Plant Status of Fukushima Daiichi Nuclear Power Station

January 2, 2012
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]

・10:37 on December 27, 2011: We started 2nd cesium adsorption facility. At 10:43 am, we reached the regular flow rate.

[Storage Facility]

・2011/6/8～ Large 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 2	・Unit 2T/B → Central Radioactive Waste Treatment Facility [Process Main Building、Miscellaneous Solid Waste Volume Reduction Treatment Building(High Temperature Incinerator Building)]	・15:22 on December 28, 2011 - Transferring
Unit 6	・Unit 6T/B→Temporary tanks	・1/2 No plan of transfer

Place transferred	Status of Water Level (As of January 2 at 7:00)
Process Main Building	Water level: O.P.+ 2,695 mm(Accumulated total increase:3,912 mm) 91mm increase since 7:00 on January 1, 2011
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 2,995 mm(Accumulated total increase:3,721 mm) 142mm decrease since 7:00 on January 1, 2011

◇Water level of the vertical shaft of the trench, T/B and R/B(As of January 2 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on January 1, 2011)	O.P.+ 2,948 mm (23mm increase since 7:00 on January 1, 2011)	O.P.+ 4,239 mm (2mm decrease since 7:00 on January 1, 2011)
Unit 2	O.P.+ 3,113 mm (19mm decrease since 7:00 on January 1, 2011)	O.P.+ 3,094 mm (18mm decrease since 7:00 on January 1, 2011)	O.P.+ 3,228 mm (26mm decrease since 7:00 on January 1, 2011)
Unit 3	O.P.+ 3,205 mm (17mm increase since 7:00 on January 1, 2011)	O.P.+ 3,176 mm (19mm increase since 7:00 on January 1, 2011)	O.P.+ 3,437 mm (20mm increase since 7:00 on January 1, 2011)
Unit 4	―	O.P.+ 3,150 mm (18mm increase since 7:00 on January 1, 2011)	O.P.+ 3,165 mm (18mm increase since 7:00 on January 1, 2011)

<Monitoring of Radioactive Materials>

Nuclide Analysis of Seawater(Reference)

Place of sampling	Date of sampling	Time of sampling	Ratio of density limit (times)		
			I-131	Cs-134	Cs-137
Approx. 330m North of Discharge Channel of 1-4U, 1F	2012/1/1	8:20	ND	0.04	0.03
Around Discharge Channel of 3,4U, 2F	2012/1/1	8:15	ND	0.02	0.02
Approx. 7km South of Discharge Channel of 1,2U, 2F	2012/1/1	8:00	ND	0.02	0.01

・Others: samples from 3 locations at offshore of Fukushima Prefecture (sampled on December 31, 2011) showed ND for all three major nuclides (Iodine-131, Cs-134,137).

<Cooling of Spent Fuel Pools >(As of January 1 at 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
Unit 1	Circulating Cooling System	Under operation	13.0 ℃
Unit 2	Circulating Cooling System	Under operation	13.9 ℃
Unit 3	Circulating Cooling System	Under suspension	21.6 ℃※
Unit 4	Circulating Cooling System	Under operation	22 ℃

*The temperature was recorded at 12:00 on January 2 after the stable operation of the alternative primary cooling system.

[Unit 3] 2011/12/30 16:54 As there was often the tendency that absorbing pressure decreased until now and a sign of the strainer jamming may occur in future when we continue operating, until January 4,We decided to stop the cooling of the spent fuel pool temporarily and stopped this cooling system in consideration of a current pool water temperature degree being low enough with approximately 13 ℃ and radiation exposure by countercurrent work of the strainer.
And after December 31, 2011, we operate the primary system of this system once a day due to confirm the spent fuel pool water temperature.
(Expected pool water temperature increase: approximately 5.0～6.0 ℃ per day)

1/1 9:50～11:11 We operated the alternative primary cooling system to confirm the water temperature of Spent Fuel Pool.

