

Plant Status of Fukushima Daiichi Nuclear Power Station

June 23, 2011

Tokyo Electric Power Company

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

◇ Construction status of accumulated radioactive water treatment system and storage tank facility

[Treatment Facility]

- At 8:00 pm on June 17, a full operation of water treatment of accumulated water started.
- At 0:54 am on June 18, we stopped operation of the facility manually due to the radiation dose at surface level measured up (stop criterion: 4mSv/h) at the first skid (for filtering out oil and technetium) of Cesium adsorption Instruments.
- From 3:17 am on June 18, we started operation of circulating seawater purification facility for cleaning up low radiation-level contained water.
- Between 7:30 pm and 11:45 pm on June 19, water flow test was implemented using highly concentrated contaminated water at Cesium adsorption Instruments.
- Between 10:25 am and 2:50 pm, a water flow test was implemented using highly concentrated contaminated water at Cesium adsorption Instruments.
- From 0:45 am on June 21, we started a water flow test using highly concentrated contaminated water at water treatment facility.

At around 7:20 am, a pump transferring filtrated water to coagulation settling instrument tripped, and the whole water treatment instrument stopped.

From 0:16 pm on June 21 to 10:00 am on June 22, we started a water flow test using highly concentrated contaminated water at water treatment facility.

- At 0:43, on June 23, we resumed a test of passing water through water treatment facilities with highly concentrated contaminated water
- At 13:00 on June 23, we suspended the water treatment facilities for the flash in order to change vessels.
- At 14:44 on June 23, we resumed a test of passing water through water treatment facilities with highly concentrated contaminated water.

[Storage Facility]

- From June 8, big tanks to store and keep treated or contaminated water are being transferred and installed sequentially.

◇ Treatment status of accumulated water in vertical shafts of trenches and at basement level of each building (as of 7:00 am on June 23)

Unit	Draining water source -> place transferred	Status
Unit 1	Unit 1 Condenser -> CST (10:33 am, June 15 ~ 9:52 am, June 16)	[Process Main Building] Water level: O.P.+4,792 mm

Unit 2	<p>Unit 2 Vertical Shaft of Trench</p> <p>-> Process Main Building of Central Radioactive Waste Treatment Facility (10:08 am, April 19 ~ 4:01 pm, May 26 and 6:39 pm, June 4 ~ 2:20 pm, June 8, 6:03 pm, June 8 ~ 8:40 am, June 16, 9:56 am, June 22 ~)</p> <p>-> Unit 1 condenser (2:20 pm~2:59 pm, June 17*, 5:09 pm, June 21)</p> <p>* Water transfer was suspended due to failure of pump.</p>	<p>(148mm decrease from 7:00 am, June 22)</p> <p>Accumulated total increase in water level: 6,009mm</p> <p>[Miscellaneous Solid Waste Volume Reduction Treatment Building]</p> <p>Water level: O.P.+3,042mm</p> <p>(16mm increase from 7:00 am, June 22)</p> <p>Accumulated total increase in water level: 3,768 mm</p>
Unit 3	<p>Unit 3 Turbine Building</p> <p>-> Miscellaneous Solid Waste Volume Reduction Treatment Building of Central Radioactive Waste Treatment Facility (from 6:04 pm, May 17~9:10am, May 25, 1:31 pm, June 18 ~ 0:02 am, June 20</p> <p>Unit 3 Turbine Building</p> <p>-> Process Main Building of Central Radioactive Waste Treatment Facility (10:05 am on June 14~ 8:46 am on June 16, 3:32 am on June 21~)</p>	
Unit 6	Unit 6 Turbine Building temporary tanks (from May 1 to June 22 on demand basis)	

◇Water level at the vertical shaft of the trench and T/B (As of 7:00 am, June 23)

	Vertical Shaft of Trench (from top of grating to surface)	T/B
Unit 1	O.P. below +850 mm (>3,150mm) No change from 7:00 am, June 22	O.P. +4,920 mm No change from 7:00 am, June 22
Unit 2	O.P. +3,742 mm (258mm) 15 mm decrease since 7:00 am, June 22	O.P. +3,730mm 14mm decrease since 7:00 am, June 22
Unit 3	O.P. +3,868 mm (132mm) 10 mm decrease since 7:00 am, June 22	O.P. +3,836mm 14mm decrease since 7:00 am, June 22
Unit 4	—	O.P. +3,839mm 13 mm decrease since 7:00 am, June 22

- Water level at Unit 1 Reactor Building: as of 7:00 am on June 23, O.P. +4,475mm, 28mm increase since 7:00 am, June 21
- With regard to Unit 2 and 3, blockage work to the extension of the pit and the pit whose flow path is not identified is underway.
(Blockage work of pits where incidents similar to outflow ones occurred or whose closure would ensure flow routes was completed by June 10.)

