Plant Status of Fukushima Daiichi Nuclear Power Station

May 29, 2012
Tokyo Electric Power Company

<1. Status of the Nuclear Reactor and the Primary Containment Vessel> (As of May 29 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^3/h Feed Water System: Approx. 4.4 m^3/h	30.9 ˚C	107.4 kPa abs	A system:0.00 vol% B system:0.00 vol%
Unit 2	Injecting Fresh Water	Core Spray System: Approx. 6.0 m^3/h Feed Water System: Approx. 3.0 m^3/h	46.6 ˚C	13.80 kPa g	A system:0.24 vol% B system:0.23 vol%
Unit 3	Injecting Fresh Water	Core Spray System: Approx. 5.0 m^3/h Feed Water System: Approx. 1.9 m^3/h	58.5 ˚C	0.27 kPa g	A system:0.15 vol% B system:0.14 vol%

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

【Unit 1, and 3】

・3:43 PM on May 29: The volume of water injection to Unit 1 reactor from feed water system was adjusted from approx. 4.4m^3/h to approx. 3.5m^3/h. (The volume of water injection from core spray system was carried on at the rate of 2.0m^3/h.) The volume of water injection to Unit 3 reactor from feed water system was adjusted from approx. 1.9m^3/h to approx. 2.9m^3/h. (The volume of water injection from core spray system was carried on at the rate of 5.0m^3/h.)

* With the current water injection amounts (Unit 1: 6.5m^3/h, Unit 2: 9.0m^3/h, Unit 3: 7.0m^3/h), the temperatures of Unit 1-3 RSV and PCV are expected to gradually increase along with the ambient temperature increase in the summer, and it is predicted that the Unit 3 temperature will be slightly higher than that of Unit 1 and 2. As a result, the operational requirement margin specified by the technical specification will decrease for Unit 3, and the volume of water injection would be changed. Carrying on the total volume of water injection to reactors in present, the amounts of water injection will be optimized (Unit 1: 5.5m^3/h, Unit 2: 8.5m^3/h, Unit 3: 8.5m^3/h) gradually, according to the estimated temperature increase (with heat balance taken into account). By doing so, sufficient margins of Unit 1-3 RSV/PCV temperature requirements will be ensured during the summer.

<2. Status of the Spent Fuel Pool > (As of May 29 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	22.9 ˚C
Unit 3	Circulating Cooling System	Under operation	22.3 ˚C
Unit 4	Circulating Cooling System	Under operation	32 ˚C

<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)]	5/27 2:34 PM – Being transferred
Unit 3	Unit 3 T/B	→	Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)]	5/19 9:15 AM – Being transferred
Unit 6	Unit 6 T/B	→	Temporary Tank	5/29 10:00 AM – 4:00 PM Transferred

【Unit 3】・ May 11 - : Transfer of the accumulated water in the pit to Unit 2 Turbine Building basement is done as appropriate in order to fill concrete in the pit of Unit 3 circulating water pump discharge valve.

May 28: Filling concrete in this pit was completed.

<4. Status of the Treatment Facility and the Storage Facility > (As of May 29 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 28, 2012: The following Unit 2 PCV thermometers (monitored in accordance with Article 138 of the Technical Specification) indicated significant temperature changes (stepwise increase/decrease in temperature). Upon our temperature trend evaluation, we found that these temperature changes may have been caused by abnormality with the thermometers. On May 29, direct resistance measurement was done on these thermometers, and reliability evaluation will also be done. According to the radioactivity density of short half-life nuclides, there is no possibility of re-criticality.
  - RETURN AIR DRYWELL COOLER (TE-16-114A) [Monitored] 58.0℃→64.7℃
  - RETURN AIR DRYWELL COOLER (TE-16-114D) [Monitored] 43.7℃→47.6℃
  - SUPPLY AIR D/W COOLER HVH 2-16A (TE-16-114F #1) [Reference] 41.0℃→35.0℃
  - SUPPLY AIR D/W COOLER HVH 2-16C (TE-16-114H #1) [Monitored] 52.1℃→48.2℃

  (Above data was acquired from 5:00 PM to 11:00 PM on May 28)
- At 10:33 AM on May 29: As to the exhaust inside the Unit 5 Primary Containment Vessel (PCV) which had been conducted by opening the equipment hatch before, in order to do it directly from PCV, PCV fan which had been stopped after the earthquake was started up.
- Around 12:30 PM on May 29: Data reading was failing on the Main Anti-Earthquake Building monitoring panel of the portable monitoring post at the west entrance. The same issue was occurring on the Main Anti-Earthquake Building monitoring panel of the wireless monitoring post used for alternative monitoring. There is no problem with data monitoring at 12:30 PM and later, as a worker at the site has been measuring data.
- At 1:10 PM on May 29: An alarm went off at the measurement equipment (dust monitor which continuously measures the radioactivity density of radioactive materials in the air) located in front of the Main Anti-Earthquake Building. At 1:15 PM on the same day, an instruction was given to wear a full-face mask (based on an operation rule). After that we found that there was no significant change in monitoring post data. The filter of the measurement equipment was replaced. At 1:50 PM, the equipment was restarted by resetting. As a result of a manual measurement of radioactivity density of the air in front of the Main Anti-Earthquake Building, the radioactivity density was below the detection limit ($1\times10-5$ [Bq/cm^3]) and the standard value for requiring a full-face mask ($1\times10-4$[Bq/cm^3]). At 1:53 PM, an announcement was given to allow taking off the mask..

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