Plant Status of Fukushima Daiichi Nuclear Power Station

June 20, 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 June18, 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 19:30 and 23:45 on June 19, passing water test was implemented using high radiation-level contained water at Cesium adsorption Instruments.
- Between 10:25-14:50, passing water test was implemented using high radiation-level contained water at Cesium adsorption Instruments.

[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 20)

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.+4,971 mm (26mm decrease from 7:00 am, June 19) Accumulated total increase in water level: 6,188mm [Miscellaneous Solid Waste Volume Reduction Treatment Building] Water level: O.P.+3,010 mm (336mm increase from 7:00 am, June 19) Accumulated total increase in water level: 3,736 mm
Unit 2	Unit 2 Vertical Shaft of Trench -> 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) -> Unit 1 condenser (2:20 pm～2:59 pm, June 17*, 1:37 pm, June 20 ～ transfer began) * Water transfer was suspended due to failure of pump.	
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, 1:31 pm, June 18 ～ 0:02 am, June 20	

	Unit 3 Turbine Building **->** Process Main Building of Central Radioactive Waste Treatment Facility (3:30pm, June 11 ～ 5:01pm, June 12, 10:05 am on June 14～8:46 am on June 16)	
Unit 6	Unit 6 Turbine Building → temporary tanks (from May 1 on demand basis, from 2:45 pm on June 5 to 6:00 pm on June 8, from 9:00 am on June 9 on demand basis, and from 10:00 am to 16:00 on June 18, from 10:00 am to 16:00 on June 19, 10:00 am, June 20 ～ transfer began)	

◇Water level at the vertical shaft of the trench and T/B (As of 7:00 am, June 20)

	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 19	O.P. +4,920 mm No change from 7:00 am, June 19
Unit 2	O.P. +3,820 mm (180mm) 37 mm increase since 7:00 am, June 19	O.P. +3,802mm 37 mm increase since 7:00 am, June 19
Unit 3	O.P. +3,853 mm (147 mm) No change since 7:00 am, June 19	O.P. +3,834mm 3mm decrease since 7:00 am, June 19
Unit 4	—	O.P. +3,824mm 7 mm decrease since 7:00 am, June 19

- Water level at Unit 1 Reactor Building: as of 7:00 am on June 19, O.P. +4,393mm, 3mm decrease since 7:00 am, June 18
- 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: 50Bq/L, Cs-134: 60Bq/L, Cs-137: 90Bq/L

Sampling Location	Date	Time	Ratio to Criteria (times)		
			Iodine-131	Cecium-134	Cecium-137
Approx. 30m north to Discharge Canal of Units 5 & 6 of Fukushima Daiichi	6/19	9:05/13:50	ND/ND	0.47/0.62	0.37/0.37
Approx. 330m south to Discharge Canal of Units 1 to 4 of Fukushima Daiichi	6/19	8:50/13:30	ND/ND	0.32/0.67	0.28/0.38

※ Analyses Results Left: Upper Layer, Right: Lower Layer

All the data in the following 7locations (12 points) were below the detectable limit

- Around the north Discharge Canal of Fukushima Daini (10km from Fukushima Daiichi)

– Around Iwasaki Seashore (16 km from Fukushima Daiichi)
– Approx. 3km offshore of Haramachi ward, Minami Souma City
– Approx. 3km / 8km offshore of Odaka ward, Minami Soumai City
– Approx. 3km / 8km offshore of Iwasawa Seashore, naraha Town

<Water Injection and Spraying to Spent Fuel Pools>

Results	Unit 4	From 4:05 pm to 19:23 on June 18, fresh water and hydrazine were injected by alternative feed water system.
Plans	-	- not planed on June 20

- 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 20: 32℃
- From 11:03 am to 4:00 pm, the operation of circulating cooling system for Spent Fuel Pool, Unit 2 was suspended due to the power switching of the power station.
- From June 16, changing water feeding line from concrete pumping vehicle to alternative water injecting line, injecting fresh water to spent fuel pool of Unit 4 was started.

<Water Injection to Reactor Pressure Vessels> (as at 11:00 am on June 20)

Unit	Status of injecting water	Temp. of feed-water nozzle	Bottom of reactor pressure vessel
1	Injecting freshwater (approx. 4.5m^3/h)	113.8℃	98.7℃
2	Injecting freshwater (approx. 5.0m^3/h)	107.7℃	108.1℃
3	Injecting freshwater (approx. 10.8～10.9m^3/h)	149.9℃	126.0℃

【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) → 134.7kPaabs, (2:00pm, June 20) approx. 48,900m^3.
- From 11:48 am to 4:05 pm on June 19, the operation of the Nitrogen Gas Supply System was suspended due to the power switching of the station.

<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 18, around the main gate etc, approx 10,200m2; on June 19, the spray is underway around the ground 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 woks of port related facilities
- Since June 7, we have been installing support structure into the bottom of fuel spent pool of reactor building

of Unit 4.

- From June 11, we started the work to improve inside working environment of Unit 2 Reactor Building.
  At 12:39 pm, we opened air-lock double doors of Reactor Building.
  From 12:42 pm we started to operate an ambient air filtration system.
- From 0:12 pm to 4:22 pm on June 19, we stopped the operation of an ambient air filtration system due to the power switching of the station.
- From 5:00 am, June 20, reactor building airlock was fully opened.
- At 2:30 pm, reactor building truck bay door was opened.
- From around 10:00am, on June 20, continuous operation of circulating seawater purification facility was resumed.
- On June 15, decontamination test was implemented within Unit 1 truck bay door.
- From 9:49, June 19, filling water at Unit 4 reactor well and instrument storage pool is being implemented.
- From 1:34 pm to 3:09 pm on June 19, the power for Unit 1 and Unit 2 was partially suspended due to the power switching of the station. (Suspended Load: the Nitrogen Gas Supply System of Unit 1, and circulating injection cooling system for spent fuel pool of Unit 2 etc)

END