# Plant Status of Fukushima Daiichi Nuclear Power Station

September 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.
- 8/7 16:11 Evaporative Concentration Facility has started full operation.
- 8/19 19:33 We activated second cesium adsorption facility (System B) and started the treatment of accumulated water by the parallel operation of cesium adsorption instrument and decontamination instrument. At 19:41, the flow rate achieved steady state.
- 9/4 19:44 We stopped all of the evaporative concentration apparatuses of water desalination facilities, while desalination (reverse osmosis membrane type) continues.
- 9/12 10:06 Waste liquid discharge pump (B) in the suppression pool water surge-tank (SPT) stopped.
  11:23 We started SPT waste liquid discharge pump (A). After that, we checked the soundness of SPT waste liquid discharge pump (B) and at 11:53 am, restarted SPT waste liquid discharge pump (B) and stopped SPT waste liquid discharge pump (A).
- 9/13 3:58 In order to maintain the water treatment facility, we stopped the cesium absorption instrument and the decontamination instrument.

[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

| Unit | Draining water source → Place transferred | Status |
|---|---|---|
| 2u | ・2u Vertical Shaft of Trench → Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building（High Temperature Incinerator Building] | ・9/13 9:51～ Transferring |
| 3u | ・3u T/B → Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building（High Temperature Incinerator Building] | ・9/11 10:00～ Transferring |
| 6u | ・6u Turbine Building → temporary tanks | ・9/14 No transferring is scheduled. |

| Transfer to: | Status of Water Level （as of 7:00 on 9/14） |
|---|---|
| Process Main Building | Water level：O.P.+ 5,037mm（Accumulated total increase：6,254mm)<br>27 mm increase from 9/13 7:00 |
| Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building) | Water level：O.P.+ 1,907mm（Accumulated total increase：2,633mm<br>266 mm increase from 9/13 7:00 |

◇Water level at the vertical shaft of the trench and T/B (as of 9/14 7:00)

| | Vertical Shaft of Trench (from top of grating to surface) | T/B |
|---|---|---|
| 1u | O.P. <+850mm (>3,150mm), No change since 9/13 7:00 | O.P. +4,920mm, No change since 9/13 7:00 |
| 2u | O.P. +2,826mm (1,174mm), 17mm decrease since 9/13 7:00 | O.P. +2,879mm, 30mm decrease since 9/13 7:00 |
| 3u | O.P. +3,189mm (811mm), 16mm decrease since 9/13 7:00 | O.P. +2,986mm, 12mm decrease since 9/13 7:00 |
| 4u | _ | O.P. +3,033mm, 18mm decrease since 9/13 7:00 |

- Water level at Unit 1 R/B: 9/14 7:00*, O.P. +4,561 mm, 194 mm decrease since 9/8 7:00.
  *After 7:00 on September 8, relevant data could not be collected because of the malfunction of light for water level gauge. Approximately 11:40 on September 13, data collection has been restored after fixing the light.
- Water level at Unit 3 R/B: 9/14 7:00, O.P. +3,047 mm, 8mm decrease since 9/13 7:00.
- Since 9:53 on September 14, we started transferring the accumulated water from the condenser of Unit 1 to the basement of T/B of Unit 1.

<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 5-6U of 1F | 9/13 | 10:45 | ND | 0.28 | 0.26 |
| Approx. 330 m South of 1-4U Discharge Channel of 1F | 9/13 | 10:20 | ND | 0.18 | 0.14 |

*Results of nuclide analysis of seawater, sampled on September 13 at 2 points around the coastal area and 9 points offshore of Fukushima Pref. are all ND for the 3 major nuclides (iodine-131, cesium-134 and cesium-137).

<Cooling of Spent Fuel Pools> (as of 9/14 11:00)

| Unit | Cooling type | Status of cooling | Temperature of water in Pool |
|---|---|---|---|
| 1u | Circulating Cooling System | Operating from 8/10 11:22 | 30.5℃ |
| 2u | Circulating Cooling System | Operating from 5/31 17:21 | 34.0℃ |
| 3u | Circulating Cooling System | Operating from 6/30 18:33 | 32.9℃ |
| 4u | Circulating Cooling System | Operating from 7/31 10:08 | 41℃ |

【Unit 4】 8/20～ We started operation of desalinating facility of the spent fuel pool.
9/14 9:47-12:25 We stopped the operation of desalination facility in order to install electrical dialysis equipment enabling high condensation at the desalinating facility. Alternative cooling of spent fuel pool has been kept operation.
【Common pool】9/14 11:08- we stopped the operation of cooling facilities for common pool because the common pool power center will be moved with the replace of power panel located at the basement of the spent fuel common pool's building.

<Water Injection to Pressure Containment Vessels> (as of 9/14 11:00)

| Unit | Status of injecting water | Temp. of feed-water nozzle | Bottom of reactor pressure vessel | Pressure of Primary Containment Vessel |
|---|---|---|---|---|
| 1u | Injecting freshwater（approx. 3.7$m^3$/h） | 90.0℃ | 84.9℃ | 125.6 kPaabs |
| 2u | Injecting freshwater（approx. 3.7$m^3$/h） | 106.6℃ | 114.4℃ | 117 kPaabs |
| 3u | Injecting freshwater (Feed Water system: approx. 4.0$m^3$/h CS system: approx. 3.0 $m^3$/h) | 105.8℃ | 101.3℃ | 101.5 kPaabs |

【Unit 1】9/13 18:07 we adjusted the amount of water injection to the reactor from approx. 3.6 $m^3$/h to 3.8$m^3$/h.
【Unit 2】9/13 18:07 we adjusted the amount of water injection to the reactor from approx. 3.5 $m^3$/h to 3.8$m^3$/h.
9/14 14:59 we started injecting water to the reactor through core spray system in addition to the water injection through the reactor feed water system.
15:25 we adjusted the amount of water injection through core spray system to approx. 1.0 $m^3$/h. No change in the amount of water injection through the reactor feed water system.
【Unit 4】【Unit 5】【Unit 6】【Common spent fuel pool】 No particular changes in parameters.

<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.
- 6/28～ Main construction work for installing the cover for the reactor building of Unit 1

- 8/10～9/9 Implemented setting up iron framework of the cover for the reactor building of Unit 1
- 9/10 Installment of wall panel for cover of reactor building of Unit1 started.
- 9/14 9:15 – 12:20 gas sampling inside the Primary Containment Vessel of Unit 1 was implemented.
- 9/14 Approx. 12:40, 6 partner company's workers, who maintained water treatment faculties, conducted contamination check of full-face masks when they returned from the work site to 1F's Main Anti-Earthquake Building. As a result, inner side of the filter for 4 out of the 6 workers were confirmed to be contaminated. Later, it is confirmed using whole body counter that the 6 workers have not absorbed contaminated materials inside of their bodies.

END