

Plant Status of Fukushima Daiichi Nuclear Power Station

May 28th, 2011
Tokyo Electric Power Company

<Draining Water on Underground Floor of Turbine Building (T/B)>

Unit	Draining water source → place transferred	Status
Unit 2	Unit 2 Vertical Shaft of Trench → Process Main Building of Central Radioactive Waste Treatment Facility (from 10:08 am, April 19 to 4:01 pm, May 26)	Increase of water level of Process Main Building: 3,891 mm as of 7:00am, May 28 (no change from 7:00, May 27)
Unit 3	Unit 3 Turbine Building → Miscellaneous Solid Waste Volume Reduction Treatment Building of Central Radioactive Waste Treatment Facility (from 6:04 pm, May 17~9:10am, May 25)	Increase of water level of Miscellaneous Solid Waste Volume Reduction Treatment Building: 2,949 mm as of 7:00am, May 28 (53 mm decrease from 7:00, May 27)
Unit 6	Unit 6 Turbine Building →temporary tanks (from May 1 on demand basis)	May 27: approx. 337m ³ May 28: planned transfer from approx. 9:00 am (approx. 400m ³)

◇Water level at the vertical shaft of the trench and T/B (As of 7:00 am, May 28)

	Vertical Shaft of Trench (from top of grating to surface)	T/B
Unit 1	O.P. below +850 mm No change from 7:00 am, May 27	O.P. +4,920 mm No change from 7:00 am, May 27
Unit 2	O.P. +3,424 mm (576mm) 65 mm increase since 7:00 am, May 27	O.P. +3,382 mm 60 mm increase since 7:00 am, May 27
Unit 3	O.P. +3,569 mm (431 mm) 25 mm increase since 7:00 am, May 27	O.P. +3,570 mm 28 mm increase since 7:00 am, May 27
Unit 4	—	O.P. +3,547 mm 27 mm increase since 7:00 am, May 27

- Blockage work at the vertical shaft of trench has been implemented at Unit 2 and Unit 3.

<Monitoring of Radioactive Materials>

◇ Nuclide Analysis of Seawater (Reference purpose)

Density limit by the announcement of Reactor Regulation:

I-131: 40Bq/L, Cs-134: 60Bq/L, Cs-137: 90Bq/L,

Sampling: Everyday

Sampling Location (seacoast)	Date	Time	Ratio to Criteria (times)		
			Iodine-131	Cesium-134	Cesium-137
Approx. 30m north to Discharge Canal of Units 5 & 6 of Fukushima Daiichi*	May 27	9:30/14:00	ND/ND	1.3/1.1	1.0/0.71
Approx. 330m south to Discharge Canal of Units 1 to 4 of Fukushima Daiichi. *	May 27	9:00/13:40	ND/ND	0.62/1.2	0.48/0.57
Around the north Discharge Canal of Fukushima Daini (10km from Fukushima Daiichi)	May 27	8:35	ND	0.38	0.29
Around Iwasawa Seashore, Naraha Town (approx. 16km from Fukushima Daiichi)	May 27	7:50	ND	0.43	0.21
Approx. 3km from the offshore of Soma City. *	May 27	7:00/7:00	ND/ND	ND/ND	ND/ND
Approx. 3km from the offshore of Iwasawa seashore, Naraha Town.	May 27	7:25	ND	ND	0.20
Approx. 5km from the offshore of Soma City. *	May 27	6:45/6:45	ND/ND	ND/ND	ND/ND
Approx. 5km from the offshore of Kashima. *	May 27	6:30/6:30	ND/ND	ND/ND	ND/ND
Approx. 8km from the offshore of Iwasawa seashore, Naraha Town.	May 27	7:40	ND	ND	ND
Approx. 15km from the offshore of Iwasawa seashore, Naraha Town.	May 27	7:15	ND	ND	ND
Approx. 15km from the offshore of Hirono Town.	May 27	7:00	ND	ND	ND
Approx. 30km from the offshore of Ukedogawa**	May 27	7:15/7:15/7:15	ND/ND/ND	ND/ND/ND	ND/ND/ND
Approx. 30km from the offshore of Minami Soma City. **	May 27	6:15/6:15/6:15	ND/ND/ND	ND/ND/ND	ND/ND/ND

* left number: Upper Layer, right number: Lower Layer

** left number: Upper Layer, middle number: Middle Layer right number: Lower Layer

<Water Injection and Spraying to Spent Fuel Pools>

◇ Result on May 27

[Unit 4] From 5:05 pm - 8:00 pm, we injected freshwater and hydrazine from Spent Fuel Cooling and Filtering System (approx. 100 tons).

◇ Plan on May 28

[Unit 3] From 1:28 pm - 3:08 pm, we injected freshwater and hydrazine from Spent Fuel Cooling and Filtering System

[Unit 1] We plan to inject freshwater from Spent Fuel Cooling and Filtering System.

[Unit 4] We plan to spray freshwater and hydrazine by a concrete pumping vehicle .

