

## Plant Status of Fukushima Daiichi Nuclear Power Station

February 6, 2012

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]

- At 18:42 on January 17, 2012: We actuated Cesium adsorption apparatus. At 18:45, the flow rate reached steady state.
- At 11:12 on February 2, 2012: We restarted the second Cesium adsorption apparatus (Sarry). At 11:15 it reached its regular flow rate.

#### [Storage Facility]

- June 8, 2011 ~ : Large 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

Unit	Draining water source Place transferred	Status
Unit 2	· Unit 2T/B Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)]	· From 16:07 on February 3 to 8:47 on February 6 – water transferred
Unit 3	· Unit 3T/B Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)]	· From 9:49 on February 5 - transferring
Unit 6	· Unit 6T/B Temporary tanks	· From 10:00 – 16:00 on February 6 – water transferred

Place transferred	Status of Water Level (As of 7:00 am on February 6)
Process Main Building	Water level: O.P.+ 3,183 mm(Accumulated total increase:4,400 mm), decreased 150mm since 7:00 am on February 5
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)	Water level: O.P.+ 3,371mm(Accumulated total increase:4,097 mm), increased 384mm since 7:00 am on February 5

Water level of the vertical shaft of the trench, T/B and R/B(As of 7:00 am on February 6)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on February 5)	O.P.+ 2,861 mm (14mm increase since 7:00 on February 5)	O.P.+ 4,256 mm (7mm decrease since 7:00 on February 5)
Unit 2	O.P.+ 3,036 mm (8mm decrease since 7:00 on February 5)	O.P.+ 3,008 mm (9mm decrease since 7:00 on February 5)	O.P.+ 3,179 mm (7mm decrease since 7:00 on February 5)
Unit 3	O.P.+ 3,024 mm (11mm decrease since 7:00 on February 5)	O.P.+ 2,938 mm (6mm decrease since 7:00 on February 5)	O.P.+ 3,246 mm (21mm decrease since 7:00 on February 5)

Unit 4	-	O.P.+ 2,946 mm (4mm decrease since 7:00 on February 5)	O.P.+ 2,973 mm (1mm increase since 7:00 on February 5)
--------	---	--	--

<Monitoring of Radioactive Materials>

Nuclide Analysis of Seawater (Reference)

Place of sampling	Date of sampling	Time of sampling	Ratio of density limit (times)		
			I-131	Cs-134	Cs-137
Approx. 30m north of Discharge Channel of 1F 5,6 u	2/5	8:25	ND	0.04	0.03
Approx. 330m south of Discharge Channel of 1F 1-4 u	2/5	8:10	ND	0.03	0.02
Around 3,4 u Discharge Channel of 2F	2/5	8:15	ND	ND	0.02

·All 3 major nuclides (I-131, Cs-134 and Cs-137) were ND at 1 point on the coast of Fukushima Prefecture (sampled on 2/5) and .3 points offshore Fukushima Prefecture (sampled on 2/4). 2 measurement points at offshore of Fukushima prefecture were not sampled due to bad weather condition.

<Cooling of Spent Fuel Pools >(As of 11:00 am on February 6)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
Unit 1	Circulating Cooling System	Under operation <sup>*1</sup>	20.5
Unit 2	Circulating Cooling System	Under operation	13.0
Unit 3	Circulating Cooling System	Under operation	28.0
Unit 4	Circulating Cooling System	Under operation	25

\*1: Air fin cooler of Secondary System out of service

[Unit 2]

- A desalination equipment has been activated in order to reduce density of salt from the spent fuel pool since 11:50 on January 19.
- At 10:56 pm on February 4, "Abnormal state (low pressures) in suction pressure of RO high pressure pump" triggered the alarm in the desalting facility for spent fuel pool of Unit 2, and the facility automatically stopped. Because all isolation valves of the system have been closed due to the interlock and the alternative cooling system for spent fuel pool is continuously operated, it does not affect the cooling for the spent fuel pool.
- At 5:35 pm of February 5, the operation of the system was resumed and no abnormality was confirmed. Also, there was no abnormality regarding the RO high pressure pump. We will monitor it continuously.

