

<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.
- 11/23 9:56 Alarm occurred indicating high pressure of treated water at desalination plant (RO) unit 2-2, and the unit stopped automatically. We are now investigating the reason of this incident.
The same incident occurred at this unit on November 18. Since we checked the unit on site and confirmed there is no trouble, we remove the discharged water in drain line at exit side of the Unit and reset the alarm. At 14:00 on November 22, we restarted the unit and was checking the operation of the unit
11:58 We started operation of desalination plant (RO) unit 3-1
- 11/23 about 12:15 When we started desalination plant (RO) unit 1A and 1B to check whether water flows the system properly or not, we found exit side of piping of the units broke and leakage of treatment water in dam, and so we immediately stopped operation of the units. The amount of leakage from unit 1A and 1B are about 14 liters and 15 liters respectively, and now it already stopped leaking. We are now investigating the reason of this incident. There is no impact for water injection to the reactor because desalination plant (RO) unit 2-1 and 3-1 are still operating and there are also enough fresh water stock.
- 11/22 ~ 11/23 Replacement for hoses of concentrated water transfer line and fresh water transfer line in desalination plant (RO) of which leakage was found on November 17 was implemented.

[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 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 24

Place transferred	Status of Water Level (As of November 24 at 7:00)
Process Main Building	Water level: O.P.+ 1,846 mm(Accumulated total increase:3,063 mm) 34mm increase since 7:00 on November 23
Miscellaneous Solid Waste Volume Reduction Treatment Building (High Temperature Incinerator)	Water level: O.P.+ 1,971 mm(Accumulated total increase:2,697 mm) 14mm decrease since 7:00 on November 23

Building)	
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· 11/24/ 9:31 Started 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 24 at 7:00)

	Vertical Shaft of Trench	T/B	R/B
Unit 1	O.P. <+ 850 mm (No change since 7:00 on November 23)	O.P.+ 3,841 mm (34mm increase since 7:00 on November 23)	O.P.+ 4,230 mm (19mm decrease since 7:00 on November 23)
Unit 2	O.P.+ 3,022 mm (14mm decrease since 7:00 on November 23)	O.P.+ 3,034 mm (13mm decrease since 7:00 on November 23)	O.P.+ 3,144 mm (15mm decrease since 7:00 on November 23)
Unit 3	O.P.+ 3,291 mm (12mm increase since 7:00 on November 23)	O.P.+ 3,068 mm (13mm increase since 7:00 on November 23)	O.P.+ 3,279 mm* (16mm increase since 7:00 on November 23)
Unit 4	-	O.P.+ 3,066 mm (19mm increase since 7:00 on November 23)	O.P.+ 3,080 mm (12mm increase since 7:00 on November 23)

[Unit 3] · From 10:22 am on November 21 to 9:45 on November 24, transferred accumulated water from the condensate storage tank to basement of turbine building.

<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	11/23	8:50	ND	0.10	0.07
Approx. 330m South of Discharge Channel of 1-4U, 1F	11/23	8:35	ND	0.02	0.02

· The major three nuclides (Iodine-131, cesium-134, 137) were not detected in the samples taken at 2 seashore point on Nov 23 and 8 offshore point on Nov 22 in Fukushima prefecture.

<Cooling of Spent Fuel Pools > (As of November 24 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 -)	17.0
Unit 2	Circulating Cooling System	Under operation(17:21 on May 31 -)	17.7
Unit 3	Circulating Cooling System	Under operation(18:33 on June 30 -)	18.2
Unit 4	Circulating Cooling System	Under operation(10:08 on July 31 -)	25

[Unit 2] · 11/6 ~ We started operation of radioactive material decontamination instrument of spent fuel pool.

[Unit 4] · 11/24 1:31 pm ~ 3:05 pm Hydrazine injection was implemented.

[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 Cooling 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 As the result of shutdown of Equipment Water Cooling System (A) pump, we stopped cooling the reactor through Residual Heat Removal System (A) at 10:23 am. Then, operation method for Residual Heat Removal System (A) was switched. At 10:41 am, cooling for spent fuel pool was started through Residual Heat Removal System (A).

<Water Injection to Pressure Containment Vessels >(As of November 24 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. 5.6 m ³ /h)	39.6	40.4	117.8 kPaabs
Unit 2	Injecting freshwater (Feed Water System: Approx. 2.8 m ³ /h, Core Spray System: Approx.7.2 m ³ /h)	64.5	68.3	111 kPaabs
Unit 3	Injecting freshwater (Feed Water System: Approx. 2.2 m ³ /h, Core Spray System: Approx.8.2m ³ /h)	57.5	66.6	101.5 kPaabs

[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