

Plant Status of Fukushima Daiichi Nuclear Power Station

February 9, 2012

Tokyo Electric Power Company

<Treatment of Accumulated 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 18:42 on January 17, 2012: We actuated Cesium adsorption apparatus. At 18:45, the flow rate reached steady state.
- At 11:12 on February 2, 2012: We restarted the second Cesium adsorption apparatus (Sarry). At 11:15 it reached its regular flow rate.

[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 [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)]	· From 14:14 on February 7 – transferring
Unit 6	· Unit 6T/B Temporary tanks	· From 10:00 – 16:00 on February 9 – transferred

Place transferred	Status of Water Level (As of 7:00 am on February 9)
Process Main Building	Water level: O.P.+ 2,850 mm (Accumulated total increase:4,067 mm), decreased 110mm since 7:00 am on February 8
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 2,976mm (Accumulated total increase:3,702 mm), decreased 179mm since 7:00 am on February 8

Water level of the vertical shaft of the trench, T/B and R/B(As of 7:00 am on February 9)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on February 8)	O.P.+ 2,917 mm (18mm increase since 7:00 on February 8)	O.P.+ 4,340 mm (5mm decrease since 7:00 on February 8)
Unit 2	O.P.+ 3,133 mm (No change since 7:00 on February 8)	O.P.+ 3,095 mm (No change since 7:00 on February 8)	O.P.+ 3,272 mm (2mm increase since 7:00 on February 8)
Unit 3	O.P.+ 3,052 mm (22mm increase since 7:00 on February 8)	O.P.+ 2,979 mm (24mm increase since 7:00 on February 8)	O.P.+ 3,287 mm (27mm increase since 7:00 on February 8)
Unit 4	-	O.P.+ 2,961 mm (23mm increase since 7:00 on February 8)	O.P.+ 2,983 mm (18mm increase since 7:00 on February 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 1F 5,6 u	2/8	8:40	ND	0.04	0.03
Approx. 330m south of Discharge Channel of 1F 1-4 u	2/8	8:20	ND	0.03	0.01
Around 3,4 u Discharge Channel of 2F	2/8	8:30	ND	ND	0.02

·All 3 major nuclides (I-131, Cs-134 and Cs-137) were ND at 1 coast point (sampled on 2/8) and 3 offshore points (sampled on 2/7) of Fukushima Prefecture. Samplings at 3 offshore points of Ibaraki Prefecture were cancelled due to the bad weather.

<Cooling of Spent Fuel Pools >(As of 11:00 am on February 9)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
Unit 1	Circulating Cooling System	Under operation ^{*1}	23.5
Unit 2	Circulating Cooling System	Under operation	13.9
Unit 3	Circulating Cooling System	Under operation	22.1
Unit 4	Circulating Cooling System	Under operation	26

*1: Air fin cooler of Secondary System out of service

[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 11:00 am on February 9)

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. 4.4m ³ /h, Core Spray System: Approx.1.8 m ³ /h)	24.3	24.7	106.1 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx.6.8 m ³ /h, Core Spray System: Approx.6.5 m ³ /h)	39.1	66.8	109 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx.2.8 m ³ /h, Core Spray System: Approx.5.8 m ³ /h)	40.8	49.3	101.6 kPaabs

- [Unit 2]

- From February 2, water injection to Unit 2 reactor was increased and the temperature tendency was monitored as the tendency of temperature rise at the bottom of PCV was observed, but the temperature have been high value (around 70.0). As a result of the sampling for the Gas Control System of the Unit 2 on February 6 to make sure there is no re-criticality state, we confirmed that the concentration of Xe-135 was below the detectible limit at the system's inlet, meaning that it falls below the re-criticality criteria of 1 Bq/cm³. In order not to raise the possibility of re-criticality state due to the high density of water in the reactor by injecting cold water rapidly, we injected boric acid into the reactor from 0:19 am to 3:20 am on February 7, in advance of increasing water injection amount, as a safety countermeasures against the re-criticality, and changed the amount of the core spray system injection water from 3.7m³/h to 6.7m³/h at 4:24 am (the amount of the feed water system injection is 6.8m³/h). Currently, the temperature is approx. 66.8 (2/9 11:00) and we continuously monitor the tendency.

- At 9:47 am February 9, as the amount of water injection decrease, we adjusted the volume from the feed water system increased from approx. 6.4 m³/h to approx. 6.8 m³/h(the amount of the continuing injection from reactor core spray system is approx. 6.8 m³/h).
- From 10:21 am to 12:35 pm on February 9, for the reliability improvement of nitrogen inclusion, we are working for installing additional flow meter to the nitrogen inclusion line of the Primary Containment Vessel (PCV), and stopped the inclusion temporarily. There is no significant change at the parameter.

[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 9:40 am on February 8, the staff of a partner company found the water in a temporary tank to the east of Unit 2 Turbine Building overflowing. At that time we were pumping up the water in the sub-drain to the temporary pool as a trial, thus on 10:15 am on the same day we stopped the pump, and the overflow was stopped. Later we investigated the site and confirmed that there was no water in trenches nearby, therefore we concluded that the water didn't run into trenches nor flow out into the sea. We also sampled the water in the tank. The results of nuclide analyses were Cs-134: $3.4 \times 10^{-1} \text{Bq/cm}^3$, Cs-137: $5.2 \times 10^{-1} \text{Bq/cm}^3$. These results are the same level as those of the water in the sub-drain sampled today, therefore we concluded that the overflowed water was the water in the sub-drain. The volume of the water overflowed from the tank is under evaluation.
- At 7:10 on February 9, the partner companies' worker found that one end of a silt fence of Unit 1 screen came off. The silt fences were installed doubly at the screen, and this was the inside one. At 10:30 am we refitted it. We implement sampling survey of inside and outside silt fences everyday and there was no significant change regarding test in which we took a sample before the refit.
- From 10:14 to 2:02 pm, we stopped the residual heat removal system (RHR) of unit 6 with the regular inspection of the RHR. (reactor's water temperature when stopped was 27.5 and 30.6 when operated again.)
- The new water leakage which would be the reason of frost after the previous announcement(at 3:00 pm on February 3) is as follow:
- Secondary cooling system air fin cooler of the spent fuel pool alternative cooling system of Unit 4(founded at 2:30 pm on February 9). (Filtrate water* : a drop per approx. 1 second)*Filtrate water: water which takes from dam.

END