[Unit 3]

- A radioactive material removal equipment has been activated in order to remove radioactive materials from the spent fuel pool since 15:18 on January 14.
- Because the pool temperature began to increase, at 9:55 am on February 6, we initiated the secondary cooling tower.

<Water Injection to Pressure Containment Vessels > (As of 11:00 am on February 6)

Unit	Status of water injection	Feed-water nozzle Temp.	Reactor pressure vessel Bottom temp.	Pressure of primary containment vessel
Unit 1	Injecting freshwater (Feed Water System: Approx. 4.6m <sup>3</sup> /h, Core Spray System: Approx.2.0 m <sup>3</sup> /h)	24.4	24.5	107.0 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx.6.8 m <sup>3</sup> /h, Core Spray System: Approx.3.6 m <sup>3</sup> /h)	45.5	71.0	110 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx.2.9 m <sup>3</sup> /h, Core Spray System: Approx.6.0 m <sup>3</sup> /h)	41.2	50.1	101.6 kPaabs

[Unit 2]

- On February 2, tendency of temperature rise at the bottom of PCV was observed. Thus, at 7:20 pm on February 3, 2012, we changed the injection amount into Unit 2 reactor through feed water system from approx. 2.9 m<sup>3</sup>/h to approx. 4.9 m<sup>3</sup>/h and changed that though reactor core spray system from approx. 5.8 m<sup>3</sup>/h to approx. 3.8 m<sup>3</sup>/h (which means setting them at those of before flow adjustment on February 1, 2012). After that, we have observed the tendency of temperature at the upper head of the bottom of PCV. Because we found the temperature has risen again (approximate 66.1 at 11:00 pm on February 4), at 12:52 am on February 5, we changed the water injection volume to Unit 2 reactor through the feed water system from approx. 4.8 m<sup>3</sup>/h to approx. 5.8 m<sup>3</sup>/h (the water injection through the reactor core spray system remains approx. 3.8 m<sup>3</sup>/h). The temperature was around 70.0 (approx. 70.3 at 11:00 pm on February 5) and in order to prevent further temperature increase, we decided to increase the amount of water injected to the reactor. At 1:29 pm on February 6, the water injection volume to the Unit 2 reactor through the feed water system was changed from approx. 5.8 m<sup>3</sup>/h to approx. 6.8 m<sup>3</sup>/h (the water injection through the reactor core spray system remains approx. 3.8 m<sup>3</sup>/h). At this moment, temperature indicates approx. 71.6 (as of 4:00 pm on February 6). We will monitor it continuously.

[Unit 4] [Unit 5] [Unit 6] · No major change

<Others>

- October 7, 2011 ~ : Continuously implementing water spray using water after purifying accumulated water of Unit 5 and Unit 6 to prevent spontaneous fire of trimmed trees and diffusion of dust.
- January 11, 2012 ~ : As finding accumulated water including radioactive materials (December 18, 2011) at the trench between Process Main Building of Central Radioactive Waste Treatment Facility and Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building), we started inspection of the other trenches in the site. \*Please refer to the other reference materials for the result of daily inspection.
- At 8:05 pm on February 5, our employee on patrol confirmed the water leakage from valve flange in the outdoor fire protection system piping in Unit 6.
- Around 8:31 pm, the valve for upper stream was closed and leakage was stopped. The water leaked was already processed and there supposed to be no outflow of the water to the sea because there is no drain located near by.
- At around 12:38 pm on February 6, one of our employees found a water leakage from one of the concentrated water tanks. The bolts of the connecting parts were tightened and after that, at 2:03 pm it was confirmed that the leak had stopped. There was some water stream on the surface of the foundation on which the tank is placed but no water has gone into the gutter or the ocean (at 2:45 pm we piled up sandbags for precaution). The radioactivity density of the foundation just below the leaking point was gamma ray: 20mSv/h, beta ray: 250mSv/h. The water that has leaked has been treated by the water desalination facility (Reverse osmosis Membrane), and the amount of leakage

is estimated 0.6 liters.

- From 8:44 am to 1:03 pm on February 6, dust sampling was conducted in the opening of Unit 2 reactor building (blowout panel).
- On February 6, the sampling was conducted on charcoal filter of Unit 2 gas control system.