

Plant Status of Fukushima Daiichi Nuclear Power Station

July 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 started.
- 6/24 12:00 Treatment started at desalination facilities
- 6/27 16:20 Circulating injection cooling started.

- 7/2 18:00 We completed installing buffer tanks and resumed circulating injection cooling via buffer tanks.
- 7/12 8:51 We found some leakage around the connection part at the liquid chemical injection line of coagulation and therefore stopped the operation of the facilities its repair. We confirmed the corrosion of metallic connectors and the fact that leaked water had not been spread to the outside. We continued injecting water to the reactor.
 - 16:19 After replacing the corroded connectors with corrosion-free metallic ones, we implemented flushing the system and switching the Cesium adsorption tower.
 - 16:28 Started Water treatment facility.
 - 16:58 Resumed water treatment.
- 7/13 13:07 While conducting Water treatment facility flashing in order to change vessels, some leakage was found around the connection part at the liquid chemical injection line of coagulation setting devices (different location from the leakage points of July 10 and 12). We have kept injecting water into the reactor.
- 7/14 12:07 The leakage was repaired, and we plan to resume water treatment.
 - 14:58 Conduct leak check after Water treatment facility restarted. 18:30 Water treatment resumed.
- 7/15 5:14 Water treatment facility stopped to investigate cause of rated water flow reduction.
 - 14:21 Water treatment facility restarted.

Temporary suspension of Water treatment facility flashing in order to change vessels;

June 23, 24, 25, 26, 28, 29, 30, July 2, 3, 5, 7, 8, 13, 14, 16.

[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 (as of 7/15 7:00 am)

Unit	Draining water source → Place transferred	Status
2u	2u Vertical Shaft of Trench → Process Main Building, Central Radioactive Waste Treatment Facility	[Process Main Building] Water level: O.P.+4,731 mm

	(4/19 ~ 5/26, 6/4 ~ 6/8, 6/8 ~ 6/16, 6/22 ~ 6/27, 6/27 ~ 7/7, 7/13 10:09 am ~ 7/15 11:02 am, 7/16 10:56 am ~)	110 mm decrease from 7/15 7:00 am)
3u	3u T/B → Miscellaneous Solid Waste Volume Reduction Treatment Building of Central Radioactive Waste Treatment Facility (5/17 ~ 5/25, 6/18 ~ 6/20) 3u T/B → Process Main Building of Central Radioactive Waste Treatment Facility (6/14 ~ 6/16, 6/21 ~ 6/27, 6/27 ~ 6/28, 6/30 ~ 7/9, and 7/10 3:15 pm ~ 7/15 11:11am, 7/16 10:50 am ~)	(Accumulated total increase : 5,948 mm) [Miscellaneous Solid Waste Volume Reduction Treatment Building] Water level: O.P.+3,467 mm (17 mm increase from 7/15 7:00 am) (Accumulated total increase: 4,193mm)
6u	6u Turbine Building → temporary tanks 5/1 ~ 6/22, 6/30 ~ 7/9 as needed, 7/11 10:30 am ~ 4:30 pm Temporary tanks Mega Float 6/30 ~ 7/5, 7/7 ~ 7/9, 7/11 ~ 15 as needed, 7/16 10:00 am ~ 3:00 pm	

Water level at the vertical shaft of the trench and T/B (as of 7:00 am on July 15)

	Vertical Shaft of Trench (from top of grating to surface)	T/B
1u	O.P. <+850mm (>3,150mm), No change since 7/15 7:00 am	O.P. +4,920mm, No change since 7/15 7:00 am
2u	O.P. +3,552mm (448mm), 7mm increase since 7/15 7:00 am	O.P. +3,578mm, 28mm increase since 7/15 7:00 am
3u	O.P. +3,719mm (281mm), No change since 7/15 7:00 am	O.P. +3,628mm, 23mm decrease since 7/15 7:00 am
4u	-	O.P. +3,622mm, No change since 7/15 7:00 am

- Water level at Unit 1 R/B: 7/16 7:00 am, O.P. +4,375mm, 6mm increase since 7/15 7:00 am.

