Plant Status of Fukushima Daiichi Nuclear Power Station

January 29, 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 8:49 am on January 29: since a gradual decline was confirmed in the amount of treatment at the second Cesium adsorption apparatus (sarry), we temporarily stopped this facility in order to conduct washing of the filter. At 12:06 we restarted this apparatus. At 12:18 it reached its regular flow rate (approx. 36.5m^3/h). ※we will periodically conduct washing of the filter.

[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 22:12 on January 28 to 8:21on January 29
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 22:06 on January 28 to 8:18 on January 29
Unit 6	・Unit 6T/B→Temporary tanks	・No transfer planned on January 29

Place transferred	Status of Water Level (As of January 29 at 7:00)
Process Main Building	Water level: O.P.+ 4,189 mm(Accumulated total increase:5,406 mm), increased 51mm since 7:00 am on January 28
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 2,358mm(Accumulated total increase:3,084 mm), decreased 93mm since 7:00 am on January 28

◇Water level of the vertical shaft of the trench, T/B and R/B(As of January 29at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on January 28)	O.P.+ 2,736 mm (15mm increase since 7:00 on January 28)	O.P.+ 4,221 mm (14mm decrease since 7:00 on January 28)
Unit 2	O.P.+ 3,084 mm (6mm increase since 7:00 on January 28)	O.P.+ 3,056 mm (4mm increase since 7:00 on January 28)	O.P.+ 3,223 mm (5mm increase since 7:00 on January 28)
Unit 3	O.P.+ 3,039 mm (4mm decrease since 7:00 on January 28)	O.P.+ 2,945 mm (6mm decrease since 7:00 on January 28)	O.P.+ 3,250 mm (5mm decrease since 7:00 on January 28)
Unit 4	—	O.P.+ 2,979 mm (3mm increase since 7:00 on January 28)	O.P.+ 3,000 mm (2mm decrease since 7:00 on January 28)

<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	1/28	8:40	ND	0.04	0.04
Around 330m south of the discharge channel of 1-4Units, 1F	1/28	8:20	ND	0.02	0.01
Near the discharge channel of 3 and 4Units, 2F	1/28	8:00	ND	ND	0.01
Around 7km south of the discharge channel of 1 and 2Units, 2F	1/28	7:40	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 29 at 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
Unit 1	Circulating Cooling System	Under operation	12.5 ℃
Unit 2	Circulating Cooling System	Under operation	12.5 ℃
Unit 3	Circulating Cooling System	Under operation	11.9 ℃
Unit 4	Circulating Cooling System	Second line out of operation	21 ℃

【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.

【Unit 4】 ・Around 9:35am on 29 January 2012, an alarm on a system failure (Unit 4 SFP backup cooling system) was given in Unit 4 spent fuel pool backup cooling system. According to the site investigation, a pump (A) to circulate cooling water of a secondary system had been stopped and the water circulation was stopped accordingly (Fuel pool temperature at the time of the alarm: 21℃). After the event, we discovered cooling water leakage from A2 line of air-fin cooler unit (A1-A4 lines) of the A system of the secondary system. We confirmed that the water leakage was stopped by closing valve of the Unit A2 line. The cooling water is from a filtrate tank for fire extinction and doesn't contain radioactive materials.

The stopped secondary pump (A) was restarted at 11:14am and water cooling of the spent fuel pool was restarted accordingly (Fuel pool temperature at the time of cooling restart: 21℃)

<Water Injection to Pressure Containment Vessels >(As of January 29 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. 5.5m^3/h,Core Spray System: Approx.1.0 m^3/h)	25.3 ℃	25.8 ℃	106.6 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx.7.0 m^3/h,Core Spray System: Approx.1.7 m^3/h)	46.6 ℃	50.8 ℃	109 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx.7.0 m^3/h,Core Spray System: Approx.2.0 m^3/h)	43.5 ℃	52.7 ℃	101.6 kPaabs

【Unit 1】・At 10:37 am on January 29, due to switching in the water piping system of the reactor water injection pump on the hill, we adjusted water injection from the feed water system to the reactor of Unit 1 from approx. 4.5 m^3/h to approx. 5.5 m^3/h, and the injection from the reactor core spray system from approx. 2.0 m^3/h to 1.0m^3/h.

【Unit 3】・At 10:00 am on January 29, since we confirmed decrease in water injection to the reactor of Unit 3 we adjusted water injection from the reactor core spray system from approx. 1.5 m^3/h to 2.0 m^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.
- January 29 2012 9:50 am：one of our employees, during adjustment works of the water flow to the feed water spray system, found a water leak from near the flow rate detector of the emergency reactor injection pump on the hill (C) which is now at standby. We shut down the valve at the leakage point and at 9:55 am confirmed that the water leak has stopped (amount of leakage under examination). The leakage point is on the hill (at the front of the main office building) and there are traces that show that a certain amount of water has flowed into the drain, and we are examining whether this water has flowed into the ocean or not. According to the sampling results we conducted at the lower side of the gutter both Cs -134 and Cs-137 was below detection limit (detection limit: Cs-134:2.4×10^{-2}Bq/cm^3, Cs-137:2.9×10^{-2}Bq/cm^3). The surface radioactivity concentration near the leakage point is as the same level as the atmosphere around (radioactivity concentration near the evaporative concentration apparatus is below measurable limit in all three major nuclides (sampled on 20 December 2011) : I-131: 1.6×10^{-2}Bq/cm^3, Cs-134:2.9×10^{-2}Bq/cm^3, Cs-137:3.3×10^{-2}Bq/cm^3, and 6.0×10^{-1}Bq/cm^3 for all beta nuclides (sampled on 29 November 2011)). Water injection to the reactor is maintained by the ordinary reactor injection pump on the hill (A) and (C).
- Other leakage points confirmed by 3:00 pm is as follows:
  - ○ Secondary water cooling unit of Unit 4 spent fuel pool (three points)
    (Filtrate water*: Approx. 40L)
  - ○ "A" system minimum flow line flange, waste liquid supply pump, Water desalinations (RO)
    (Water after decontamination and before purification: approx. 10L (in the barrage))
    [Surface radioactive density gamma ray: 0.6mSv/h, beta ray: 35mSv/h,
    atmosphere radioactive density gamma ray: 0.11mSv/h, beta ray: 2mSv/h]
  - ○ Flow meter of reactor water injection pump from Unit 3 condensate storage tank to Unit 2
    (RO water: Approx. 4L)

[atmosphere radioactive density as same as background level]

○ Flow meter of reactor water injection pump from Unit 3 condensate storage tank to Unit 3
(RO water: Approx. 4L)
[atmosphere radioactive density as same as background level]

○ Flange of demineralizer resin transfer line of water desalinations (evaporative concentration apparatus)
(RO water: Approx. 0.5L (in the barrage))
[atmosphere radioactive density as same as background level]

○ Boiler "B" system, Water desalinations (evaporative concentration apparatus)
(Filtrate water*: Approx. 25L (total of system B and C))

○ Boiler "C" system, Water desalinations (evaporative concentration apparatus)
(Filtrate water:* Approx. 25L (total of system B and C))

○ Header of filtrate water supply line into fuel pool make up system
(Filtrate water:* Approx. 9L)

○ Flow meter of filtrate water backwash line of boiler water supply of evaporative concentration apparatus
(Filtrate water:* Approx. 18L)

○ Flow meter of filtrate water of deionizer
(Filtrate water*: Approx. 1L)

○ Flange of cooling water line of Unit 6 water circulation pump
(Pure water (made from filtrate water): Approx. 7L, repair completed in 1 minute)

* Filtrate water: water taken from the barrage

End