Plant Status of Fukushima Daiichi Nuclear Power Station

November 25, 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 of radioactive material removal instruments started.

・6/24 12:00 Start of desalination facilities operation

・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.

・11/25 Water treatment facilities suspended at 6:30 to switch the power source of oukuma 2 line movable transformer. Cesium adoption apparatus resumed after switching power source to oukuma 3 line at 12:37. (1st Cesium adoption apparatus at 15:00, 2nd Cesium adoption apparatus at 17:00)

*power source switched after the oil leak recovery work of oukuma 3 line movable transformer B.

・11/25 10:20 Water leak detected at the pipe arrangement between desalination facility and buffer tanks due to the vent valve open. Water leak stopped after closing the valve. It is assumed that the valve was opened in the construction of attaching lagging material to the pipe.

10:30 Water leak detected at the pipe arrangement between desalination facility and buffer tanks. At 10:57 transfer pump suspended for the recovery work. At 12:45 water leak detected at other two points. At 14:10 transfer pump resumed after the recovery work. No impact to the water injection to the reactor because of plenty freshwater stock.

*radioactivity density of leaked water was below measurable limit.

[Storage Facility]

・6/8～ 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
Unit 1	・Unit 1 T/B → Unit2 T/B	・From 2:54 pm on November 25 - Transferring
Unit 2	・Unit 2T/B→Central Radioactive Waste Treatment Facility［Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator Building)］	・From 9:10am on November 10 - Transferring
Unit 3	・Unit 3T/B→Central Radioactive Waste Treatment Facility［Process Main Building］	・From 9:25am on November 15 - Transferring
Unit 6	・Unit 6T/B→Temporary tanks	・No plan for transfer on November 25

Place transferred	Status of Water Level (As of November 25 at 7:00)
Process Main Building	Water level: O.P.+ 1,962 mm(Accumulated total increase:3,179 mm) 116mm increase since 7:00 on November 24
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator	Water level: O.P.+ 1,961 mm(Accumulated total increase:2,687 mm) 10mm decrease since 7:00 on November 24

Building)	

・11/24/ 9:31～17:05 transfer from on-site bunker building to process main building.

◇Water level of the vertical shaft of the trench, T/B and R/B(As of November 25 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on November 24)	O.P.+ 3,874 mm (33mm increase since 7:00 on November 24)	O.P.+ 4,197 mm (33mm decrease since 7:00 on November 24)
Unit 2	O.P.+ 3,003 mm (19mm decrease since 7:00 on November 24)	O.P.+ 3,018 mm (16mm decrease since 7:00 on November 24)	O.P.+ 3,129 mm (15mm decrease since 7:00 on November 24)
Unit 3	O.P.+ 3,283 mm (8mm decrease since 7:00 on November 24)	O.P.+ 3,047 mm (21mm decrease since 7:00 on November 24)	O.P.+ 3,259 mm* (20mm decrease since 7:00 on November 24)
Unit 4	－	O.P.+ 3,058 mm (8mm decrease since 7:00 on November 24)	O.P.+ 3,063 mm (17mm decrease since 7:00 on November 24)

<Monitoring of Radioactive Materials>

Nuclide Analysis of Seawater(Reference) ※Since Oct 24, an approach to decrease the detection limits of radioactivity density was started.

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, 1F	11/24	8:50	ND	0.09	0.08
Approx. 330m South of Discharge Channel of 1-4U, 1F	11/24	8:30	ND	0.02	0.02
Discharge Channel of 3-4U, 2F		8:25	ND	0.02	0.01
Approx. 7km South of Discharge Channel of 1-2U, 2F		8:00	ND	ND	0.01

・The major three nuclides (Iodine-131, cesium-134, 137) were not detected in the samples taken at 2 seashore point on Nov 23 and 5 offshore point on Nov 22 in Fukushima prefecture.