[Unit 4]・2011/11/29～ We started operation of the ion exchange equipment to remove salt from spent fuel pool.

・At approx. 5:30 pm on January 1, 2012, we observed approx. 240 mm decrease in the water level of the skimmer surge tank*1 of Unit 4 spent fuel pool in the three hours between 2:00 pm to 5:00 pm (According to the operation record so far, there had been an approx. 50 mm decrease.). As a result of the site investigation later, we did not observe any leakage around the Unit 4 reactor building, connecting points of primary system pipes of Unit 4 spent fuel pool alternative cooling system, or its installation space. The water temperature of Unit 4 spent fuel pool as of 5:00 pm on January 1 is 23℃ (22℃ as of 5:00 am on January 2). The spent fuel pool alternative cooling system is still in operation and there is no problem in cooling the reactor. Though the water level of the spent fuel pool is kept stable without any problem, the water level in the skimmer surge tank continues decreasing. Therefore, from 10:27 pm to 11:13 pm on January 1, we filled water in the skimmer surge tank. At present, the water level in the skimmer surge tank keeps decreasing approx. 90mm/hour. We strengthened surveillance on observation of the water level in the skimmer surge tank, increasing the frequency to once in an hour from once in three hours. At present, no leakage is observed outside the building. No significant change is observed in the water level of the accumulated water in the building.

By further investigation, we confirmed that amount of water that is equivalent to decreased water level of the skimmer surge tank and amount of water that is equivalent to increased water level of the reactor well*2 are almost the same and the water level at reactor well is lower than that of the spent fuel pool. With these facts, we estimate that situation of gate between the reactor well and the spent fuel pool changed and water flow from the spent fuel pool to the reactor well increased made decrease in water flow from the spent fuel pool to the skimmer surge tank, and so decrease in water level at the skimmer

surge tank was more than usual. To decrease the difference between the water level of the reactor well and that of the spent fuel pool, we put water into the reactor well from 11:50 am to 11:59 am on January 2. As of 4:00 pm, we can not find decrease in the water level of the skimmer surge tank. We will continue surveillance the water level of the skimmer tank.

*1 The tank installed in order to receive the water overflows from the spent fuel pool. The water in the spent fuel pool is overflowed into the skimmer surge tank in order to cool the fuel assembly and remove impurities in the water. The water returns to the spent fuel pool after passing through the heat exchanger and the filter.

*2 The reactor well is the space which contains the reactor pressure vessel and the lid of the reactor containment vessel. During the periodical inspections, the space filled with water and the fuel is changed.

< Water Injection to Pressure Containment Vessels > (As of January 1 at 11:00)

Unit	Status of water injection	Feed-water nozzle Temp.	Reactor pressure vessel Bottom temp.	Pressure of primary containment vessel
Unit 1	Injecting freshwater (Feed Water System: Approx.4.8 m^3/h,Core Spray System: Approx.2.0 m^3/h)	26.9℃	27.6℃	105.5 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx.1.9 m^3/h, Core Spray System: Approx.7.0 m^3/h)	53.4℃	55.5℃	109 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx.2.9 m^3/h, Core Spray System: Approx.6.0 m^3/h)	48.1℃	55.5℃	101.6 kPaabs

【Unit 1】・About atmosphere temperature in Primary Containment Vessel, we are watching a tendency of the 1 point (C point) that the temperature increase from December 22, 2011 and 2 points(D point and E point) that the temperature increase afterwards gently.

C point (Max) approximately 54.6℃(December 28, 2011 at 18:00) → approximately 43.3℃(January 1 at 11:00)

D point (Max) approximately 35.8℃(December 29, 2011 at 17:00) → approximately 32.6℃(January 1 at 11:00)

E point (Max) approximately 40.0℃(December 29, 2011 at 17:00) → approximately 35.8℃(January 1 at 11:00)

[Unit 4][Unit 5][Unit 6]・No major change

<Others>

・2011/10/7～ 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.

End