Plant Status of Fukushima Daiichi Nuclear Power Station

January 28, 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]

・At 12:12 on January 16, 2012: we started the second cesium absorption apparatus. At 12:17, the flow rate reached steady state.

・At 18:42 on January 17, 2012: We actuated Cesium adsorption apparatus. At 18:45, the flow rate reached steady state.

・At 12:00 pm on January 28, when a TEPCO worker checked the water treatment facility, he found water was leaked around a drop per second from the Valve Flange around the Demineralizer of the Evaporation Concentration Apparatus. (We estimated the amount of leakage was approx. 8 liters.) The water did not flow out to the sea because it was in the weir tank. We also checked that the surface dose rate around the leakage point was the same level of the atmosphere dose rate. Currently, we took countermeasure to receive leaked water by pan. This facility is now suspended. As there is sufficient desalinated water, we continue the operation of the water treatment facility and the injection to the reactor.

・At 12:00 pm on January 28, when a TEPCO worker checked the water treatment facility, he found water was leaked around a drop per 5 seconds from the Valve Flange of Mini Flow Piping of the Waste RO Supply Pump where the treated water is sent from the suppression pool water surge-tank to the water desalinations. (The amount of leakage was approx. 0.5 liters.) The water did not flow out to the sea because it was in the weir tank. We also checked that the surface dose rate around the leakage point was the same level of the atmosphere dose rate. Currently, we took countermeasure to receive leaked water by pan. The 2 RO Supply Pumps are now on stand-by and we continue the operation of the water treatment facility and the injection to the reactor.

[Storage Facility]

・June 8, 2011～: 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)]	・Transferred from 21:51 on January 27 to 8:29 on January 28
Unit 3	・Unit 3T/B→Central Radioactive Waste Treatment Facility [Process Main Building, Miscellaneous Solid Waste Volume Reduction Treatment Building(High Temperature Incinerator Building)]	・Transferred from 21:48 on January 27 to 8:31 on January 28
Unit 6	・Unit 6T/B→Temporary tanks	・Transferred from 10:00 to 16:00 on January 28

Place transferred	Status of Water Level (As of January 28 at 7:00)
Process Main Building	Water level: O.P.+ 4,138 mm(Accumulated total increase:5,355 mm), increased 58mm since 7:00 am on January 27
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 2,451 mm(Accumulated total increase:3,177 mm), decreased 134mm since 7:00 am on January 27

◇Water level of the vertical shaft of the trench, T/B and R/B(As of January 28 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on January 27)	O.P.+ 2,721 mm (15mm increase since 7:00 on January 27)	O.P.+ 4,235 mm (20mm decrease since 7:00 on January 27)
Unit 2	O.P.+ 3,078 mm (4mm increase since 7:00 on January 27)	O.P.+ 3,052 mm (3mm increase since 7:00 on January 27)	O.P.+ 3,218 mm (5mm increase since 7:00 on January 27)
Unit 3	O.P.+ 3,043 mm (7mm decrease since 7:00 on January 27)	O.P.+ 2,951 mm (8mm decrease since 7:00 on January 27)	O.P.+ 3,255 mm (4mm decrease since 7:00 on January 27)
Unit 4	—	O.P.+ 2,976 mm (2mm decrease since 7:00 on January 27)	O.P.+ 3,002 mm (7mm decrease since 7:00 on January 27)

<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
Around 30m north of the discharge channel of 5 and 6Units, 1F	1/27	9:00	ND	0.09	0.08
Around 330m south of the discharge channel of 1-4Units, 1F	1/27	8:40	ND	0.01	0.01
Near the discharge channel of 3 and 4Units, 2F	1/27	8:20	ND	0.03	0.01
Around 7km south of the discharge channel of 1 and 2Units, 2F	1/27	8:00	ND	ND	0.01

・At the other 3 offshore points of Fukushima Prefecture (sampled on January 26), all the major 3 nuclides (I-131, Cs-134 and Cs-137) were ND.

<Cooling of Spent Fuel Pools >(As of January 28 at 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
Unit 1	Circulating Cooling System	Under operation	13.5 ℃
Unit 2	Circulating Cooling System	Under operation	12.5 ℃
Unit 3	Circulating Cooling System	Under operation	12.1 ℃
Unit 4	Circulating Cooling System	Under operation	22 ℃

[Unit 2] ・A 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] ・A radioactive material removal equipment has been activated in order to remove radioactive materials from the spent fuel pool since 15:18 on January 14.

<Water Injection to Pressure Containment Vessels >(As of January 28 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.4.4 m^3/h,Core Spray System: Approx.2.0 m^3/h)	25.4 ℃	26.0 ℃	106.6 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx.7.0 m^3/h,Core Spray System: Approx.1.8 m^3/h)	46.5 ℃	48.2 ℃	109 kPaabs

Unit 3	Injecting freshwater (Feed Water System: Approx.8.0 m^3/h,Core Spra System: Approx.0.5 m^3/h)	43.9 ℃	52.9 ℃	101.6 kPaabs

【Unit 3】・At 9:14 on January 27, the volume from the feed water system increased from approx. 8.5 m^3/h to approx. 8.9 m^3/h, and the volume from the reactor core spray system decreased from approx. 1.0 m^3/h to 0 m^3/h.

・At 15:01 on January 27,because the replacing work of the water injection line of the reactor water injection pump on the hill was finished, regarding the water injection from the feed water system, we switched the pump from in the turbine building to on the hill again.

・At 3:11 pm on January 27, the volume from the feed water system decreased from approx. 8.9 m^3/h to approx. 7.9 m^3/h, and the volume from the reactor core spray system increased from 0 m^3/h to approx. 1.0m^3/h.

・At 2:02 pm on January 28, the volume from the feed water system decreased from approx. 8.0 m^3/h to approx. 7.0 m^3/h, and the volume from the reactor core spray system increased from 0.5 m^3/h to approx. 2.0m^3/h.

【Unit 4】【Unit 5】【Unit 6】・No major change

<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.
- At around 10:29 January 28, 2012, when a TEPCO worker checked the reactor water injection system, he found water leakage from the Vent Valve around the Normal Reactor Injection Pump (B) on the Hill which was on standby.
- At around 10:36 am, we closed the anterior and posterior valve of the pump.
- At around 11:19 am, we checked that the leakage was stopped. (We estimated the amount of leakage was approx. 9 liters.) The water did not flow out to the sea because there was no drain there. We also checked that the surface dose rate around the leakage point was the same level of the atmosphere dose rate. Currently, we are checking the similar places. We will conduct a detail inspection to find the reason of the leakage and take countermeasures. We continue to inject water to the reactor from the Normal Reactor Injection Pump on the Hill (A) and (C).

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