Plant Status of Fukushima Daiichi Nuclear Power Station

November 27, 2011
Tokyo Electric Power Company

<Draining Water on Underground Floor of Turbine Building (T/B) >

◇Status of highly concentrated accumulated radioactive water treatment facility and storage tank facility

[Treatment Facility]

・6/17 20:00 Full operation of radioactive material removal instruments started.
・6/24 12:00 Start of desalination facilities operation
・6/27 16:20 Circulating injection cooling started.
・8/7 16:11 Evaporative Concentration Facility has started full operation.
・8/19 19:33 We activated second cesium adsorption facility (System B) and started the treatment of accumulated water by the parallel operation of cesium adsorption instrument and decontamination instrument. At 19:41, the flow rate achieved steady state.

[Storage Facility]

・6/8～ Big tanks to store and keep treated or contaminated water have been transferred and installed sequentially.

◇Accumulated water in vertical shafts of trenches and at basement level of building

Unit	Draining water source→Place transferred	Status
Unit 1	・Unit 1T/B→Unit 2T/B	・14:54 on November 25 -9:38 on November 27 Transferred
Unit 2	・Unit 2T/B→Central Radioactive Waste Treatment Facility［Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)］	・9:10 on November 10 - Transferring
Unit 3	・Unit 3T/B→Central Radioactive Waste Treatment Facility［Process Main Building］	・9:25 on November 15 - Transferring
Unit 6	・Unit 6T/B→Temporary tanks	・11/27 No plan of transfer

Place transferred	Status of Water Level (As of November 27 at 7:00)
Process Main Building	Water level: O.P.+ 2,089 mm(Accumulated total increase:3,306 mm) 36mm increase since 7:00 on November 26
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 2,048 mm(Accumulated total increase:2,774 mm) 59mm decrease since 7:00 on November 26

◇Water level of the vertical shaft of the trench, T/B and R/B (As of November 27 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on November 26)	O.P.+ 3,296 mm (358mm decrease since 7:00 on November 26)	O.P.+ 4,105 mm (46mm decrease since 7:00 on November 26)
Unit 2	O.P.+ 3,047 mm (28mm increase since 7:00 on November 26)	O.P.+ 3,056 mm (25mm increase since 7:00 on November 26)	O.P.+ 3,164 mm (25mm increase since 7:00 on November 26)
Unit 3	O.P.+ 3,260 mm (12mm decrease since 7:00 on November 26)	O.P.+ 3,015 mm (14mm decrease since 7:00 on November 26)	O.P.+ 3,226 mm (16mm decrease since 7:00 on November 26)
Unit 4	－	O.P.+ 3,039 mm (4mm decrease since 7:00 on November 26)	O.P.+ 3,057 mm (12mm decrease since 7:00 on November 26)

<Monitoring of Radioactive Materials>

Nuclide Analysis of Seawater(Reference) ※Since Oct 24, an approach to decrease the detection limits of radioactivity density was started.

Place of sampling	Date of sampling	Time of sampling	Ratio of density limit (times)		
			I-131	Cs-134	Cs-137
Approx. 30m North of Discharge Channel of 5-6U, 1F	11/26	8:20	ND	0.20	0.14
Approx. 330m South of Discharge Channel of 1-4U, 1F	11/26	8:45	ND	0.04	0.03

・The major three nuclides (Iodine-131, cesium-134, 137) were not detected in the samples taken at 2 seashore point on Nov 26.

<Cooling of Spent Fuel Pools >(As of November 27 at 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
Unit 1	Circulating Cooling System	Under operation(11:22 on August 10 -)	15.5 ℃
Unit 2	Circulating Cooling System	Under operation(17:21 on May 31 -)	17.5 ℃
Unit 3	Circulating Cooling System	Under operation(18:33 on June 30 -)	20.7 ℃
Unit 4	Circulating Cooling System	Under operation(10:08 on July 31 -)	23 ℃

【Unit 2】・11/6～ We started operation of radioactive material decontamination instrument of spent fuel pool.

【Unit 3】・11/27 At 2:00 am, we confirmed the difference in temperature at the gateway of the heat exchanger on the primary side of the spent fuel pool alternative cooling equipment was getting small (inlet temperature: 19.7℃, outlet temperature: 19.0℃). However, as we could figure out that it did not affect the cooling of the spent fuel pool immediately, we decided to conduct a field investigation after dawn. At 6:33 am, as a result of the field investigation, we confirmed the main valve of watering equipment was closed and therefore we opened it and filled with water for watering. As a result, we could confirm that the outlet temperature fell down (as of 7:00 am on November 27, inlet temperature: 20.3℃, outlet temperature: 15.1℃). Considering this result, it is confirmed that the cause for the difference in temperature is that the valve was closed down and the cooling water was not supplied. We will further investigate the reason of the closing down of the valve (the temperature of the inlet port of the heat exchanger on the primary side = the temperature of the spent fuel pool).

<Water Injection to Pressure Containment Vessels >(As of November 27 at 11:00)

Unit	Status of injecting water	Feed-water nozzle Temp.	Reactor pressure vessel Bottom temp.	Pressure of primary containment vessel
Unit 1	Injecting freshwater (Feed Water System: Approx.4.5 m^3/h)	41.0℃	42.0℃	116.5 kPaabs※
Unit 2	Injecting freshwater (Feed Water System: Approx.3.1 m^3/h, Core Spray System: Approx.4.5 m^3/h)	68.2℃	74.1℃	111 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx.1.9 m^3/h, Core Spray System: Approx.6.0 m^3/h)	58.5℃	67.5℃	101.6 kPaabs

Unit 1 PCV pressure under investigation due to error figure.

【Unit 4】【Unit 5】【Unit 6】 No particular changes in parameters.

<Others>

- 10/7～ 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.
- As of 5:00 pm on November 26, the indicator of the gas temperature of Suppression Chamber of Unit 2 read 52.7℃, but at 11:00 pm on the day we confirmed that it read “Overscaled” (digital recorder). Then, as of 5:00 am on November 27, it read 102.6℃. Though the readings were not stable, as there were no significant changes or variations in the temperatures of the same types of 2 thermometers and the pool water in Suppression Chamber, we have been investigating the causes for this event including the possibility of malfunction of the measuring instruments.
- The indicator for the inside of the Primary Containment Vessel (Drywell) of Unit 2 (base line temperature of the air conditioning unit, local cooling equipment) read 78.2℃ as of 5:00 am on November 27 but at 6:50 am on the day it was confirmed that it read approximately 84℃, increasing in a staircase pattern. On the other hand, it was also confirmed that the temperature changes of the bottom of the Reactor Pressure Vessel and the water in the pool of the Suppression Chamber were smaller than that of the inside of the Primary Containment Vessel (Drywell) and that there was no significant change in the temperature.

  Now we have been decreasing the flow rate of water injection as shown in the below and therefore it is expected that the temperature inside the Primary Containment Vessel will rise, but, as the line of which temperature rose in a staircase pattern was only one line of the five lines and the rest of the lines did not show the same changes, we have been investigating the causes for this event, including the possibility of malfunction of the measuring instruments.

  - At 7:11 pm on November 24, we adjusted the flow rate of water injection from Core Spray System from approx. 7.2 m3/h to approx. 5.6m3/h (for feed water system, the flow rate is kept at 2.9 m3/h).
  - On November 26 (from 10:18 am to 11:02 am), we adjusted the flow rate from Core Spray System from approx. 5.5 m3/h to approx. 4.5m3/h (for feed water system, the flow rate is kept at 3.0 m3/h).

End