

Plant Status of Fukushima Daiichi Nuclear Power Station

December 16, 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 2nd 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 a steady state.
- 12/16 11:38 We found that there was high vibration at desalination plant (RO) unit 2-2 high pressure pump, we manually stopped the desalination plant. We confirmed that there is no water leakage at the site. We will study on its countermeasure later. On the other hand, desalination plant (RO) unit 2-1 is in operation. And water injection to the Reactors will not be affected since the cooling is continued by using processed water in the buffer tank.

[Storage Facility]

- 6/8 ~ 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)]	· 18:03 on November 30 - 7:51 on December 13 Transferring
Unit 3	· Unit 3T/B Central Radioactive Waste Treatment Facility [Process Main Building]	· 14:22 on December 15 Transferring
Unit 6	· Unit 6T/B Temporary tanks	· 10:00 on December 15 -16:00 on December Transferring

Place transferred	Status of Water Level (As of 12/16 at 7:00)
Process Main Building	Water level: O.P.+ 1,478 mm(Accumulated total increase:2,695 mm) 80mm increase since 7:00 on December 15
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 1,553 mm(Accumulated total increase:2,279 mm) 1mm decrease since 7:00 on December 15

- 12/12 9:30 We started transferring of the accumulated water in the condensate storage tank of Unit 3 to the basement of Turbine Building of Unit 3 before feeding water to reduce salt level in the tank. After that we confirmed decrease of transferring quantity of water from the water level fluctuation, at 0:00 pm on December 14, we stopped transferring of the accumulated water in the tank. Also we confirmed that there was no water leakage at the site. Currently we are investigating the cause.
- 12/15 12:30 We conducted flushing of the piping and restarted transferring. It is assumed that the clogging of the piping caused it because no abnormality was found on the transferring water volume after the flushing.
- 12/16 16:00 We complete to transfer of the accumulated water in the condensate storage tank of Unit 3 to the

basement of Turbine Building of Unit 3.

Water level of the vertical shaft of the trench, T/B and R/B(As of December 16 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on December 15)	O.P.+ 3,195 mm (32mm increase since 7:00 on December 15)	O.P.+ 4,166 mm (56mm increase since 7:00 on December 15)
Unit 2	O.P.+ 2,960 mm (55mm increase since 7:00 on December 15)	O.P.+ 2,934 mm (20mm increase since 7:00 on December 15)	O.P.+ 3,089 mm (50mm increase since 7:00 on December 15)
Unit 3	O.P.+ 3,145 mm (9mm decrease since 7:00 on December 15)	O.P.+ 3,114 mm (12mm decrease since 7:00 on December 15)	O.P.+ 3,346 mm (14mm decrease since 7:00 on December 15)
Unit 4	-	O.P.+ 3,114 mm (9mm increase since 7:00 on December 15)	O.P.+ 3,110 mm (7mm decrease since 7:00 on December 15)

the data of 16:00 on December 15 (fault of meter reading at 7:00 on December 16)

<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	12/15	8:50	ND	0.17	0.13
Approx. 330m South of Discharge Channel of 1-4U, 1F	12/15	8:20	ND	0.03	0.01
Around Discharge Channel of 3,4U, 2F	12/15	8:20	ND	ND	0.01
Approx. 7km South of Discharge Channel of 1,2U, 2F	12/15	7:55	ND	0.02	ND

· Others, sample from 8 location at offshore of Fukushima Daiichi Nuclear Power Station (sampled on December 14) showed ND for all three major nuclides (Iodine-131, Cs-134,137).

<Cooling of Spent Fuel Pools >(As of December 16 at 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
Unit 1	Circulating Cooling System	Under operation	14.5
Unit 2	Circulating Cooling System	Under operation	18.4
Unit 3	Circulating Cooling System	Under operation	15.3
Unit 4	Circulating Cooling System	Under operation	23.0

[Unit 4] · 11/29 ~ We started operation of the ion exchange equipment to remove salt from spent fuel pool.

< Water Injection to Pressure Containment Vessels > (As of December 16 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 ³ /h,Core Spray System: Approx.2.0 m ³ /h)	35.6	36.3	109.5 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx.2.9 m ³ /h,Core Spray System: Approx.6.0 m ³ /h)	63.5	67.2	111.0 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx.2.8 m ³ /h,Core	56.6	63.4	101.6 kPaabs

	Spray System: Approx.5.8 m ³ /h)			
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* [Unit 1] We adjusted injection rate of core spray system from approx.1.6m³/hour to approx.2.0m³ /hour.
(the injection of feed water system is continuing at 4.5 m³/h)

[Unit 4] [Unit 5] [Unit 6] No major change.

<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.
- 12/15 We conducted sampling by a vial container at gas control system of the Primary Containment Vessel of Unit 2. As a result we confirmed that at the exit of the gas controlling system of the Primary Containment Vessel, the level of xe-135 detected was below detection limit (9.1×10^{-2} Bq/cm³) and below the recriticality standard 1Bq/cc.
- 12/16 9:10 We found the burnt trace in the distribution panel at Centralized Waste Treatment Facility (Miscellaneous Solid Waste Volume Reduction Treatment Building [High Temperature Incinerator Building]). We reported the incident to the fire station at 9:19 am. But a smoke was not found.
10:28 We stopped power supply to the distribution panel.
12:05 It is considered that the fire was not occurred by fire station.
14:30 We resumed power supply to the distribution panel.

End