<Monitoring of Radioactive Materials>

Nuclide Analysis of Seawater (Reference)

Density limit by the announcement of Reactor Regulation: I-131: 40Bq/L*, Cs-134: 60Bq/L, Cs-137: 90Bq/L

Sampling Location	Date	Time	Ratio to Criteria (times)		
			Iodine-131	Cesium-134	Cesium-137
Approx. 30m north of Water Discharge Channel of 5-6u of 1F	7/15	11:45 am	ND	1.1	1.0
Around North Water Discharge Channel, 2F (approx. 10km from 1F)	7/15	8:20 am	ND	ND	0.05

As to the others, the latest before July 15 for around the shore of 1F, offshore of 1F (3km ~ 30km), offshore of Ibaraki prefecture and Miyagi prefecture are all below detection limits.

<Cooling of Spent Fuel Pools>

Unit	Cooling type	Status of cooling	Temperature of water in Pool
1u	Fuel Pool Cooling and Filtering System	No plan on 7/16	-
2u	Circulating Cooling System	Operating from 5/31	41.0 (7/16 11:00 am)
3u	Circulating Cooling System	Operating from 6/30 6:33 pm	32.0 (7/16 11:00 am)
4u	Alternative Injection System	No plan on 7/16	87-89 (7/15 4:00 pm)

Since 7/9, power supply to remote monitoring system of temperature of spent fuel pool has been suspended.

- 7/16 11:22 am ~ 3:52 pm, water injection into reactor well and facility storage pool for Unit 4 started.

<Water Injection to Reactor Pressure Vessels> (at 11:00 am, 7/16)

Unit	Status of injecting water	Temp. of feed-water nozzle	Bottom of reactor pressure vessel
1u	Injecting freshwater (approx. 3.6m ³ /h)*	114.7	101.6
2u	Injecting freshwater (approx. 3.4m ³ /h)	111.5	122.6
3u	Injecting freshwater (approx. 9.0m ³ /h)	142.1	113.0

[Units 4] [Unit 5] [Units 6] [Common spent fuel pool] No particular changes in parameters.

<Injection of Nitrogen Gas into the Primary Containment Vessel> (at 11:00 am, 7/16)

Unit	Pressure of Primary Containment Vessel	Total volume of injected Nitrogen ^{*1}
1u	156.3kPaabs(4/7 1:20 am) => 142.4kPaabs	Approx.66,300m ³
2u	20kPaabs(6/28 7:00 pm) => 127kPaabs ^{*2}	Approx.5,500m ³
3u	99.6kPaabs(7/14 5:00 pm) => 101.6kPaabs ^{*2}	Approx.500m ³

*1: approximate figure *2: 7/16 5:00 am ~ changed the pressure indicator for PCVs, Units 2 and 3

<Others>

- 4/10 ~ Clearance of outdoor rubbles by remote control to improve working conditions.
- 5/10 ~ Clearing of rubbles in and around Unit 3 reactor building etc using robots.
- 6/3 ~ Restoration works of port related facilities has been under operation.
- 7/12~ Started construction for installing steel pipe sheet pile against water leakage in the water intake channel.
- 6/7 ~ 6/20 Installation of support structure into the bottom of fuel spent pool of reactor building of Unit 4.
- 6/21 ~ Concrete filling and grout started.
- 6/28 ~ Main construction work for installing the cover for the reactor building of Unit 1 started.
- 6/21 ~ Concrete filling and grout started.
- 7/15 Started pumps of regular residual heat removal seawater system (system B) of Unit 5 and started operation of Residual Heat Removal System.
- 7/16 4:01am ~ Started Emergency Diesel Generator of Unit 5 in connection with the restoration work of 1:05pm 2 lines, Yorunomori Line.

4:21 am ~ 1:51 Started Emergency Diesel Generator of Unit 6

pm

5:28 am ~ 12:05 Stopped Yorunomori Line (suspension of external power supply to Units 5 & 6)

pm