Plant Status of Fukushima Daiichi Nuclear Power Station

December 22, 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.
・12/21 1:40 The alarm went off at the desalination facility (reverse osmosis membrane type) 2-2 which showed that the closing of the backwash water drain valve of the multimedia filter was not conducted within the designated time, which led to an automatic shutdown of the unit. We confirmed at the site that there was no water leak. Since we have enough desalinated water this will not influence the water injection. Desalination facility (reverse osmosis membrane type) 3 can be activated. We are now looking into this matter.
・12/21 around 10:20 We restarted the unit.

[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［Process Main Building and Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)］	・Started transfer from 13:57 on December 21
Unit 3	・Unit 3T/B→Central Radioactive Waste Treatment Facility［Process Main Building］	・14:22 on December 15 – 10:04 on December 17, Transferred
Unit 6	・Unit 6T/B→Temporary tanks	・On December 22, no scheduled

Place transferred	Status of Water Level (As of 12/22 at 7:00)
Process Main Building	Water level: O.P.+ 1,737 mm(Accumulated total increase:2,954 mm) 186mm increase since 7:00 on December 21
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 1,853 mm(Accumulated total increase:2,579 mm) 137mm increase since 7:00 on December 21

◇Water level of the vertical shaft of the trench, T/B and R/B (As of December 21 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on December 21)	O.P.+ 3,358 mm (26mm increase since 7:00 on December 21)	O.P.+ 4,231 mm (11mm decrease since 7:00 on December 21)
Unit 2	O.P.+ 3,051 mm (68mm decrease since 7:00 on December 21)	O.P.+ 3,043mm (63mm decrease since 7:00 on December 21)	O.P.+ 3,183 mm (47mm decrease since 7:00 on December 21)
Unit 3	O.P.+ 3,193 mm (17mm increase since 7:00 on December 21)	O.P.+ 3,166 mm (17mm increase since 7:00 on December 21)	O.P.+ 3,411 mm (22mm increase since 7:00 on December 21)
Unit 4	－	O.P.+ 3,134 mm (3mm increase since 7:00 on December 21)	O.P.+ 3,152 mm (15mm increase since 7:00 on December 21)

<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	12/21	8:45	ND	0.06	0.05
Approx. 330m South of Discharge Channel of 1-4U, 1F	12/21	8:25	ND	0.04	0.03

・Others: samples from 2 location at the coast of Fukushima Daiichi Nuclear Power Plant (sampled on December 21) and from 13 locations offshore (sampled on December 20) showed ND for all three major nuclides (Iodine-131,Cs-134,137).

<Cooling of Spent Fuel Pools >(As of December 22 at 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
Unit 1	Circulating Cooling System	Under operation	11.0 ℃
Unit 2	Circulating Cooling System	Under suspension	22.4 ℃
Unit 3	Circulating Cooling System	Under operation	13.0 ℃
Unit 4	Circulating Cooling System	Under operation	20 ℃

【Unit 2】・12/20 15:03～ The same system stopped due to inspection of flow monitor of the Fuel Pool Cooling and Filtering System. *The temperature of the spent fuel pool was 15.4℃ at the time of the stop. The stop is planned to last until around 2:00pm on Dec. 23. The estimated increase of the temperature of the spent pool is approx. 21℃ for that period.

【Unit 3】・12/22 9:43～11:06 Since the suction force of primary circulating pump of Spent Fuel Pool Cooling and Filtering System decreased, we stopped the system to conduct flushing of entrance-side strainer of the pump.
*The temperature of pool : approx. 13℃ when the system stopped, approx. 13℃ when the pump restarted

・12/22 13:30～15:15 we injected hydrazine into Unit 3 spent fuel pool (approx. 2m^3).

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

<Water Injection to Pressure Containment Vessels >(As of December 21 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.4.5 m^3/h,Core Spray System: Approx.2.0 m^3/h)	29.6℃	30.2℃	106.2 kPaabs
Unit 2	Injecting freshwater※	58.5℃	61.0℃	111 kPaabs

	(Feed Water System: Approx.2.7 m^3/h,Core Spray System: Approx.6.0 m^3/h)			
Unit 3	Injecting freshwater (Feed Water System: Approx.2.9 m^3/h,Core Spr System: Approx.6.0 m^3/h)	53.3℃	60.8℃	101.6 kPaabs

【Unit 4】【Unit 5】【Unit 6】・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.

・12/19 18:00 Since the monitoring results of the decontamination of radioactivity material and hydrogen density at the Primary Containment Vessel (PCV) gas controlling system which was in a test run was stable, we started regular operation of this system.

・12/22 10:11 Since we finished the recovery work of seawater pump (System B) of equipment water cooling system of Unit 5, we made a trial run.
11:25 we confirmed no abnormalities and restarted the operation.

・12/22 10:00～11:40 we replaced the transmission parts of monitoring post No.2 and No.8 which monitor dose rate inside the site. In addition, monitoring post No.8 data was unavailable from 11:10 am to 11:40 am. (Monitoring post No.2 was available during the replacement work)

・12/22 10:35 According to the operational record thus far of Unit 1, we decreased the nitrogen injection amount from approx. 18Nm3/h to approx. 13Nm3/h.
11:45 we confirmed the volume of gas emitted from the gas management system decreased from approx. 30Nm3/h to 26.9Nm3/h.

End