<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 Location	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	6/22	9:10/13:55	ND/ND	0.35/0.35	0.24/0.33
Approx. 330m south to Discharge Canal of Units 1 to 4 of Fukushima Daiichi	6/22	8:55/13:40	ND/ND	0.77/0.53	0.57/0.32

All the data in the following 5 locations (8 points, collected as follows: offshore/Upper Layer, 15km offshore/ Upper and Lower Layer) were below the detectable limit

- Around Fukushima Daini North Discharge Canal (Approx. 10km from Fukushima Daiichi)
- Around Iwasawa Seashore, Naraha Town (Approx. 16km from Fukushima Daiichi)
- Approx. 15km offshore of Ukedo River, Namie City
- Approx. 15km offshore of Fukushima Daiichi site
- Approx. 15km offshore of Fukushima Daini site

* Density limit by the announcement of Reactor Regulation of I-131 was mistakenly announced as "50Bq/L" in "Plant Status of Fukushima Daiichi Nuclear Power Station" since June 16, but the correct data is "40Bq/L". We apologize for this mistake.

<Water Injection and Spraying to Spent Fuel Pools>

Results	-	- None on June 22
Plans		- None on June 23

- From May 31, cooling using the circulating cooling system for Spent Fuel Pool, Unit 2 is underway.
Spent fuel pool water temperature at 11:00 am on June 23: 33°C

<Water Injection to Reactor Pressure Vessels> (as at 11:00 am on June 23)

Unit	Status of injecting water	Temp. of feed-water nozzle	Bottom of reactor pressure vessel
1	Injecting freshwater (approx. 3.5m ³ /h)	118.2°C	102.1°C
2	Injecting freshwater (approx. 3.5m ³ /h)	107.9°C	107.8°C
3	Injecting freshwater (approx. 9.4~9.5m ³ /h)	149.5°C	120.5°C

Injection amount into reactor was changed on June 23 (Unit 3: 10:13 ~ Approx. 10.0 → Approx. 9.5m³/h)
【Unit 4】Units 5】【Units 6】【Common spent fuel pool】No particular changes on parameters.

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

◇ Injection of nitrogen gas

- Primary Containment Vessel pressure: 156.3 (1:20am, April 7) → 137.9 kPaabs, (11:00am, June 23) approx. 50,900m³.

<Others>

- Since April 10, we have been clearing outdoor rubbles by a remote control to improve working environment to

improve working conditions.

- Since April 26, we are continuing to spray dust inhibitor in the site of the power station. (On June 22, around the south bank protection and southeast yard of Unit 5 and 6 approx. 13,550m²; on June 23, the spraying is underway at the west side of the reactor building of Unit 4 etc.).
- 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 13, preparation work for installation of a cover for the reactor building of Unit 1.
- Since June 3, we have been carrying out restoration works of port related facilities
- From June 7 to June 20, we installed support structure into the bottom of fuel spent pool of reactor building of Unit 4.
- From June 21, started filling concrete and grout.
- From June 19, we started injecting fresh water constantly to reactor building well and instrument storage pool of Unit 4.
- On June 21, we implemented investigation of measuring the radiation dose / dust density of nuclear reactor building of Unit 2.
- On June 22, we installed Reactor Temporary Pressure Meter of Unit 2.
- On June 23, we injected water into instrumentation piping arrangement of Reactor Temporary Pressure Meter of Unit 2. We also installed hoses in the nitrogen injection line of Reactor Containment Vessel of Unit 2.
- On June 22, we take samples with a concrete pumping vehicle of air in the upper part of reactor building of Unit 1.
- On June 22, we implemented on-site survey for installing alternative cooling equipment of fuel pool cooling and filtering.

END