# Plant Status of Fukushima Daiichi Nuclear Power Station

June 13, 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

- From June 4, radioactive accumulated water treatment system water flow test is underway -> Planned Cesium adsorption Instruments (Kurion) stand-alone commissioning -> Planned Decontamination instruments (AREVA) stand-alone commissioning -> Planned Unite commissioning -> Planned full treatment start-up
- From June 8, Big storage tanks for storage and treatment contaminated water are being transferred and installed sequentially.

◇Treatment status of accumulated radioactive water from trenches vertical shafts and basement level of each buildings

| Unit | Draining water source -> place transferred | Status |
|---|---|---|
| Unit 2 | Unit 2 Vertical Shaft of Trench<br>-> 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 ～) | Increase of water level of Process Main Building:<br>5,515 mm as of 7:00 am, June 13<br>(190 mm increase from 7:00 am, June 12)<br><br>Increase of water level of Miscellaneous Solid Waste Volume Reduction Treatment Building:<br>3,040mm as of 7:00am, June 13<br>(13 mm increase from 7:00 am, June 12) |
| Unit 3 | Unit 3 Turbine Building<br>-> Miscellaneous Solid Waste Volume Reduction Treatment Building of Central Radioactive Waste Treatment Facility (from 6:04 pm, May 17～9:10am, May 25)<br>Unit 3 Turbine Building<br>**->** Process Main Building of Central Radioactive Waste Treatment Facility (3:30pm, June 11 ～ 5:01pm, June 12) | |
| Unit 6 | Unit 6 Turbine Building<br>→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 4:00 pm on June 13) | |

◇Water level at the vertical shaft of the trench and T/B (As of 7:00 am, June 13)

| | Vertical Shaft of Trench (from top of grating to surface) | T/B |
|---|---|---|
| Unit 1 | O.P. below +850 mm (>3,150mm)<br>No change from 7:00 am, June 12 | O.P. +4,920 mm<br>No change from 7:00 am, June 12 |
| Unit 2 | O.P. +3,714 mm (286mm)<br>19 mm decrease since 7:00 am, June 12 | O.P. +3,694 mm<br>15 mm decrease since 7:00 am, June 12 |
| Unit 3 | O.P. +3,824 mm (176 mm)<br>9 mm increase since 7:00 am, June 12 | O.P. +3,810 mm<br>15mm increase since 7:00 am, June 12 |
| Unit 4 | — | O.P. +3,798mm<br>3 mm increase since 7:00 am, June 12 |

- Water level at Unit 1 Reactor Building: as of 7:00 am on June 13, O.P. +4,489mm, 2mm decrease since 7:00 am, June 12
- With regard to Unit 2 and 3, blockage work to the extension of the pit and the pit whose flow path is unclear is underway.
  (Blockage work to the pit related to the outflow incident was completed by June 10.)

* In the material distributed on June 12, there was description “Blockage work to the pit of Unit 2 and 3 was completed on June 10”, but correctly it should be “Blockage work to the pit related to the outflow incident was completed by June 10”. We correct it and apologize for the error.

<Monitoring of Radioactive Materials>

◇ Nuclide Analysis of Seawater (Reference purpose)

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 | Cecium-134 | Cecium-137 |
| Approx. 30m north to Discharge Canal of Units 5 & 6 of Fukushima Daiichi | 6/12 | 9:05/14:00 | ND/ND | 0.60/0.33 | 0.40/0.24 |
| Approx. 330m south to Discharge Canal of Units 1 to 4 of Fukushima Daiichi | 6/12 | 8:45/13:40 | ND/ND | 0.55/0.12 | 0.39/0.17 |
| Around the north Discharge Canal of Fukushima Daini (10km from Fukushima Daiichi) | 6/12 | 9:15 | ND | 0.08 | ND |
| Around Iwasawa Seashore, Naraha Town (approx. 16km from Fukushima Daiichi) | 6/12 | 7:45 | ND | 0.12 | 0.10 |
| Approx. 15km from the offshore of Ukedo River in Namie Town※ | 6/12 | 8:30/8:30 | ND/ND | ND/ND | ND/ND |
| Approx. 15 km from the offshore of Fukushima Daiichi※ | 6/12 | 8:40/8:40 | ND/ND | ND/ND | 0.17/ND |
| Approx. 15 km from the offshore of Fukushima Daini※1 | 6/12 | 8:10/8:10 | ND/ND | ND/ND | ND/ND |
| Approx. 15 km from the offshore of Iwasawa Seashore, Naraha Town※1 | 6/12 | 7:40/7:40 | ND/ND | ND/ND | ND/ND |

| | | | | | |
|---|---|---|---|---|---|
| Approx. 15 km from the offshore of Minamisoma City ※ | 6/12 | 8:10/8:10 | ND/ND | ND/ND | ND/ND |
| Approx. 15 km from the offshore of Hironomachi※ | 6/12 | 7:10/7:10 | ND/ND | ND/ND | ND/ND |

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

<Water Injection and Spraying to Spent Fuel Pools>

◇ Results on June 12: None

◇ Plan and Results on June 12:

Unit 3: 10:09-11:48, Injected freshwater and hydrazine through Fuel Pool Cooling and Filtering System

Unit 4: 16:00-21:00, Plan to inject freshwater and hydrazine by a concrete pumping vehicle

◇ Others

- From May 31, cooling using the circulating cooling system for Spent Fuel Pool, Unit 2 is underway.
  Spent fuel pool temperature (5:00 pm May 31) 70℃ → (11:00 am June 13) 32℃

<Water Injection to Reactor Pressure Vessels>

【Unit 1】Injecting freshwater (reactor feed water system: 5.2 m³/h):

At 11:00am, June 13, <Feed-water nozzle> 113.4℃

<Bottom of reactor pressure vessel>97.7℃

【Unit 2】Injecting freshwater (reactor feed water system:5.1m³/h)

At 11:00am, June 13, <Feed-water nozzle> 108.1℃

【Unit 3】Injecting freshwater (reactor feed water system: 11.2-11.3 m³/h)

At 11:00am, June 13, <Bottom of reactor pressure vessel> 175.9℃

【Unit 4】【Common spent fuel pool】No particular changes on parameters.

【Units 5】【Units 6】Reactor cold shutdown. No particular changes on parameters.

<Injection of Nitrogen Gas to the Primary Containment Vessel of Unit 1 (PCV)>

◇Injection of nitrogen gas

- From 1:31 am, April 7, we started to inject nitrogen gas to PCV using temporary nitrogen generators.
  Primary Containment Vessel pressure: 156.3 (1:20am, April 7) → 132.4kPaabs, (11:00am, June 13) approx. 44,300m³.

<Others>

- Since April 10, we have been clearing outdoor rubbles by a remote control to improve working environment.
- Since April 26, we are continuing to spray dust inhibitor in the site of the power station. (On June 12, no work. On June 13, underway around Main Gate).
- From May 9 to June 6, we commenced preparation work for installing support structure into the bottom of fuel spent pool of reactor building of Unit 4.
- Since June 7, installation and construction of post material made of steel are commenced.
- 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 May 30, we have been installing the circulating seawater cleaning system.
- From approximately 10:00 am on June 13, full operation has been started.
- Since June 3, we have been carrying out restoration woks of port related facilities
- On June 9 Advance inspection of nitrogen injection work to Unit 3 Primary Containment Vessel was implemented (we implemented duct sampling, radiation dose measure by γ camera, etc, within the reactor building)
- On June 10, we entered the area reactor building Unit 4(preliminary survey for installation of circulating seawater purification facility)
- 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 local exhausters.

END