

Plant Status of Fukushima Daiichi Nuclear Power Station

November 18, 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.
- 11/17 approx. 10:50 Water leakage by pin holes at one point of freshwater transfer line, and three points at concentrated water transfer line after desalination process, was confirmed at desalination apparatus.
approx. 14:30 Transfer was continued at fresh water transfer line, and at the same time, leakage repair (repair by tapes) was implemented and completed (estimated leakage amount: approx. 1liter). Cesium adsorption apparatus, 2nd adsorption apparatus and concentrated evaporation apparatus continued operation, and therefore there is no major effect with processing accumulated water. Also, concentrated water transfer line is currently not being used, and is isolated. Leaking spot in the concentrated water transfer was repaired by tapes. The leaked amount was confirmed to be approx 25 liters by the site inspection. Radioactivity in the surrounding environment remains same as other environment. The leaking hose is scheduled to be replaced.

[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 18

Place transferred	Status of Water Level (As of November 18 at 7:00)
Process Main Building	Water level: O.P.+ 1,579 mm(Accumulated total increase:2,796 mm) 45mm increase since 7:00 on November 17
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 1,987 mm(Accumulated total increase:2,713 mm) 48mm decrease since 7:00 on November 17

Water level of the vertical shaft of the trench, T/B and R/B(As of November 18 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on November 17)	O.P.+ 3,617 mm (42mm increase since 7:00 on November 17)	O.P.+ 4,489 mm (24mm decrease since 7:00 on November 17)
Unit 2	O.P.+ 3,104 mm (10mm decrease since 7:00 on November 17)	O.P.+ 3,113 mm (14mm decrease since 7:00 on November 17)	O.P.+ 3,216 mm (12mm decrease since 7:00 on November 17)
Unit 3	O.P.+ 3,281 mm (14mm increase since 7:00 on November 17)	O.P.+ 3,051 mm (16mm increase since 7:00 on November 17)	O.P.+ 3,269 mm *
Unit 4	-	O.P.+ 3,064 mm (19mm increase since 7:00 on November 17)	O.P.+ 3,070 mm (29mm decrease since 7:00 on November 17)

* data as of 7:00 on Nov 17 is stated as latest data could not be collected due to camera failure

<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	11/17	8:30	ND	0.04	0.04
Approx 330m South of Discharge Channel of 1-4u of 1F	11/17	8:10	ND	0.12	0.10
Discharge Channel of 3,4U of 2F	11/17	8:20	ND	ND	0.01
Approx 7km South of Discharge Channel of 1,2u of 2F	11/17	7:50	ND	0.01	ND

<Cooling of Spent Fuel Pools > (As of November 18 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 -)	18.0
Unit 2	Circulating Cooling System	Under operation(17:21 on May 31 -)	19.0
Unit 3	Circulating Cooling System	Under operation(18:33 on June 30 -)	18.8
Unit 4	Circulating Cooling System	Under operation(10:08 on July 31 -)	28

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

[Unit 4] · 11/17 13:15 ~ 14:50 Hydrazine was injected (approx. 2m3)

11/17 14:58 An error alarm of spent fuel pool circulating cooling system went off, and the system automatically shut down.

15:38 It was confirmed after, by site investigation, that there is no water leakage.

16:12 The system was reactivated. The system is under continuous surveillance while running water amount remains at normal level.

[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 18 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.7.5 m ³ /h)	34.9	35.8	124.1 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx.2.6 m ³ /h,Core Spray System: Approx.7.4 m ³ /h)	65.2	68.8	110 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx.2.4 m ³ /h,Core Spray System: Approx.8.2 m ³ /h)	56.8	67.7	101.5 kPaabs

[Unit 1] 11/18 15:33 Water injection amount through feed water system was decreased from 7.7 m³/h to 5.5 m³/h before adding another injection line through core spray system in order to increase system's reliability.

*Due to the decrease of water injection, bottom temperature of the reactor pressure vessel may increase up to approx 65 and the temperature inside the primary containment vessel may increase up to approx 70 while they may stay below those level because of deterioration of decay heat or decrease of outside temperature. While we consider that decrease of water injection will not lead to sharp temperature increase, we plan to increase water injection amount in case the temperature of the reactor goes up beyond 80

[Unit 2/3] 11/18 15:33 In response to the change of injected water amount in Unit 1, water injection amount was adjusted from 2.6 m³/h to 3.1 m³/h in the feed water system of Unit 2, from 7.4 m³/h to 7.1 m³/h in the core spray system, from 2.4 m³/h to 2.5 m³/h in the feed water system of Unit 3, from 8.2 m³/h to 8.1 m³/h in the core spray system,

[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.
- 11/17 13:50 ~ 16:20 For the preparation of installation of PCV gas management system at unit 3 reactor building 1F, a robot entered into the building to wipe off water from northeast facilities hatch rail and investigate radiation dose. Due to arm operation failure, however, the operation was suspended.
- 11/18 approx 15:00 ~ After rechecking the robot's arm, 2 unit of robot wiped off water from northeast facilities hatch rail and investigated radiation dose.

End