

## Plant Status of Fukushima Daiichi Nuclear Power Station

July 14, 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.
- 7/12 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 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 switching 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 change 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.

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

June 23~26, June 28~30, July 2~3, 5, 7, 8, and 13 11:00 am - .

#### [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 7/14 7:00 am)

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 5:07pm~ 7/7 3:10 pm, 7/13 10:09 am ~ )	[Process Main Building] Water level: O.P.+4,693 mm 266 mm increase from 7/13 7:00 am) (Accumulated total increase :

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~)	5,910 mm)  [Miscellaneous Solid Waste Volume Reduction Treatment Building]  Water level: O.P.+3,433 mm (17 mm increase from 7/13 7:00 am)  (Accumulated total increase: 4,159mm)
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, 7/11~13 as needed, 7/14 10:00~	

◇Water level at the vertical shaft of the trench and T/B (as of 7:00 am on July 14)

	Vertical Shaft of Trench (from top of grating to surface)	T/B
1u	O.P. <+850mm (>3,150mm), No change since 7/13 7:00 am	O.P. +4,920mm, No change since 7/13 7:00 am
2u	O.P. +3,572mm (428mm), 29mm decrease since 7/13 7:00 am	O.P. +3,577mm, 23mm decrease since 7/13 7:00 am
3u	O.P. +3,733mm (267mm), 12mm decrease since 7/13 7:00 am	O.P. +3,621mm, 14mm decrease since 7/13 7:00 am
4u	—	O.P. +3,633mm, 14mm decrease since 7/13 7:00 am

- Water level at Unit 1 R/B: 7/14 7:00 am, O.P. +4,340mm, 27mm increase since 7/13 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
Around the north water discharge of Fukushima Daini(approx. 10 km from Fukushima Daiichi)	7/13	8:25 am	ND	0.08	ND

Lower than detection limits at 8 locations below (13 sampling points: shore [upper layer], 3km and 8km offshore [upper and lower layers] sampled on 7/13);

Approx. 330m south of discharge channel of Units 1-4 of Fukushima Daiichi, approx. 30m north of discharge channel of Units 5-6 of Fukushima Daiichi, around Naraha Town Iwasawa Shore (approx. 16 km offshore from Fukushima Daiichi), approx. 3km offshore from Haramachi-ku, approx. 3km and 8km offshore from Odaka-ku, 3km

and 8km offshore from Iwasawa Shore

<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 7/14	-
2u	Circulating Cooling System	Operating from 5/31	37.0°C (7/14 11:00)
3u	Circulating Cooling System	Operating from 6/30 6:33 pm	31.4°C(7/14 11:00)
4u	Alternative Injection System	No plan on 7/14	85-86°C(7/13 14:00)※

※Since 7/9, power supply to remote monitoring system of temperature of spent fuel pool has been suspended.

<Water Injection to Reactor Pressure Vessels> (at 11:00 am, 7/14)

Unit	Status of injecting water	Temp. of feed-water nozzle	Bottom of reactor pressure vessel
1u	Injecting freshwater (approx. 3.7m <sup>3</sup> /h) *	116.6°C	102.6°C
2u	Injecting freshwater (approx. 3.6m <sup>3</sup> /h)	111.5°C	122.3°C
3u	Injecting freshwater (approx. 9.0m <sup>3</sup> /h)	148.1°C	115.2°C

【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, 7/14)

Unit	Pressure of Primary Containment Vessel	Total volume of injected Nitrogen *1
1u	156.3kPaabs(4/7 1:20) => 143.6kPaabs	Approx.65,000m <sup>3</sup>
2u	20kPaabs(6/28 19:00) => 15kPaabs *2	Approx.4,900m <sup>3</sup>

\*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.
- 7/6 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
- 7/12 – 7/13 Implemented dust sampling at the opening of the reactor building of Unit 3.
- 7/12 Implemented connecting procedure of ducts for nitrogen injection into the reactor of Unit 3.
- 7/14 20:00- Plan to inject nitrogen into the reactor of Unit 3.

- 7/13 Found that portable monitoring post shows the value of exposure dose at the main entrance as approx. zero. We plan to repair or replace the data receiver of Main Anti-Earthquake Building.

22:00