

Plant Status of Fukushima Daiichi Nuclear Power Station

November 8, 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 (RO membrane system)
- 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.
- 11/6 At around 11:00

Since partner companies' workers who went on patrol found that the boiler of evaporative concentration apparatus stopped, we stopped operation of the apparatus 3B and 3C.

Since the operation panel on the site alerted "Very low water level in boiler supply water tank", we assumed that the boiler stopped due to this reason. After that, we conducted investigation of the cause of decrease of supply tank water level. When we started a backup pump for transfer of boiler supply water, the alert stopped. Therefore we judged that one pump was troubled.

In addition, although all the evaporative concentration apparatus stopped, water treatment by the water desalinations (RO membrane system) and water injection to the reactors have been continued.
- 11/7 14:55 We started another boiler by using a spare water transfer pump for boiler. Then, we started evaporative concentration apparatus 3B at 5:24 pm and 3C at 6 pm. Causes of the trouble of the water transfer pump for boiler are still under investigation.
- 11/8 2:20 An alarm worked and indicated decrease of water level in boiler water supply tank. Thus, at 2:24 am on November 8, we manually stopped the boiler of evaporative concentration apparatus in the water desalinations. Then, we stopped evaporative concentration apparatus 3B at 2:28 am and 3C at 2:31 am. Although all the evaporative concentration apparatus stopped, water treatment by the water desalinations (RO membrane system) and water injection to the reactors have been continued. Causes will be investigated in the future.

[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 1	· Unit 1T/B	Unit 2T/B	· November 7, No transfer
Unit 2	· Unit 2T/B	Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building(High Temperature Incinerator Building)]	· From 9:38 on November 4 to 15:00 on November 8 Transferred
Unit 3	· Unit 3T/B	Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building	· From 10:11 on November 2 to 15:05 on November 8

	(High Temperature Incinerator Building)]	Transferred
Unit 6	· Unit 6T/B Temporary tanks	· November 7, No transfer
	· Temporary tanks Mega float	· November 7, No transfer

Place transferred	Status of Water Level (As of November 8 at 7:00)
Process Main Building	Water level: O.P.+ 2,246mm(Accumulated total increase:3,463 mm) 115mm decrease since 7:00 on November 7
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 2,770 mm(Accumulated total increase:3,496 mm) 358mm increase since 7:00 on November 7

Water level of the vertical shaft of the trench, T/B and R/B(As of November 8 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P.< + 850 mm (No change since 7:00 on November 7)	O.P.+ 3,850 mm (47mm increase since 7:00 on November 7)	O.P.+ 4,527 mm (50mm increase since 7:00 on November 7)
Unit 2	O.P.+ 3,009 mm (11mm decrease since 7:00 on November 7)	O.P.+ 3,026 mm (12mm decrease since 7:00 on November 7)	O.P.+ 3,116 mm* (17mm decrease since 7:00 on November 7)
Unit 3	O.P.+ 3,194 mm (9mm decrease since 7:00 on November 7)	O.P.+ 2,947 mm (13mm decrease since 7:00 on November 7)	O.P.+ 3,136 mm (11mm decrease since 7:00 on November 7)
Unit 4	-	O.P.+ 2,992 mm (7mm decrease since 7:00 on November 7)	O.P.+ 2,992 mm (29mm decrease since 7:00 on November 7)

<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	11/7	8:55	ND	0.05	0.04
Approx 330m South of Discharge Channel of 1-4u of 1F	11/7	8:35	ND	0.03	0.02
Approx 7km South of Discharge Channel of 1-2u of 2F	11/7	8:00	ND	ND	0.02

· Results of nuclide analysis of seawater at 1 Fukushima seashore point sampled on November 7, and 5 offshore points sampled on November 6, are all ND for the 3 major nuclides (iodine-131, cesium-134 and cesium-137).

<Cooling of Spent Fuel Pools> (As of November 8 at 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
<u>Unit 1</u>	Circulating Cooling System	Under operation(11:22 on August 10 -)	22.0
<u>Unit 2</u>	Circulating Cooling System	Under operation(17:21 on May 31 -)	26.2
<u>Unit 3</u>	Circulating Cooling System	Under operation(18:33 on June 30 -)	24.8
<u>Unit 4</u>	Circulating Cooling System	Under operation(10:08 on July 31 -)	32

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

[Unit 3] · 11/7 14:30 ~ 19:17 We suspended the alternative cooling in order to clear clogs in the primary strainer resulted from reverse cleaning, as a countermeasure against the alarm suction pressure decrease of primary coolant system pump in spent fuel pool closed loop cooling system. (When suspended: 24.8 , when resumed: 22.5)

* The temperature of water in skimmer surge tank dropped after the system was suspended probably due to the influence of open air.

[Unit 4] · 8/20 ~ We started operation of desalinating facility of the spent fuel pool.

· 11/8 12:25 am RO membrane unit of desalting facility in spent fuel pool, Unit 4 automatically stopped due to the alarm indicating leakage. Responding to the alarm, we confirmed that all the isolation valves of each unit were closed by the interlocks. Also, considering that all the spots at leakage risk were equipped with receiving pans which would be able to store all of the liquid in the unit, we judged that further deterioration of leakage or leakage to outside of the unit was unlikely. We will check the site and situation in the future. The operation of circulating cooling system has been continued. Afterwards, as the result of confirmation at the site of this facility, we confirmed that the leakage have stopped, all of the leaked liquid is in the receiving pans (approx. 5 liter), and there exists a trail of leakage from the pump casing of RO membrane unit. At 2:00 pm on the same day, we wiped out the leaked liquid and reset the alarm. We will investigate in detail.

<Water Injection to Pressure Containment Vessels> (As of November 8 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. 7.8 m ³ /h)	42.2	43.1	121.6 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx. 3.0 m ³ /h, Core Spray System: Approx. 7.3 m ³ /h)	68.3	72.4	117 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx. 2.3 m ³ /h, Core Spray System: Approx. 8.0 m ³ /h)	62.8	70.8	101.5 kPaabs

[Unit 3] We adjusted the water injection into the Reactor through reactor feed water system to approx. 3.0 m³/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