

# Plant Status of Fukushima Daiichi Nuclear Power Station

September 1, 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 started.
- 6/24 12:00 Treatment started at desalination facilities
- 6/27 16:20 Circulating injection cooling started.
- 8/7 16:11 Evaporative Concentration Facility, which was additionally installed to Water Treatment Facility to produce fresh water from concentrated seawater generated at Water Desalination Facility, has started full operation.
- 8/18 14:43 We started operation of the water treatment facility.  
(We started treatment of accumulated water at series operation including highly concentrated radioactive materials by cesium adsorption Instrument, 2<sup>nd</sup> cesium adsorption Instrument and decontamination instrument)
- 15:50 We confirmed flow rate reached normal level ,water treatment facility operated stably and operation status had no problem)
- 8/19 19:33 We activated second cesium adsorption facility (System B) and started parallel operation. At 19:41, the flow rate achieved steady state.
- 8/29 7:00 We stopped the operation of the desalination facilities (1B) in order to change filters.
- 8/31 14:00 We started full operation of three evaporative concentration apparatuses which we had additionally installed and conducted commissioning of.
- Approx. 15:00 We confirmed water leakage near the sludge transfer pump (B) for the coagulation settling instruments inside the water treatment system (decontamination instruments). We bypassed a part of the coagulation setting instruments and segregated the pump's surroundings, and then the leakage stopped. The treatment of the accumulated water is continuing.

### [Storage Facility]

From June 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
2u	·2u Vertical Shaft of Trench → Central Radioactive Waste Treatment Facility [Process Main Building]	·8/30 9:39 ~ Transferring
	·2u Vertical Shaft of Trench → Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)]	·8/25 10:03 ~ 8/30 9:31 Transferred
3u	·3u T/B → Central Radioactive Waste Treatment Facility [Process Main Building]	·8/23 16:15 ~ Transferring is in operation
	·3u T/B → Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)]	·8/30 9:54 ~ Transferring
6u	·6u Turbine Building → temporary tanks	·9/1 10:00 ~ 16:00 Transferred

Transfer to:	Status of Water Level (as of 5:00 on 9/1)
Process Main Building	Water level: O.P.+ 4,922 mm (Accumulated total increase: 6,139mm) 89 mm decrease from 8/31 7:00
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 2,687 mm (Accumulated total decrease: 3,413mm) 27 mm decrease from 8/31 7:00

Water level at the vertical shaft of the trench and T/B (as of 9/1 5:00)

	Vertical Shaft of Trench (from top of grating to surface)	T/B
1u	O.P. <+850mm (>3,150mm), No change since 8/31 7:00	O.P. +4,920mm, No change since 8/31 7:00
2u	O.P. +3,336mm (664mm), 49mm decrease since 8/31 7:00	O.P. +3,373mm, 44mm decrease since 8/31 7:00
3u	O.P. +3,408mm (592mm), 18mm decrease since 8/31 7:00	O.P. +3,230mm, 4mm increase since 8/31 7:00
4u	-	O.P. +3,279mm, 32mm decrease since 8/31 7:00

- Water level at Unit 1 R/B: 9/1 7:00, O.P. +4,729 mm, 21mm decrease since 8/31 7:00.

<Monitoring of Radioactive Materials>

Nuclide Analysis of Seawater (Reference)

- As for the samples collected at 4 points offshore of Fukushima Prefecture on August 31 and at 3 points offshore of Ibaraki Prefecture on August 30, main three nuclides (Iodine-131, Cesium-134 and Cesium-137) were all ND (not detected.)

<Cooling of Spent Fuel Pools> (as of 9/1 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
1u	Circulating Cooling System	Operating from 8/10 11:22	30.0
2u	Circulating Cooling System	Operating from 5/31 17:21	35.0
3u	Circulating Cooling System	Operating from 6/30 18:33	32.8
4u	Circulating Cooling System	Operating from 7/31 10:08	41

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

9/1 11:00 ~ 13:00 We injected hydrazine (approx 2m<sup>3</sup>) to spent fuel pool of Unit 4.

<Water Injection to Pressure Containment Vessels> (as of 9/1 11:00)

Unit	Status of injecting water	Temp. of feed-water nozzle	Bottom of reactor pressure vessel	Pressure of Primary Containment Vessel
1u	Injecting freshwater (approx. 3.6m <sup>3</sup> /h)	92.8	87.8	126.8kPaabs
2u	Injecting freshwater (approx. 3.7m <sup>3</sup> /h)	106.7	113.1	115kPaabs
3u	Injecting freshwater (approx. 7.0m <sup>3</sup> /h)	118.8	109.8	101.5kPaabs

- 9/1 14:09 We started to control the water flow into the reactor of Unit 3 in order to start water injection by core spray system.
- 14:20 We started water injection by core spray system.
- 14:58 We controlled the rate of water injection by reactor feed water system at the level of approximately 7.0 m<sup>3</sup>/h and the rate of water injection by core spray system at the level of approximately 1.0 m<sup>3</sup>/h.
- 15:20 We adjusted the rate of water injection into the reactor of Unit 1 from 3.5 m<sup>3</sup>/h to 3.8 m<sup>3</sup>/h.

[Units 4] [Unit 5] [Units 6] No particular changes in parameters.

<Others>

- 4/10 ~ Clearance of outdoor rubbles by remote control to improve working conditions.
- 6/3 ~ Restoration works of port related facilities has been under operation.
- 7/12~ Construction work of installing steel pipe sheet pile against water leakage in the water intake channel.
- 6/28 ~ Main construction work for installing the cover for the reactor building of Unit 1
- 8/10 Started setting up iron framework of the cover for the reactor building of Unit 1
- 8/23 We confirmed minute amount of water leakage from the hose of primary system of alternative cooling facility for Unit 4 Spent Fuel Pool. We are continuing cooling the Spent Fuel Pool.
- 8/31 around 9:35 We implemented the drainage work of spent vessels at the temporary storage area for spent vessels for the water treatment system. When workers, who assumed the valve was closed, dismantled the hose, water from the tank and the hose scattered towards two workers from one of our affiliated companies. High-level radiation dose was confirmed by measuring the radiation of the filters of the mask worn by the workers. On the other hand, internal exposure was not confirmed according to the results per the whole body counter.