there was no missing data. The cause of the issue on the monitoring post at the main entrance is considered to be a temporary transmission system issue. The issue on the monitoring post at the west entrance seems to be caused by a bad cable connection and a temporary transmission system issue. All data except for that of 1:30 PM on May 16 was acquired by an alternative measurement (at both the main entrance and west entrance). We will continue to monitor these equipments by checking the data updates every 30 minutes.

At around 9:20 PM: The data of the portable monitoring post at the west entrance could not be confirmed on the Main Anti-Earthquake Building monitoring panel. Though the receiving terminal panel was reset, transmission did not recover. Data acquired at 9:30 PM on May 17 and later is being monitored by a wireless monitoring system. The cause of this issue is currently under investigation.

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