Plant Status of Fukushima Daiichi Nuclear Power Station

February 17, 2012
Tokyo Electric Power Company

<1. Status of the Nuclear Reactor and the Primary containment vessel> (As of February 17 at 11:00)

Unit	Status of Water injection		Bottom temperature of Reactor pressure vessel	Pressure of primary containment vessel	Hydrogen density Of Primary containment vessel
Unit 1	Injecting Fresh water	Core Spray System: Approx. 1.7 m^3/h	24.6 ° C	106.0k Paabs	0.01 vol%
		Feed Water System: Approx. 4.4 m^3/h			
Unit 2	Injecting Fresh water	Core Spray System: Approx.10.0 m^3/h	-3.5 ° C *	113k Paabs	0.05 vol%
		Feed Water System: Approx. 7.7 m^3/h			
Unit 3	Injecting Fresh water	Core Spray System: Approx. 6.1 m^3/h	48.6 ° C	101.6k Paabs	
		Feed Water System: Approx. 2.8 m^3/h			

* We evaluated that the thermocouple is out of order.

【Unit 2】

- Because the tendency of temperature rise at the bottom of the PCV had been accelerated since February 2 and it continued, we have increased the amount of water injection to the reactor since 14:10 on February 12. We confirmed that the meter indicated 82˚C exceeding 80˚C which is the maximum temperature limit at the bottom of the PCV for the safety operation defined in the safety regulation*2 and evaluated that it violated the regulation at 14:20 on February 12. In order to satisfy the limit of the safety operation, we increased the amount of water injection. After the countermeasure was taken, the temperature continued to rise and we conducted an investigation of the meter which monitors the temperature at the bottom of the PCV. As a result of the investigation, we evaluated that the thermocouple has been out of order due to disconnection, because the DC resistance was higher than normal level. After the inspection of the soundness of thermocouple, we evaluated that it has been out of order.
- 14:00 February 17: We evaluated that the temperature at the bottom of the PCV was not actually risen and it didn't exceed the limit of the safety operation. Our evaluation of violation of the safety operation was corrected retroactive to February 12. The meter was deleted from the list of the meters to monitor the temperature of the bottom of the PVC. The temperature is monitored with the other meters.

*1) Based on the management of facilities stipulated at the Article 12 "Mid-term safety securing" of Act of the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors, it provides "Operational Limit" and "measures required in the case that does not satisfy the Operational Limit", it is required to respond based on the measures required in the case that does not satisfy the Operational Limit. In our case, in order to implement the preservation work, it was shifted to outside of operational limit condition as planned (from 1:55 pm on February 12), we changed the water injection amount into the reactor of Unit 2. At 2:20 pm, we judged that it was not satisfied "the temperature is below 80 ˚C at the bottom of PCV", which is stipulated in "the Reactor Facility safety Regulation" as one of the "Conditions of operation". as the indicated temperature was 82 ˚C beyond 80 ˚C. We continue to change the water injection amount accordingly.

*2) Reactor Facility Safety Regulation provides necessary conditions such as the numbers of the permitted machines etc. or criteria of temperatures and pressures for securing multiple safety function for operating reactors and for keeping nuclear power stations stable and these are treated as conditions for operation. When there happen some malfunctions of equipment provided in the regulation and a nuclear power station can not clear the conditions temporarily, operators have to

take required countermeasures.

- On February 16-17, sampling for the air of Unit 2 PCV gas control system was conducted. As a result of the analysis, it was confirmed that xenon 135 at the entrance of the system was below the detection limit and recriticality criteria 1 Bq/cm^3. Thus, recriticality was not confirmed. (The detection limit 1.2 X 10^{-1}Bq/cm^3 on February 16, 1.0 X 10^{-1}Bq/cm^3 on February 17)

【Unit 3】

- 11:33am on February 17: Since the current amount of the water injection has enough margin against the water injection for decay heat, the water injection from the core spray system has been reduced from approx. 6.0m^3/h to approx. 5.0m^3/h in order to alleviate transfer and treatment of accumulated water increased by the water injection increase into Unit 2. The water from the reactor feed water system was adjusted from approx. 2.9m^3/h to approx. 3.0m^3/h.

【Unit 4】【Unit 5】【Unit 6】

- No significant incidents have happened.

<2. Status of the Spent Fuel Pool> (As of February 17 at 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Spent Fuel Pool
Unit 1	Circulating Cooling System	Under operation*	24.5 °C
Unit 2	Circulating Cooling System	Under operation	12.7 °C
Unit 3	Circulating Cooling System	Under operation	16.0 °C
Unit 4	Circulating Cooling System	Under operation	25.0 °C

* System secondary air fin cooler: out of service

【Unit 2】

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

【Unit 3】

- Radioactive material removal equipment has been activated in order to remove radioactive materials from the spent fuel pool since 3:18 pm on January 14.

<3. Status of water transfer from the Vertical Shaft of the Trench and the basement floor of the Turbine Building>

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)]	14:43 on February 10 - Transferring
Unit 6	Unit 6 T/B	→	Temporary tank	From 10:00 to 16:00 on February 17 Transferring

<4. Status of the Treatment Facility and the Storage Facility> (As of February 17 at 7:00)

Facility	Cesium adsorption apparatus	Secondary Cesium adsorption apparatus (sarry)	Decontamination instruments	water desalinations (reverse osmosis membrane)	water desalinations (evaporative concentration)
Operating status	Under operation	Under operation*	Out of service	Operating intermittently according to the water balance	Operating intermittently according to the water balance

*Cleaning of filter is implemented accordingly.

・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.
- January 11, 2012～: As finding accumulated water including radioactive materials (December 18, 2011) at the trench between Process Main Building of Central Radioactive Waste Treatment Facility and Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building), we started inspection of the other trenches in the site. *Please refer to the other reference materials for the result of daily inspection.
- February 14, due to the inspection of strainer changeover valve of auxiliary cooling seawater system pump of Unit 6, at 10:02 we stopped cooling the spent fuel pool by the spent fuel pool cooling system (B). At 10:06, we also stopped the auxiliary cooling seawater system pump (A) (The temperature at the shutdown period was around 23˚C). During the work, we implemented alternant cooling of the reactor and the spent fuel pool by the residual heat removal system (RHR)(until around February 17), because the spent fuel pool cooling system stopped. We estimated that the water temperature during the work would be a maximum of 37˚C at the reactor and 31˚C at the spent fuel pool. We estimated that the temperature was tolerance level.
- 2:07pm on February 17, the inspection of the strainer changeover valve of auxiliary cooling seawater system pump of Unit 6 was completed, the auxiliary cooling seawater system pump (A) was activated. At 2:53 pm on February 17, we restarted the cooling of the spent fuel pool by the spent fuel pool cooling system (B) and the system was back to the normal operating condition. (The maximum temperature during alternate cooling period Reactor Water: 33.6˚C, Spent Fuel Pool Water: 29˚C)

End