

Plant Status of Fukushima Daiichi Nuclear Power Station

December 4, 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 steady state.
- 12/2 18:00 After completing the reinforcement work to on-site power, we stopped the evaporative concentration apparatus in order to start receiving power from the power source*.
* 2nd cesium adsorption facility continued operation and treated accumulated water. Reactor water injection was continued by desalinated water in the buffer tank. There was no impact from this power source switchover.
- 12/3 8:04 We stopped the water desalination apparatus (reverse osmosis membrane type). 8:30 We stopped the cesium adsorption apparatus.
13:30 We restarted the water desalination apparatus (reverse osmosis membrane type) after power receiving operation.
14:22 We restarted the cesium adsorption apparatus
14:34 We restarted the evaporative condensation apparatus.
- 12/4 11:33 Workers found that there was puddle water inside the barrier around the evaporative condensation apparatus (the estimated volume of water was approx.45 m³). At 11:52, stopped the apparatus.
12:14 Workers made visual inspection of the apparatus and thought that the leakage stopped. After that, conducted investigation. At 14:30, we found crack in the barrier made of concrete and water was leaking to the gutter (surface dose rate of leaked water: beta ray 110mSv/h, gamma ray 1.8mSv/h). We are considering emergency response to stop leakage of water to the outside of the barrier. In the meantime, water desalination apparatus is continuing operation. As we have sufficient volume of desalinated water, there is no impact on the Reactor water injection.

[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)]	·18:03 on November 30 - 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	·12/4 No plan of transfer

Place transferred	Status of Water Level (As of December 4 at 7:00)
Process Main Building	Water level: O.P.+ 2,419 mm(Accumulated total increase:3,636 mm) 84mm increase since 7:00 on December 3
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 1,540 mm(Accumulated total increase:2,266 mm) 70mm decrease since 7:00 on December 3

Water level of the vertical shaft of the trench, T/B and R/B(As of December 4 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P.+ 850mm (No change since 7:00 on December 3)	O.P.+ 3,493mm (48mm increase since 7:00 on December 3)	O.P.+ 4,076mm (144mm increase since 7:00 on December 3)
Unit 2	O.P.+ 2,927mm (7mm decrease since 7:00 on December 3)	O.P.+ 2,941mm (6mm decrease since 7:00 on December 3)	O.P.+ 3,064mm (6mm decrease since 7:00 on December 3)
Unit 3	O.P.+ 3,184mm (1mm increase since 7:00 on December 3)	O.P.+ 2,926mm (2mm increase since 7:00 on December 3)	O.P.+ 3,143mm (3mm increase since 7:00 on December 3)
Unit 4	-	O.P.+ 2,953mm (2mm increase since 7:00 on December 3)	O.P.+ 2,975mm (4mm decrease since 7:00 on December 3)

<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	12/3	8:45	ND	0.04	0.05
Approx. 330m South of Discharge Channel of 1-4U, 1F	12/3	8:25	ND	0.02	0.02

·Others, samples from 2 locations on the shore of Fukushima Daiichi Nuclear Power Station (sampled on December 3) showed ND for all three major nuclides (Iodine-131, Cs-134,137).

<Cooling of Spent Fuel Pools> (As at 11:00 on December 4)

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 -)	16.0
<u>Unit 2</u>	Circulating Cooling System	Under operation(17:21 on May 31 -)	23.9
<u>Unit 3</u>	Circulating Cooling System	Under operation(18:33 on June 30 -)	18.9
<u>Unit 4</u>	Circulating Cooling System	Under operation(10:08 on July 31 -)	26

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

[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 4 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. 4.4 m ³ /h)	44.4	45.4	116.8 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx. 3.1m ³ /h,Core Spray System: Approx. 4.3 m ³ /h)	71.5	71.0	114 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx. 2.0 m ³ /h,Core Spray System: Approx. 6.1 m ³ /h)	60.7	67.9	101.6 kPaabs

[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.

· From 17:48 on December 3 - MP-8's dosage rate data was lost. As we could not figure out the cause and could not resume, we used an alternative dose rate meter located around MP-7 and MP-8 (enhancement to monitoring that coincides with nitrogen injection to RPV). The most recent data did not have change from that of the day before. We are planning to repair MP-8.

19:07-21:01 on December 3 In order to transfer and cut the power cable* for the auxiliary transformer power board that receives power from Okuma Line 2L, we changed the power source for that power board. With this work, lighting at rest places, local air extractor and continuous dust monitoring at the main gate, anti-earthquake main building and rest places at the service building for Units 5 & 6 stopped. After completion of the power source switchover, stopped equipments resumed operation.

* This is a preparation work to stop leakage of water from the duct, STr, Unit 3 to the control building found on August 4 (announced on August 8).

End