Plant Status of Fukushima Daiichi Nuclear Power Station

April 10, 2012
Tokyo Electric Power Company

<1. Status of the Nuclear Reactor and the Primary Containment Vessel> (As of April 9 at 11:00 am)

Unit	Status of water injection		Reactor pressure vessel bottom temp.	Pressure of primary containment vessel*1	Hydrogen density of primary containment vessel
Unit 1	Injecting Fresh water	Core Spray System: Approx.1.7 m^3/h Feed Water System: Approx.4.6 m^3/h	24.9 ˚C	107.7 kPa abs	A system:0.00 vol% B system:0.00 vol%
Unit 2	Injecting Fresh water	Core Spray System: Approx.6.0 m^3/h Feed Water System: Approx.3.0 m^3/h	46.8 ˚C	26.64 kPa g	A system:0.20 vol% B system:0.19 vol%
Unit 3	Injecting Fresh water	Core Spray System: Approx.5.2 m^3/h Feed Water System: Approx.1.8 m^3/h	54.6 ˚C	0.29 kPa g	A system:0.21 vol% B system:0.19 vol%

*1: absolute pressure (kPa abs) = gauge pressure (kPa g) + atmosphere pressure (normal atmosphere pressure 101.3 kPa).

【Unit 1-3】・17:00 on April 7…When verifying the plant data, the flow volume of the nitrogen injection line to PCV and RPV was confirmed to be 0 m^3/h. By conducting on-site verification, it was confirmed that nitrogen supply facility (nitrogen gas separator A) was halt due to compressor failure alert. Subsequently, at 17:43, backup nitrogen supply facility (nitrogen gas separator B) was activated and at 17:56, injection of nitrogen to PCV and RVP was recommenced. No significant changes have been confirmed in regard to parameters in connection with PCV of Unit 1-3, density of Hydrogen and monitoring post data.

【Unit 2】・9:55 on April 9…Fluctuation in the volume of water injection to the reactor was confirmed. Therefore, the volume of water injection from feed water system was adjusted from approx. 2.8m^3/h to approx. 3.0m^3/h, and 6.5m^3/h to approx. 6.0m^3/h from core spray system.

<2. Status of the Spent Fuel Pool > (As of April 10 at 11:00 am)

Unit	Cooling type	Status of cooling	Temperature of water in Spent Fuel Pool
Unit 1	Circulating Cooling System	Under operation	15.0 ˚C
Unit 2	Circulating Cooling System	Under operation	15.5 ˚C
Unit 3	Circulating Cooling System	Under operation	15.2 ˚C
Unit 4	Circulating Cooling System	Under operation	26˚C

<3. Status of Water Transfer from the Basement Floor of the Turbine Building etc.>

Unit	Draining water source →	Place transferred	Status
Unit 1	Unit 1 T/B →	Unit 2 Turbine Building	4/7 9:31 – 4/8 9:18 Transferred
Unit 2	Unit 2 T/B →	Central Radioactive Waste Treatment Facility ［Process Main Building］	4/6 10:08 – 4/9 9:21 Transferred
Unit 3	Unit 3 T/B →	Central Radioactive Waste Treatment Facility [Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)]	4/10 13:31 – Being transferred
Unit 6	Unit 6 T/B →	Temporary Tank	4/10 10:00 – 16:00 Transferred

4/10 9:30 – 16:52 Water transferred from On-site Bunker Building to Process Main Building of Central Radioactive Waste Treatment Facility

<4. Status of the Treatment Facility and the Storage Facility > (As of April 10 at 7:00 am)

Facility	Cesium adsorption apparatus	Secondary Cesium adsorption apparatus (SARRY)	Decontamination instruments	Water desalinations (reverse osmosis membrane)	Water desalinations (evaporative concentration)
Operating status	Operation	Shutdown *	Shutdown	Operating intermittently according to the water balance	Operating intermittently according to the water balance

* Cleaning of filter is in progress.

