

## Plant Status of Fukushima Daiichi Nuclear Power Station

July 31, 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.
- 7/31 10:50 a leakage was detected between water desalination facility and primary storage tank of concentrated water of water desalination equipment along the transfer line.  
11:15 we stopped the transferring pumps. At 11:20 am, we stopped the water desalination facilities. After that, we closed the valves of the transfer line, confirming that the leakage stopped at 0:30 pm.  
15:02 After replacing the line material and checking the status of leakage, we started the water desalination facility again.

#### [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 7/31 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 ~ 7/29, 7/30 16:10 ~ )	[Process Main Building] Water level: O.P.+5,158 mm 59 mm decrease from 7/30 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 ~ 7/29, 7/30 16:13)	(Accumulated total increase : 6,375 mm) [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)] Water level: O.P.+3,678 mm (38 mm increase from 7/30 7:00 am) (Accumulated total increase: 4,404mm)
6u	6u Turbine Building → temporary tanks 5/1 ~ 6/22, 6/30 ~ 7/9, 7/11, 7/21 ~ 24, 7/26 ~ 7/30 as needed, 7/31 11:00 ~ Temporary tanks Mega Float 6/30 ~ 7/5, 7/7 ~ 7/9, 7/11 ~ 16 and 7/27 as needed, 7/30 10:00 ~ 17:00, 7/31 10:00 ~	-

- 7/30 11:04 ~ We transferred from spent fuel common pool to the water desalinations tank for water treatment facility.
- 7/31 13:58 ~ We started transferring accumulated water at the Centralized Radiation Waste Treatment Facility (Miscellaneous Solid Waste Volume Reduction Treatment Building) to the Centralized Radiation Waste Treatment Facility (Process Main Building).

Water level at the vertical shaft of the trench and T/B (as of 7:00 am on July 31)

	Vertical Shaft of Trench (from top of grating to surface)	T/B
1u	O.P. <+850mm (>3,150mm), No change since 7/30 7:00 am	O.P. +4,920mm, No change since 7/30 7:00 am
2u	O.P. +3,625mm (375mm), 11mm increase since 7/30 7:00 am	O.P. +3,638mm, 12mm increase since 7/30 7:00 am
3u	O.P. +3,747mm (253mm), 9mm increase since 7/30 7:00 am	O.P. +3,596mm, 1mm increase since 7/30 7:00 am
4u	-	O.P. +3,604mm, 15mm increase since 7/30 7:00 am

- Water level at Unit 1 R/B: 7/31 7:00 am, O.P. +4,765 mm, 51mm increase since 7/30 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
Around North Discharge Channel of 2F (approx. 16 km from 1F)	7/30	8:20 am	ND	0.08	0.06

\* Samples collected at 3 points along the shores of Fukushima Prefecture on July 30 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 7/31	-
2u	Circulating Cooling System	Operating from 5/31 5:21 pm	34.0 (7/31 11:00)
3u	Circulating Cooling System	Operating from 6/30 6:33 pm	31.3 (7/31 11:00)
4u	Circulating Cooling System	Operation start from 7/31 10:08 pm	86 (7/31 10:08)*

\* 7/31 10:08 we started alternative cooling system for spent fuel pool of Unit 4, and implemented trial run.

\* 7/31 12:44 we conducted its performance assessment, and started the full-scale operation.

<Water Injection to Reactor Pressure Vessels> (at 11:00 am, 7/31)

Unit	Status of injecting water	Temp. of feed-water nozzle	Bottom of reactor pressure vessel	Pressure of Primary Containment Vessel
1u	Injecting freshwater (approx. 3.4m <sup>3</sup> /h)	105.5	94.4	132.5kPaabs
2u	Injecting freshwater (approx. 3.2m <sup>3</sup> /h)	111.6	122.0	134kPaabs
3u	Injecting freshwater (approx. 8.9m <sup>3</sup> /h)	122.7	106.8	101.6kPaabs

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

·7/31 5:01 Adjusted injection amount of water of each unit to approx. 3.7 m<sup>3</sup>/h. , because the amount of water injection of unit 1 and 2 was found to be lowered.

<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

END