

Plant Status of Fukushima Daiichi Nuclear Power Station

July 12, 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 (In order to inject water to reactors of Units 1 to 3, we use water injected from filtrate water tanks in addition to treated water in water treatment facilities)
- 7/2 18:00 We completed installing buffer tanks and resumed circulating injection cooling via buffer tanks.
- 7/10 4:53 We confirmed the leakage at the chemical injection line of the coagulation settling equipment of the water treatment facility, and stopped the operation to repair leakage. Water injection into the reactor is continued.
Later we repaired the leakage and conducted leakage check.
- 7/10 17:06 We turned on the water treatment facility.
- 7/10 17:40 We resumed operation of the water treatment facility.
- 7/12 8:51 We found some leakage around the connection part at the liquid chemical injection line of coagulation setting devices in accumulated water treatment facilities and therefore stopped the operation of the facilities. However, we have been injecting water into the reactors.
- 7/12 11:22 We started to fill the reactor well in Unit 4 and equipment storage pool with water. After that, we found some leakage from the connection part at water injection line and therefore stopped the injection at 12:03 pm.
- 7/12 We conducted dust sampling at the apertural area of the reactor building in Unit 3.
- 7/12 13:30~13:45 We implemented connecting work of piping for nitrogen injection into the reactor of Unit 3.

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

June 23 ~ 26, June 28 ~ 30, July 2 ~ 3, 5, 7 and 8. Vessels were replaced on July 10.

[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 7/12 7:00)

Unit	Draining water source → Place transferred	Status
2u	2u Vertical Shaft of Trench → Process Main Building, Central Radioactive Waste Treatment Facility (4/19 10:08am ~ 5/26 4:01pm, 6/4 6:39pm ~ 6/8 2:20pm, 6/8 6:03pm ~ 6/16 8:40am, 6/22 9:56am ~ 6/27 9:02am, 6/27	[Process Main Building] Water level: O.P.+4,445 mm 110 mm decrease from 7/11 7:00) (Accumulated total increase :

	5:07pm ~ 7/7 3:10 pm)	5,662 mm)
3u	3u T/B → Miscellaneous Solid Waste Volume Reduction Treatment Building of Central Radioactive Waste Treatment Facility (5/17 6:04 pm ~ 5/25 9:10 am, 6/18 1:31 pm ~ 6/20 12:02 am) 3u T/B → Process Main Building of Central Radioactive Waste Treatment Facility (6/14 10:05 am ~ 6/16 8:46 am, 6/21 3:32 pm ~ , 6/27 3:44 pm, 6/27 5:00 pm ~ 6/28 9:58 pm, 6/30 8:56 am ~ 7/9 2:49 pm, and 7/10 3:15 ~)	[Miscellaneous Solid Waste Volume Reduction Treatment Building] Water level: O.P.+3,401 mm (17 mm increase from 7/11 7:00) (Accumulated total increase: 4,127mm)
6u	6u Turbine Building → temporary tanks 5/1 ~ 6/22, 6/30 ~ 7/9 as needed, 7/11 10:30 ~ 16:30 Temporary tanks Mega Float 6/30 ~ 7/5, 7/7 ~ 7/9, 7/11 as needed, 7/12 11:00 ~	

Water level at the vertical shaft of the trench and T/B (as of 7:00 am on July 12)

	Vertical Shaft of Trench (from top of grating to surface)	T/B
1u	O.P. <+850mm (>3,150mm), No change since 7/11 7:00 am	O.P. +4,920mm, No change since 7/11 7:00
2u	O.P. +3,566mm (434mm), 34mm increase since 7/11 7:00 am	O.P. +3,568mm, 35mm increase since 7/11 7:00
3u	O.P. +3,757mm (243mm), 11mm decrease since 7/11 7:00 am	O.P. +3,653mm, 16mm increase since 7/11 7:00
4u	-	O.P. +3,664mm, 10mm decrease since 7/11 7:00

- Water level at Unit 1 R/B: 7/12 7:00 am, O.P. +4,281mm, 4mm decrease since 7/11 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
Water discharge of Units 5-6 of Fukushima Daiichi. Approx. 30m north	7/11	10:50 am	ND	0.50	0.44
Around the north water discharge of Fukushima Daini(approx. 10 km from Fukushima Daiichi)	7/11	8:25 am	ND	ND	0.06

Naraha Town Iwasawa Shore 3km (Upper/Lower)	7/11	7:00 am	ND/ND	ND/ND	0.04/ND
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Lower than detection limits at 16 locations below (30 sampling points: shore (upper layer), 15km offshore of Numanouchi (upper, lower layer) sampled on 7/11);

Approx. 330m south of discharge channel of Units 1-4 of Fukushima Daiichi, Around Naraha Town Iwasawa Shore (approx. 16 km offshore from Fukushima Daiichi), Minamisoma Ichihara Twon Area approx. 3km offshore, North of Iwaki City Numanouchi approx. 3km offshore, Iwaki City Natsui River approx. 3km offshore, Iwaki City Onahama Port approx. 3km offshore, Iwaki City Ena approx. 3km offshore, Iwaki City Numanouchi approx. 3km offshore, Iwaki City Toyoma approx. 3km offshore, Minamisoma City Odaka Area approx. 3km, 8km offshore, Naraha Twon Iwasawa Shore approx. 3km, 8km and 15km offshore, Minamisoma City approx. 15km offshore, and Hirono Town approx. 15km offshore

<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 7/12	-
2u	Circulating Cooling System	Operating from 5/31	35.0 (7/12 11:00)
3u	Circulating Cooling System	Operating from 6/30 6:33 pm	31.6 (7/12 11:00)
4u	Alternative Injection System	No plan on 7/12	82 (7/8 16:00)

Due to temporary stop of power supply to remote monitoring system, no data of water temperature are and will be available (from 7/9 to 7/11)

<Water Injection to Reactor Pressure Vessels> (at 11:00 am, 7/12)

Unit	Status of injecting water	Temp. of feed-water nozzle	Bottom of reactor pressure vessel
1u	Injecting freshwater (approx. 3.5m ³ /h)*	116.9	102.8
2u	Injecting freshwater (approx. 3.5m ³ /h)	112.04	122.8
3u	Injecting freshwater (approx. 9.0m ³ /h)	150.3	117.9

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

<Injection of Nitrogen Gas into the Primary Containment Vessel> (at 11:00 am, 7/12)

Unit	Pressure of Primary Containment Vessel	Total volume of injected Nitrogen *1
1u	156.3kPaabs(4/7 1:20) => 144.4kPaabs	Approx.63,700m ³
2u	20kPaabs(6/28 19:00) => 15kPaabs *2	Approx.4,300m ³

*1: approximate figure *2: monitoring the status

<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.

- 7/1 ~ Cleaning by a robot to reduce the radioactive level on the 1st floor of the reactor building of Unit 3
- 7/3 ~ 7/4 Installing steel plates on the 1st floor of the reactor building of Unit 3
- 7/6 Robot entrance for the survey of nitrogen injection to Unit 3
- 7/8 Entrance for the survey of nitrogen injection to Unit 3.
- 7/6 Valves closed to establish circulating cooling system of Spent Fuel Pool of Unit 4.
- 7/8 Conducted a water flow test to confirm the soundness of Residual Heat Removal System piping to establish circulating cooling system of Spent Fuel Pool of Unit 4

END