

## Plant Status of Fukushima Daiichi Nuclear Power Station

July 29, 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.
- 7/2 18:00 We completed installing buffer tanks and resumed circulating injection cooling via buffer tanks.
- 7/21 8:38 Water treatment was interrupted due to power switching with relation to restoration work of Yonomori Line 2 circuits. The water treatment facility stopped after the power stopped at water level gauge installed at suppression pool water surge tank (B).
- 7/22 0:28 Restarted water treatment facility. 0:40 Water treatment in operation  
7:10 Water treatment facility shut-downed by circuit breaker opening of spare transformer in the station due to overload.  
15:37 Restarted water treatment facility. 15:51 Water treatment in operation
- 7/23 8:45 Water treatment was interrupted due to power switching with relation to restoration work of Yonomori Line 2 circuits.  
15:26 Restarted water treatment facility. 16:27 Water treatment in operation
- 7/24 11:57 Water desalinations were shut-downed due to annunciator alarmed with relation to sand filtration system.  
19:19 Water desalinations were restarted by switching to spare equipment. Water injection into reactors of Unit 1 to 3 were continued without interruption by feeding water from filtrate tank to buffer tank.

#### [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 7/29 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 ~ 5/26, 6/4 ~ 6/8, 6/8 ~ 6/16, 6/22 ~ 6/27, 6/27 ~ 7/7, 7/13 ~ 7/15, 7/16 ~ 7/21, 7/22 16:56 ~ 7/29 9:43)	[Process Main Building] Water level: O.P.+5,365 mm 45 mm increase from 7/28 7:00 am)
3u	3u T/B → Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building) of Central Radioactive Waste Treatment Facility (5/17 ~ 5/25, 6/18 ~ 6/20) 3u T/B → Process Main Building of Central Radioactive Waste Treatment Facility (6/14 ~ 6/16, 6/21 ~ 6/27, 6/27 ~ 6/28, 6/30 ~ 7/9, 7/10 ~ 7/15, 7/16 10:50 am ~ 7/21 15:59, 7/22 16:53 ~ 7/29 9:48)	(Accumulated total increase : 6,582 mm) [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)] Water level: O.P.+3,707 mm (30 mm increase from 7/28 7:00 am) (Accumulated total increase: 4,433mm)
6u	6u Turbine Building → temporary tanks 5/1 ~ 6/22, 6/30 ~ 7/9, 7/11, 7/21 ~ 24, 7/26 ~ 7/27 as needed, 7/28 11:00 ~ 16:00, 7/29 10:00 ~ 17:00 Temporary tanks Mega Float 6/30 ~ 7/5, 7/7 ~ 7/9, 7/11 ~ 16 and 7/27 as needed, 7/28 10:00 ~ 17:00	-

· 7/29 10:03 ~ 16:09 We started transferring from Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building) to Process Main Building

Water level at the vertical shaft of the trench and T/B (as of 7:00 am on July 29)

	Vertical Shaft of Trench (from top of grating to surface)	T/B
1u	O.P. <+850mm (>3,150mm), No change since 7/28 7:00 am	O.P. +4,920mm, No change since 7/28 7:00 am
2u	O.P. +3,564mm (436mm), 14mm decrease since 7/28 7:00 am	O.P. +3,580mm, 12mm decrease since 7/28 7:00 am
3u	O.P. +3,719mm (281mm), 8mm decrease since 7/28 7:00 am	O.P. +3,560mm, 11 mm decrease since 7/28 7:00 am
4u	-	O.P. +3,578mm, 10mm decrease since 7/28 7:00 am

• Water level at Unit 1 R/B: 7/29 7:00 am, O.P. +4,713 mm, 34 mm decrease since 7/28 7:00 am.

<Monitoring of Radioactive Materials>

Nuclide Analysis of Seawater (Reference)

Sampling Location	Date	Time	Ratio to Criteria (times)		
			Iodine-131	Cesium-134	Cesium-137
Approx. 30m north of Water Discharge Channel of 5-6u of 1F	7/28	11:00 am	ND	0.33	0.29
Around Iwasawa Shore, 2F (approx. 16km from 1F)	7/28	7:55 am	ND	ND	0.05

\* Samples collected at 2 points along the shores, 12 points of offshore and 5 point of offshore of Ibaraki Prefecture on July 28 were all below the detectable threshold.

<Cooling of Spent Fuel Pools>

Unit	Cooling type	Status of cooling	Temperature of water in Pool
1u	Fuel Pool Cooling and Filtering System	No water injection plan on 7/29	-
2u	Circulating Cooling System	Operating from 5/31 5:21 pm	34.0 (7/29 11:00)
3u	Circulating Cooling System	Operating from 6/30 6:33 pm	31.8 (7/29 11:00)
4u	Alternative Injection System	No water injection plan on 7/29	87 ~ 89 (7/28 19:00)*

\* 7/28 14:33 ~ 18:50 Water was injected into the Reactor well and the Drier separator pit of Unit 4.

\* 7/29 11:55 ~ 13:29 Hydrazine was injected into the spent fuel pool of Unit 3.

<Water Injection to Reactor Pressure Vessels> (at 11:00 am, 7/29)

Unit	Status of injecting water	Temp. of feed-water nozzle	Bottom of reactor pressure vessel
1u	Injecting freshwater (approx. 3.5m <sup>3</sup> /h)	107.2	95.8
2u	Injecting freshwater (approx. 3.5m <sup>3</sup> /h)	111.8	123.5
3u	Injecting freshwater (approx. 8.9m <sup>3</sup> /h)	124.0	107.1

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

· 7/28 17:30 Adjusted injection amount of water to Unit 2 from 3.2m<sup>3</sup>/h to 3.6m<sup>3</sup>/h.

<Injection of Nitrogen Gas into the Primary Containment Vessel> (at 11:00 am, 7/29)

Unit	Pressure of Primary Containment Vessel	Total volume of injected Nitrogen (Estimate)
1u	156.3kPaabs (4/7 1:20) 134.7kPaabs	Approx. 75,100m <sup>3</sup>
2u	20kPaabs (6/28 19:00) 135kPaabs	Approx. 9,600m <sup>3</sup>
3u	99.6kPaabs (7/14 17:00) 101.6kPaabs	Approx. 4,900m <sup>3</sup>

<Others>

- 4/10 ~ Clearance of outdoor rubbles by remote control to improve working conditions.
- 6/3 ~ Restoration works of port related facilities has been under operation.
- 7/12~ Construction work of 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 spent fuel pool of reactor building of Unit 4.
- 6/21 ~ 7/26 Concrete placement and preparation work.
- 7/27 ~ Started installing forms for injecting grout
- 6/28 ~ Main construction work for installing the cover for the reactor building of Unit 1
- 7/26 Site inspection was conducted by a robot as to the 1<sup>st</sup> and 2<sup>nd</sup> floors of Reactor Building, Unit 3.
- 7/27 Workers entered the reactor building of Unit 3 and surveyed water injection points and measured radiation dose.
- 7/29 Implemented the gas sampling of Unit 1 Primary Containment Vessel.

END