<Cooling of Spent Fuel Pools > (As of November 25 at 11:00)

Unit	Cooling type	Status of cooling	Temperature of water in Pool
Unit 1	Circulating Cooling System	Under operation(11:22 on August 10 -)	17.5 ℃
Unit 2	Circulating Cooling System	Under operation(17:21 on May 31 -)	19.3 ℃
Unit 3	Circulating Cooling System	Under operation(18:33 on June 30 -)	18.5 ℃
Unit 4	Circulating Cooling System	Under operation(10:08 on July 31 -)	27℃

【Unit 2】・11/6～ We started operation of radioactive material decontamination instrument of spent fuel pool.

【Unit 6】・11/15～23 Cleanup work in order to prevent performance deterioration of pump caused by inletting sand or other materials piled up at the bottom of pump room of intake channel was implemented. Immediately after restarting Equipment Water Cooing System (A) at 5:00 pm on Nov.23, it stopped automatically. The cause is still under investigation. Until the pump for the system resumes its operation, reactor and spent fuel pool will be cooled alternatively by Residual Heat Removal System (A).

・11/24 At 10:23 am, due to the automatic shutdown of Auxiliary Seawater Cooling System (A) pump,

we shutdown Heat Removal System (A) pump and changed its operation method. At 10:41 am, the cooling down of Spent Fuel Pool by way of Heat Removal System (A) pump started (the water temperature of nuclear reactor was 26.4℃, and that of Spent Fuel Pool was 30℃ at the time of operational method change). As a result of checkups of the pump except for the power panel switchgear that we are unable to check without overhauling, since we identified no abnormality, the pump resumed at 4:19 pm after a workout to resume by replacing the power panel switchgear. After that at 4:35 pm, as there was no abnormality we resumed cooling down the Spent Fuel Pool water by using the pump (SFP water temperature: 23.5 ℃ at the time of resumption). Since 10:23 on November 24, as for the water residual heat removal system (A) pump that has been shutdown to cool down the water of nuclear reactor, we, by changing method, resumed operation. (nuclear reactor water temperature: 33.4 ℃ at the time of resumption).

<Water Injection to Pressure Containment Vessels >(As of November 25 at 11:00)

Unit	Status of injecting water	Feed-water nozzle Temp.	Reactor pressure vessel Bottom temp.	Pressure of primary containment vessel
Unit 1	Injecting freshwater (Feed Water System: Approx. 5.0 m^3/h)	39.5℃	40.4℃	117.3 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx. 2.8 m^3/h, Core Spray System: Approx.5.5 m^3/h)	65.7℃	70.0℃	110 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx. 2.0 m^3/h, Core Spray System: Approx.6.9m^3/h)	57.0℃	66.8℃	101.6 kPaabs

Unit 1 PCV pressure under investigation due to error figure.

【Unit 1】【Unit 2】【Unit 3】

・10/28 After regular operation of the gas control system for PCV, Unit 2, since a relatively high density hydrogen was detected on October 29, we are intending to control the hydrogen density below the inflammable limit (4%) even if there is no steam, by directly including nitrogen into the RPV for Units 1 to 3.

・11/24 As it will take time until we finish including nitrogen into RPV, in order to tentatively increase the steam ratio by raising the temperature in RPV, we lowered the amount of water injection into the reactors.

- Unit 1: At 7:03 pm, the injection amount by the feed water system decreased from 5.5 m3/h to 5.0 m3/h.
- Unit 2: At 7:11 pm, the water injection amount by the reactor core system decreased from 7.2 m3/h to 5.6 m3/h. (the injection of feed water system is continuing at 2.9 m3/h)
- Unit 3: At 7:19 pm, the water injection amount by the reactor core system decreased from 8.5 m3/h to 6.7 m3/h. (the injection of feed water system is continuing at 2.3 m3/h).
  At 7:09 pm, as the amount of nitrogen included was smaller than that of Units 1 and 2, the amount increased from 14 m3/h to 28.5 m3/h.

【Unit 4】【Unit 5】【Unit 6】 No particular changes in parameters.

<Others>

・10/7～ 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.

End