Others

- We are conducting detailed nuclide analyses on the water collected on April 12 from the spent fuel pool of Unit 4.
- We are conducting detailed nuclide analyses on the water collected on April 16 from the skimmer surge tank of Unit 2.
- We are conducting detailed nuclide analyses on the water collected on May 8 from the spent fuel pool of Unit 3.

<Water Injection to Reactor Pressure Vessels>

【Unit 1】 Injecting fresh water (approx. 6 m³/h):

Reactor pressure vessel temperature:

At 11:00am, May 28, <Feed-water nozzle> 114.5°C

<Bottom of reactor pressure vessel>96.9°C

【Unit 2】 Injecting fresh water (approx. 7 m³/h)

Reactor pressure vessel temperature:

At 11:00am, May 28, <Feed-water nozzle> 111.7°C

【Unit 3】 Injecting fresh water (Fire Protection System approx. 2 m³/h + Feed Water System approx. 13.5 m³/h)

Reactor pressure vessel temperature:

At 11:00am, May 28, <Bottom of reactor pressure vessel> 113.3°C

- Since 4:53 pm, May 12, injection line has been changed from fire protection system to feed water system (monitoring the temperature trend).
- From 2:15 pm, May 20, we changed the amount of water injected to the reactor pressure vessel by the feed water system from 9m³/h to 12m³/h.
- From 5:39 pm, May 20, we gradually decreased the amount of water injected to the reactor pressure vessel by the fire protection system (from 5:00 am, May 21st : 6m³/h, from 11:31 am, May 23: 5m³/h, from 2:08 pm, May 23: 4m³/h, from 5:19 pm, May 23: 3m³/h)
- On May 26, we changed the injection rate by fire protection system from 3m³/h to 2m³/h.
- On May 27, we changed the injection rate by fire protection system from 2m³/h to 1m³/h.

【Unit 4】 **【Common spent fuel pool】**No particular changes on parameters.

【Units 5/6】 Reactor cold shutdown. No particular changes on parameters.

<Injection of Nitrogen Gas to the Primary Containment Vessel of Unit 1 (PCV)>

◇Injection of nitrogen gas

- From 1:31 am, April 7, we started to inject nitrogen gas to PCV using temporary nitrogen generators.
- Approx. 2:00 pm on May 21, nitrogen supply was stopped as a result of a trip of compressors due to high temperature. At 5:11 pm, we started up a back-up nitrogen generator to resume nitrogen supply at approx. 20 m³/h (it was adjusted to approx.

26 m³/h before 8:31 pm).

- At 11:23 am, May 22, we started up nitrogen generators planned to be used at Units 2 and 3 and resumed nitrogen supply at approx. 28 m³/h
- From 9:14 am to 9:18 am, May 25, we temporarily stopped nitrogen injection due to change of power source associated with stoppage of temporary power panel (Then nitrogen injection was resumed). From 3:16 pm to 3:18 pm, nitrogen injection was stopped due to connection change of power source (temporary power source to permanent power source). (Then nitrogen injection was resumed). At 3:45 pm, we confirmed a trip of one of the feed compressors. At 7:44 pm, an alternative compressor was activated and injection was resumed at approx. 28 m³/h.
- D/W pressure: 156.3 kPaabs (1:20am, April 7) -> 132.6 kPaabs, (11:00am, May 28)
Injected amount of nitrogen gas was approx. 33,600m³.

<Others>

- Since April 10, we have been clearing outdoor rubbles by a remote control to improve working environment.
- Since April 26, we are continuing to spray the dust inhibitor. (On May 27, sprayed in the area of approx. 15,350m². On May 28, we are spraying the dust inhibitor around the solid waste storage facility).
- Since May 9, we commenced preparation work for installing support structure into the bottom of fuel spent pool of reactor building of Unit 4.
- Since May 10, we commenced clearing of rubble in front of carry-in gate for large stuff of reactor building of Unit 3 by using robots.
- Since May 12, reinforcement work of power source line of Unit 3 and 4
- Since May 13, preparation work for installation of a cover for the reactor building of Unit 1.
- May 21, the Mega Float arrived in Fukushima Daiichi port and berthed at the shallow draft quay.
- Since May 24, we are installing major equipments such as heat exchange units regarding installing cyclic cooling system for spent fuel pool at Unit 2. (Planned commencement of cooling: May 31)
- May 25, power center (2C system) was stopped due to the composition change of onsite power system but resumed at 2:59pm.
- Since May 26, TEPCO employees have entered Unit2 to conduct dust sampling around double doors (inside) of reactor building.
- Since May 26, we have removed water from the condenser of the turbine building in order to be prepared for the construction for water injection through feed water system piping arrangement into the reactor of Unit 2. Completed on 2:30 pm in 27th May.
- May 27, we started to enter the reactor building of Unit 1 in order to conduct sampling survey of accumulated water on the underground floor, to install water level gauge, and to lay hoses.

END