

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

November 29, 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.
- 11/29 12:06 water leakage from pin holes at the pipe arrangement between the water desalination facility and the buffer tanks was detected ( estimated leakage amount : 500cc) . The tubes were replaced and we confirmed that the water leakage had stopped.

[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	·11/29 10:00-16:00 Transferred

Place transferred	Status of Water Level (As of November 29 at 7:00)
Process Main Building	Water level: O.P.+ 2,168 mm(Accumulated total increase:3,385 mm) 40mm increase since 7:00 on November 28
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 2,126 mm(Accumulated total increase:2,852 mm) 121mm increase since 7:00 on November 28

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

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on November 28)	O.P.+ 3,321 mm (33mm increase since 7:00 on November 28)	O.P.+ 4,044 mm (29mm decrease since 7:00 on November 28)
Unit 2	O.P.+ 3,004 mm (23mm decrease since 7:00 on November 28)	O.P.+ 3,015 mm (24mm decrease since 7:00 on November 28)	O.P.+ 3,131 mm (20mm decrease since 7:00 on November 28)
Unit 3	O.P.+ 3,236 mm (13mm decrease since 7:00 on November 28)	O.P.+ 2,984 mm (17mm decrease since 7:00 on November 28)	O.P.+ 3,197 mm (14mm decrease since 7:00 on November 28)

	November 28)		
Unit 4	-	O.P.+ 3,012 mm (15mm decrease since 7:00 on November 28)	O.P.+ 3,015 mm (31mm decrease since 7:00 on November 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
Approx. 30m North of Discharge Channel of 5-6U, 1F	11/28	7:15	ND	0.13	0.11
Approx. 330m South of Discharge Channel of 1-4U, 1F	11/28	7:35	ND	0.03	0.02
Approx. 7km South of Discharge Channel of 1,2U, 2F	11/28	7:55	ND	0.02	ND

· The major three nuclides (Iodine-131, cesium-134, 137) were not detected in the samples taken at 1 seashore point of Fukushima Daiichi on Nov 28, 3 offshore points of Fukushima Daiichi on Nov 27 and 5 points offshore of Ibaraki Prefecture from 21-23 Nov.

<Cooling of Spent Fuel Pools >(As of November 29 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 -)	17.0
Unit 2	Circulating Cooling System	Under operation(17:21 on May 31 -)	22.4
Unit 3	Circulating Cooling System	Under operation(18:33 on June 30 -)	20.4
Unit 4	Circulating Cooling System	Under operation(10:08 on July 31 -)	27

- [Unit 2] · 11/6 ~ We started operation of radioactive material decontamination instrument of spent fuel pool.
- 11/28 At 9:12am, the alarm indicating that the difference of flow rates between at the entering and at the exit of the primary pump at the alternative cooling system for the spent fuel pool is big went off, and the system automatically stopped. At 9:16 am on the same day we checked the site and no abnormality such as no leakage was confirmed. We are investigating the cause.
- 11/29 11:50 the piping of the flow rate detector was choked with trash and was assumed not to be in normal operation, so we activated the system to flush this detector under pressure. After flushing the flow rate detector is operating normally and we are monitoring the operation.
- [Unit 4] · 11/29 10:58 in order to lower the salt density of the Spent Fuel Pools we fully activated the newly introduced ion exchanging device.

<Water Injection to Pressure Containment Vessels >(As of November 29 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.4.5 m <sup>3</sup> /h)	43.5	44.5	115.7 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx.3.0 m <sup>3</sup> /h,Core Spray System: Approx.4.4m <sup>3</sup> /h)	70.3	75.9	111 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx.2.1 m <sup>3</sup> /h,Core Spray System: Approx.6.0 m <sup>3</sup> /h)	59.4	67.9	101.5 kPaabs

\*We found out that there were errors in the figures of the pressure of the Primary Containment Vessel (PCV) of Unit 1 from 5:00pm of 11 May to 5 am of 29 November due to an error in the calculating formula (from 5:00pm of 11 May to 5 am of 28 October) and lack of required correction after switching the data recorder to a digital recorder (from 11:00am of 28 October to 5 am of 29 November). Correct formula is adopted for the figures from 11 am of 29 November.

[Unit 1] 11/29 9:55 due to installation works of the nitrogen injection line to the Reactor Pressure Vessel we

suspended the operation of the nitrogen injection device.

11:05 Installation completed and operation of the nitrogen injection device restarted.

11:30 reached fixed amount of 28Nm<sup>3</sup>/h

11/29 10:13-10:28 increased water injection from the reactor feed water system from 4.2m<sup>3</sup>/h to 4.5m<sup>3</sup>/h

[Unit 2] 11/29 13:47 due to installation works of the nitrogen injection line to the Reactor Pressure Vessel we suspended the operation of the nitrogen injection device.

14:21 Installation completed and operation of the nitrogen injection device restarted.

14:37 reached fixed amount of 26Nm<sup>3</sup>/h

[Unit 3] 11/29 10:13-10:28 increased water injection from the reactor feed water system from 1.9m<sup>3</sup>/h to 2.1m<sup>3</sup>/h (water injection from core water system maintained at 6.0m<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.
  - 11/29 11:10-13:50 started sampling at the gas controlling system of the Primary Containment Vessel of Unit 2.
  - 11/29 9:24-13:00 started dust sampling above the reactor building of Unit 3 with a large crane.
  - 11/29 12:30-13:00 Started dust sampling by a robot near the equipment hatch of ground floor, reactor building unit 3.

End