Plant Status of Fukushima Daiichi Nuclear Power Station

December 9, 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 2nd 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 a steady state.

[Storage Facility]

・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 [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)]	・18:03 on November 30 -Transferring
Unit 3	・Unit 3T/B→Central Radioactive Waste Treatment Facility [Process Main Building]	・9:25 on November 15 -12/5 10:31
Unit 6	・Unit 6T/B→Temporary tanks	・10:00 on December 8 -12/9 16:00Transferring

Place transferred	Status of Water Level (As of December 9 at 7:00)
Process Main Building	Water level: O.P.+ 2,036 mm(Accumulated total increase:3,253 mm) 107mm decrease since 7:00 on December 8
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 1,213 mm(Accumulated total increase:1,939 mm) 52mm decrease since 7:00 on December 8

◇Water level of the vertical shaft of the trench, T/B and R/B(As of December 9 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P.< + 850mm (No change since 7:00 on December 8)	O.P.+ 3,667 mm (32mm increase since 7:00 on December 8)	O.P.+ 4,012 mm (55mm decrease since 7:00 on December 8)
Unit 2	O.P.+ 2,819 mm (23mm decrease since 7:00 on December 8)	O.P.+ 2,839 mm (21mm decrease since 7:00 on December 8)	O.P.+ 2,969 mm (21mm decrease since 7:00 on December 8)
Unit 3	O.P.+ 3,251 mm (17mm increase since 7:00 on December 8)	O.P.+ 3,017 mm (18mm increase since 7:00 on December 8)	O.P.+ 3,241 mm (20mm increase since 7:00 on December 8)
Unit 4	—	O.P.+ 3,007 mm (22mm increase since 7:00 on December 8)	O.P.+ 3,022 mm (32mm increase since 7:00 on December 8)

<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. 30m North of Discharge Channel of 5,6U, 1F	12/8	8:55	ND	0.10	0.07
Approx. 330m South of Discharge Channel of 1-4U, 1F	12/8	8:35	ND	0.04	0.04

・Others、Samples from 2 locations at offshore of Fukushima Daiichi Nuclear Power Station (sampled on December 8), 7 locations at offshore (sampled on December 7) showed ND for alll three major nuclides (Iodine-131、Cs-134,137).

<Cooling of Spent Fuel Pools> (As of December 9 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 -)	14.5 ℃
Unit 2	Circulating Cooling System	Shut down(4:17 on December 7 -)	27.4 ℃
Unit 3	Circulating Cooling System	Under operation(18:33 on June 30 -)	15.7 ℃
Unit 4	Circulating Cooling System	Under operation(10:08 on July 31 -)	22 ℃

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

・9:28-11:58 on December 9 the operation of facilities to cool the common spent fuel pool was temporarily suspended in order to implement the replacement work of power source for such facilities. (The pool temperature at that time was 18.8 degree C, at the time of restarting operation was 19.1 degree C).

< Water Injection to Pressure Containment Vessels > (As of December 9 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. 4.3 m^3/h)	43.3℃	44.5℃	110.6 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx. 2.9 m^3/h,Core Spray System: Approx. 4.2 m^3/h)	71.6℃	71.3℃	114 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx. 2.1 m^3/h,Core Spray System: Approx. 6.0 m^3/h)	59.7℃	66.8℃	101.6 kPaabs

【Unit 1】・12/9 10:13 As we observed reduction of the water injection rate to the Reactor, adjusted the water injection rate from the feed water system from approx 4.2m^3/h to approx 4.5m^3/h.

【Unit 2】・12/8 16:15 In order to secure the sufficient time before hydrogen reaching the flammability limit in case the nitrogen injection facilities stop its operation in the Unit 2 Reactor Pressure Vessel, nitrogen injection amount into the RPV was increased from 13 Nm^3/h to 14.5 Nm^3/h.On the other hand, as it is considered that there would be sufficient time before hydrogen reach the flammability limit in the Primary Containment Vessel, the nitrogen injection amount into the PCV was decreased from 20 Nm^3/h to 16.5 Nm^3/h.

・12/9 10:13 As we observed reduction of the water injection rate to the Reactor, adjusted the water injection rate from the core spray facility from approx 4.2m^3/h to approx 4.5m^3/h (from feed water system remains at approx 3.0m^3/h).

【Unit 3】・10:00 on December 6 -8:54 on December 7

- We plan to establish the system injecting water into the reactor of Unit 1 to 3 using the condensate storage tank of Unit 3. During the measurement of salt concentration in the water in the tank, it turned out that concentration was high. In order to reduce such

concentration, we planned to inject water after reducing the water in the tank first. The water in the tank was transferred from the tank to the basement of turbine building.

- 12/7 9:19 We started filling water in the tank, but afterwards, we confirmed water leakage (approx. 5 liter) at the joint section of hose connecting to the tank, at approx. 9:52 am, we stopped filling water and confirmed the leakage has stopped.

12/9 9:05 we restarted filling the water in the tank after completing the replacement of the transfer hose.

9:25 finished surveillance of leakage in the transferring hose.

12/9 10:13 As we observed reduction of the water injection rate to the Reactor, adjusted the water injection rate from the feed water system from approx 2.0m^3/h to approx 2.2m^3/h, from the core spray facility from approx 6.2m^3/h to approx 6.1m^3/h

【Unit 6】・12/9 10:32 As we observed reduction of flow rate at the residual heat removal seawater system pump (C) of Unit 6, At 10:32 am on December 9, we stopped cooling the Reactor by the residual heat removal system (A) and stopped the residual heat removal seawater system pump (C). After that, we restarted the residual heat removal seawater system pump (C) and confirmed that the performance of that pump returned to almost normal level. At 11:18 am on the same day, we resumed cooling the Reactor by the residual heat removal system (A). With this stop, Reactor water temperature temporarily increased from 26.6 Celsius to 27.5 Celsius

【Unit 4】【Unit 5】

No major change

<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.

End