Plant Status of Fukushima Daiichi Nuclear Power Station

March 28, 2012
Tokyo Electric Power Company

<1. **Status of the Nuclear Reactor and the Primary Containment Vessel>** (As of March 28 at 11:00 am)

Unit	Status of Water injection		Reactor pressure vessel Bottom temp.	Pressure of primary containment vessel*	Hydrogen density of Primary containment vessel
Unit 1	Injecting Fresh water	Core Spray System: Approx.2.0 m^3/h	24.1 ℃	106.9 kPa abs	A system:0.00 vol%
		Feed Water System: Approx.4.8 m^3/h			B system:0.00 vol%
Unit 2	Injecting Fresh water	Core Spray System: Approx.6.0 m^3/h	50.1℃	15.28 kPa g	A system:0.28 vol%
		Feed Water System: Approx.2.8 m^3/h			B system:0.28 vol%
Unit 3	Injecting Fresh water	Core Spray System: Approx.4.9 m^3/h	54.5 ℃	0.30 kPa g	A system:0.19 vol%
		Feed Water System: Approx.1.8 m^3/h			B system:0.18 vol%

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

【Unit 2】

・From 9:40 am to 12:30 pm on March 26: We confirmed the water level and checked the water temperature in the reactor containment vessel using industrial endoscope. It was confirmed that the water level was approx. 60 cm above the bottom of the vessel and the water temperature was within the range from approx. 48.5℃ to approx.50.0℃.

・From approx. 9:30 am to 10:30 am on March 27: We measured ambient dose rates of inside of PCV by inserting a dose rate meter around the upper part of grating through one of the penetration points of PCV (X-53 Pene). We confirmed that an ambient dose rate was 31.1 to 48.0 Sv/h at the point of approx. 50 cm inside from the edge of the penetration point (PCV side) towards the center. Another was 39.0 to 72.9 Sv/h at the point of approx. 1m inside from the edge towards the center.

・At 12:10 pm on March 27: Since the investigation of the inside of the primary containment vessel was completed, we changed the volume of nitrogen injection into the primary containment vessel from 0m^3／h to approx.5m^3／h.

<**2. Status of the Spent Fuel Pool** >(As of March 28 at 11:00 am)

Unit	Cooling type	Status of cooling	Temperature of water in Spent Fuel Pool
Unit 1	Circulating Cooling System	Under operation	13.5 ℃
Unit 2	Circulating Cooling System	Under operation	13.8 ℃
Unit 3	Circulating Cooling System	Under operation	13.4 ℃
Unit 4	Circulating Cooling System	Suspended	24 ℃*

* As the latest data is missing due to the suspension of the cooling system of the spent fuel pool, proximate data is inserted (as of 5:00 am on March 27).

【Unit 2】

- Desalination equipment has been activated in order to reduce density of salt from the spent fuel pool since 11:50 am on January 19.

【Unit 4】・

・At 5:41 am on March 27: Due to switching of the flexible hose of the spent fuel pool primary cooling system and switching of the pump suction strainer of the secondary cooling system etc., the cooling of the pool stopped (the pool water temperature at the time of the stop: approx.24℃). The period of the stop is scheduled to be until March 28. Since we estimate that the increase of the pool water temperature will be approx.0.5℃/h, there is no problem regarding the control of the pool water temperature.

・.At 4:35 pm on March 28: Due to the completion of work, the cooling of the spent fuel pool was restarted.

<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)］	10:14 am on March 20 - Transferring
Unit 6	Unit 6 T/B	→	Temporary tanks	10:00 am-4:00 pm on March 28 Transferred

<4. Status of the Treatment Facility and the Storage Facility >(As of March 28 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	Shutdown*	Shut down	Operating intermittently according to the water balance	Operating intermittently according to the water balance

* Cleaning of filter is in progress.

- From June 8, 2011: Large tanks to store contaminated and decontaminated water are transported and installed.
- On March 26, 2012: At around 8:30 am, in the area of condensed water tanks for water desalinations (reverse osmosis membrane) of Fukushima Daiichi Nuclear Power Station, a partner company worker found that water was leaked from a pipeline (anti-pressure hose) which transferred the condensed water from the water desalinations to the condensed water tanks. In order to stop the water leakage, we stopped the transfer pumps of the water desalinations (reverse osmosis membrane) and then the leakage stopped. After that, we closed the valves at the both sides to the leakage point of the pipeline (anti-pressure hose). When we checked the leakage on the site later, we found that a part of the leaked water had been poured into a nearby drainage for general draining water. And then we conducted sampling surveys on the leaked water, the water which was poured into the drainage, and the seawater around the exit of the drainage. As a result, we judged that some water including radioactive materials was poured into the sea from the exit of the drainage located at about 300 m south from the discharge channel of Unit 1-4 of Fukushima Daiichi Nuclear Power Station. At this moment, the water desalinations (reverse osmosis membrane and evaporative concentration apparatus) are not in service. However, because we have much treated fresh water, it does not affect water injection to the reactors. After that, we stopped the cesium adsorption apparatus at around 5:00 pm and the second cesium adsorption apparatus at around 5:29 pm. We estimated that the amount of the leaked water was approx. 120 m^3 in total based on the pump operating time etc. and that the amount of the water flown out to the sea was approx. 80 liter at a maximum.
- At 9:10 am on March 28, 2012, we restarted the 2nd Cesium Adsorption Apparatus after having completed the work against the leakage and it reached to the rated flow (approx 40 m^3/h) at 9:20 am on the same day. At the 12:07 pm and 12:13 pm on the same day, we restarted the two lines of the desalination facility (reverse osmosis membrane). As for the Cesium Adsorption Apparatus, power retrofitting work had been conducted in order to establish 2 lines of power sources for accumulated water treatment facility. Thus, after having completing the work, at 2:32 pm on the same day, we restarted the Cesium Adsorption Apparatus and it reached the rated flow (approx. 19.1 m^3/h).

<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).
- March 28, 2012: At 7:05 am we stopped Shutdown Cooling System due to suspension of power supply for construction work regarding power supply cars installation in case of outage of AC power source of Unit 5 and 6. Due to this work, cooling the reactor stopped (water temperature of the reactor when sftopped: approx. 32.3℃).
  At 2:56 pm on the same day, we restarted Shutdown Cooling System and re-started cooling the reactor. (water temperature of the reactor when restarted: approx. 38.2℃)

END