

**Plant Status of Fukushima Daiichi Nuclear Power Station**

November 20, 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 second 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 steady state.

[Storage Facility]

- 6/8 ~ Big 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)]	·9:10 on November 10 - Transferring
Unit 3	·Unit 3T/B Central Radioactive Waste Treatment Facility [Process Main Building]	·9:25 on November 15 - Transferring
Unit 6	·Unit 6T/B Temporary tanks	No transfer is scheduled on Nov 20

Place transferred	Status of Water Level (As of November 20 at 7:00)
Process Main Building	Water level: O.P.+ 1,663 mm(Accumulated total increase:2,880 mm) 37mm increase since 7:00 on November 19
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 1,904 mm(Accumulated total increase:2,630 mm) 40mm decrease since 7:00 on November 19

Water level of the vertical shaft of the trench, T/B and R/B(As of November 20 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on November 19)	O.P.+ 3,699 mm (45mm increase since 7:00 on November 19)	O.P.+ 4,398 mm (46mm decrease since 7:00 on November 19)
Unit 2	O.P.+ 3,085 mm (8mm decrease since 7:00 on November 19)	O.P.+ 3,094 mm (7mm decrease since 7:00 on November 19)	O.P.+ 3,203 mm (5mm decrease since 7:00 on November 19)
Unit 3	O.P.+ 3,265 mm (6mm decrease since 7:00 on November 19)	O.P.+ 3,030 mm (7mm decrease since 7:00 on November 19)	O.P.+ 3,236 mm* (6mm decrease since 7:00 on November 19)
Unit 4	-	O.P.+ 3,048 mm (8mm decrease since 7:00 on November 19)	O.P.+ 3,069 mm (7mm increase since 7:00 on November 19)

<Monitoring of Radioactive Materials>

Nuclide Analysis of Seawater(Reference) Since Oct 24, an approach to decrease the detection limits of radioactivity density was started.

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 of 1F	11/19	8:40	ND	0.02	0.02
Approx. 330m south of discharge channel of Fukushima Daiichi unit 1-4	11/19	8:20	ND	0.05	0.05

· The major three nuclide (Iodine-131, cesium-134, 137) in the sample, taken at 2 seashore points of Fukushima prefecture on Nov 19, and 8 offshore points of Fukushima prefecture, are all not detected.

<Cooling of Spent Fuel Pools > (As of November 20 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 -)	19.5
Unit 2	Circulating Cooling System	Under operation(17:21 on May 31 -)	22.5
Unit 3	Circulating Cooling System	Under operation(18:33 on June 30 -)	22.4
Unit 4	Circulating Cooling System	Under operation(10:08 on July 31 -)	30

[Unit 2] · 11/6 ~ We started operation of radioactive material decontamination instrument of spent fuel pool.

[Unit 3] · 11/18 past 23:00 It was confirmed that coolant water temperature at the heat exchange facility exit of unit 3 alternative cooling facility for the fuel spent pool tends to increase (16.5 at 8 pm on Nov 18 17.3 at 11 pm on Nov 18). We planned to investigate there the next day because there was no impact for the coolant of spent fuel pool soon.

· 11/19 7:00 it was confirmed main tap for watering was closed. The temperature decreased after tap opening (19.5 at 5 am on Nov 19 17.9 at 8 am on Nov 19) so we found the reason of temperature rise was tap close. The research for tap close is currently underway.

After that it was confirmed that the temperature of spent fuel pool of Unit 3 was tending upward again. We investigated there and found that the strainer in watering tank was tending to be choked though water was being sprinkled.

· 11/19 16:11 ~ 16:50 We switched the secondary cooling tower of the spent fuel pool for Unit 3 from A system to B system. Now we are investigating the tendency of the temperature.

[Unit 6] · 11/15 ~ From November 15, due to cleanup work in order to prevent performance deterioration of pump caused by inletting sand or other materials piled up at the bottom of pump room of intake channel, Residual Heat Removal System (A) was shutdown, and stopped cooling the reactor. And Seawater pump of Equipment Water Cooling System (A) was shutdown, and stopped

cooling the spent fuel pool. The stop is scheduled from 7:00 am to 5:00 pm everyday, and reactor water temperature will rise by approx. 12 per day, and spent fuel pool water temperature will rise by approx. 3 per day. (The cleanup work is planned to be finished in a week.)

<Water Injection to Pressure Containment Vessels >(As of November 20 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. 5.3 m <sup>3</sup> /h)	39.4	40.1	115.6 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx. 3.0 m <sup>3</sup> /h, Core Spray System: Approx.7.1 m <sup>3</sup> /h)	65.3	68.4	110 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx. 2.3 m <sup>3</sup> /h, Core Spray System: Approx.8.1 m <sup>3</sup> /h)	58.3	67.0	101.5 kPaabs

[Unit 1] 11/20 13:58 As it was confirmed that there was a decrease in the water injection amount from the feed water system at unit 1 reactor, injection amount was adjusted from 5.3m<sup>3</sup>/h to 5.5m<sup>3</sup>/h.

[Unit 4] [Unit 5] [Unit 6] No particular changes in parameters.

<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