Plant Status of Fukushima Daiichi Nuclear Power Station

July 20, 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 for 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 replacement of 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 replace 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 restarting water treatment facility. 18:30 Resumed water treatment.

・7/15 5:14 Stopped water treatment facility to investigate causes of water flow reduction.

14:21 Restarted water treatment facility.

14:48 Restarted water treatment.

※ Temporary suspension of water treatment facility for flashing in order to change vessels;
June 23, 24, 25, 26, 28, 29 and 30 and July 2, 3, 5, 7, 8, 13, 14, 16 and 19.

[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 7/20 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.+4,933 mm

	(4/19～5/26, 6/4～6/8, 6/8～6/16, 6/22～6/27, 6/27～7/7, 7/13～7/15, 7/16 10:56 am～)	90 mm increase from 7/19 7:00 am) (Accumulated total increase : 6,150 mm)
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, 7/10～7/15, 7/16 10:50 am～)	[Miscellaneous Solid Waste Volume Reduction Treatment Building] Water level: O.P.+3,558 mm (33 mm increase from 7/19 7:00 am) (Accumulated total increase: 4,284mm)
6u	6u Turbine Building → temporary tanks 5/1～6/22, 6/30～7/9, 7/11 as needed Temporary tanks →Mega Float 6/30～7/5, 7/7～7/9, 7/11～16 as needed	

◇Water level at the vertical shaft of the trench and T/B (as of 7:00 am on July 20)

	Vertical Shaft of Trench (from top of grating to surface)	T/B
1u	O.P. <+850mm (>3,150mm), No change since 7/19 7:00 am	O.P. +4,920mm, No change since 7/19 7:00 am
2u	O.P. +3,494mm (506mm), 11mm decrease since 7/19 7:00 am	O.P. +3,504mm, 9mm decrease since 7/19 7:00 am
3u	O.P. +3,698mm (302mm), 1mm decrease since 7/19 7:00 am	O.P. +3,571mm, 1mm decrease since 7/19 7:00 am
4u	—	O.P. +3,582mm, 7mm decrease since 7/19 7:00 am

・ Water level at Unit 1 R/B: 7/20 7:00 am, O.P. +4,482mm, 131mm increase since 7/19 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	Cecium-134	Cecium-137
Around North Water Discharge Channel, 2F (approx. 10km from 1F)	7/19	8:20 am	ND	0.10	0.07
Around Iwasawa Shore, 2F (approx. 16km from 1F)	7/19	7:50 am	ND	0.12	0.08

As to the others, measurement results of the samples collected around the shore and offshore of 1F on July 19 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 water injection plan on 7/20	—
2u	Circulating Cooling System	Operating from 5/31 5:21 pm	36.0℃ (7/20 11:00)
3u	Circulating Cooling System	Operating from 6/30 6:33 pm	32.2℃ (7/20 11:00)
4u	Alternative Injection System	No water injection plan on 7/20	88～90℃ (7/19 13:00)

From 11:15 am to 3:39 pm on July 20, we conducted injecting water to the reactor well of Unit 4 and the Drier Separator Pit.

<Water Injection to Reactor Pressure Vessels> (at 11:00 am, 7/20)

Unit	Status of injecting water	Temp. of feed-water nozzle	Bottom of reactor pressure vessel
1u	Injecting freshwater (approx. 3.8m^3/h)	110.3℃	98.6℃
2u	Injecting freshwater (approx. 3.8m^3/h)	111.1℃	126.6℃
3u	Injecting freshwater (approx. 9.0m^3/h)	134.5℃	111.2℃

【Units 4】【Unit 5】【Units 6】【Common spent fuel pool】 No particular changes in parameters.

- 7/17, the motor driven pump which injected water to the reactor of Unit 1 and 2 was changed from the Unit 1 pump to the Unit 2 pump. (The motor driven pump for water injection to the reactor of Unit 1 was stopped.)
- At around 10:10 am of 7/19, amounts of water injection to reactor pressure vessels have been changed, Unit 1: from approx. 4.0m^3/h to approx. 3.8m^3/h, Unit 2: from approx. 4.1m^3/h to approx. 3.8m^3/h.

<Injection of Nitrogen Gas into the Primary Containment Vessel> (at 11:00 am, 7/20)

Unit	Pressure of Primary Containment Vessel	Total volume of injected Nitrogen *1
1u	156.3kPaabs (4/7 1:20) →137.3kPaabs	Approx. 69,000m^3
2u	20kPaabs (6/28 19:00) →131kPaabs*2	Approx. 6,700m^3
3u	99.6kPaabs (7/14 17:00) →101.6kPaabs*2	Approx. 1,900m^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 spent fuel 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.
･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, 7/17	Conducted restoration work of 2 lines of Yonomori Line.
7/18～	Installation work of temporary roof for the Unit 3 turbine building started.

END