- From June 8, 2011: Large tanks to store contaminated and decontaminated water are transported and installed.
- Around 1:05 am on April 5, 2012: Because the amount of flow which transfer condensed water from the water desalinator (reverse osmosis membrane) to the condensed water storage tank increased, we stopped the operation of the desalinator manually at around 1:10 am considering the possibility of water leakage. In order to prevent water leakage, at around 1:45 am, we closed the valve located before and after the piping (pressure-proof hose) which transfer condensed water from the water desalinator to the condensed water storage tank. TEPCO's employer checked the site and found water leakage from the piping at around 1:50 am. Since the desalinator was stopped its operation and the valve was closed, the employer confirmed that the leakage stopped at around 2:20 am. Because it was confirmed that water leaked from the lagging material of the pressure-proof hose, the employer removed the material, confirming that the pressure-proof horse had been disconnected from the joint flange. Because there was possibility that condensed water amounting to approximately 12 m3 might have flown into sea via the ditch for general water discharge, we conducted sampling of the leaked water, water at the drainage ditch, and seawater around the exit of the ditch for general water discharge which locates around 300 m south from the water outlet ofr Unit 1 – 4. As a result, while gamma nuclide and all beta-radioactivity were detected from the leaked water and water at the ditch, the result was below the detection limit for the seawater around the exit of the ditch, we confirmed. We also confirmed based on the result of the sampling offshore and in the site and so forth that gamma nuclides and all beta-radioactivity were all below the detection limitation. In order to further observe the tendency, on April 6, we conducted sampling survey of the sea water around the outlet of water discharge ditch. As a result, we confirmed that gamma nuclides and all beta-radioactivity were all below the detection limitation. Although the operation of the water desalinator (reverse osmosis membrane type and evaporative concentration apparatus type) was suspended, there is no significant influence to the water injection into the reactor because there are affluent amount of water which has been already desalinated.
- At 9:50 am on April 8, 2012: Considering the situation of water injection to reactor (the water level of temporary RO water storage tank designed to feed buffer tank for water injection to reactor), water desalination (reverse osmosis membrane type) were activated in order to treat water inside the waste RO supply tank. We confirmed before activating the said system that every hoses between concentrated water feed pump discharge and RO concentrated water storage tank were replaced to polyethylene pipe and that no leakage is detected.
- At 9:43 pm on April 8, 2012: After completing the treatment of water inside the waste RO supply tank, water desalination (reverse osmosis membrane type) was suspended. Since enough desalinated water has been maintained, there will be no concern in regard to water injection to reactor due to suspension of water desalinations (reverse osmosis membrane type and evaporative concentration apparatus type).
- At 9:52 pm on April 9, 2012, as series of countermeasures* regarding this leakage were finalized, we started water desalinator (reverse osmosis membrane) to recommence the treatment of accumulated water. At 9:48 am on April 10, the second cesium adsorption apparatus started and reached the normal operation flow (40.0 m^3/h) at 9:50 am on the same day. Desalinator (reverse osmosis membrane) will be operated intermittently considering the water balance.

* Series of countermeasures

- Setting of absorbent to the leaking point. Setting of sandbags to the connecting point of U-drainage ditch and general water discharge
- Collection of accumulated water in the drainage and cleaning, and collection of cleaning water.
- Setting of sandbags along with the transfer line from suppression pool water surge tank (SPT) to desalinator (reverse osmosis membrane) to prevent expansion the leakage (SPT building side, slope, drainage, around manhole).
- Hose from outlet of condensed water feed pump to RO condensed water pool was replaced with the polyethylene pipe (the line which is currently used for the desalination).

<5. 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.
- February 23, 2012~: Test of drawing water in the Unit 6 sub drain to the temporary tank through the temporarily storage tank was implemented.
- March 6, 2012~: Test of drawing water in the Unit 5 sub drain to the temporary tank through the temporarily storage tank was implemented.
- March 14, 2012~: In order to prevent the diffusion of ocean soil, we started the full-scale covering work of seafloor by solidification soil (covering material).

END