

**Situation of storing and treatment of accumulated water including highly concentrated radioactive materials at Fukushima Daiichi Nuclear Power Station
(4th Release)**

July 20th 2011

Tokyo Electric Power Company

1. Purpose

This document is to report the following matters in accordance with the instruction of “(Instruction) Regarding installment of treatment facility and storing facility of water including highly concentrated radioactive materials at Fukushima Daiichi Nuclear Power Station of the Tokyo Electric Power Company (NISA No. 6, June 8, 2011),” dated June 9.

<Instruction>

Situation of storing and treatment of the contaminated water in the Power Station and future forecast based upon the current situation have to be reported to NISA as soon as the treatment facility starts its operation. Also, subsequently, continued report has to be submitted to NISA once in a week until the treatment of the accumulated water in the Centralized Radiation Waste Treatment Facility is completed.

2. Situation of storing and treatment of accumulated water in the building (actual record)

Stored amount in each unit building (Unit 1 to 4 (including condenser and trench)), and stored and treated amount in the Accumulated Water Storing Facility (including underpass area close to the High Temperature Incinerator Building), and other related data, on July 19, are shown in the Attachment material-1.

3. Future forecast of storing and treatment

(1) Short term forecast

Water transfer is planned so that the level of the accumulated water in the Unit 1 and 2 building and Unit 3 and 4 building will not exceed OP. 4,000, taking the stored amount in the Accumulated Water Storing Facility and the operating situation of the radioactive material treatment equipment into consideration. Water is transferred to the Process Main Building in principle, by securing the enough capacity for accepting accumulated water in the Process Main Building.

Hence, priority for treatment is placed on the accumulated water in the Process Main Building in order to reserve the capacity for accepting the accumulated water in the building.

Stored amount in each unit building (Unit 1 to 4 (including condenser and trench)), and stored and treated amount in the Accumulated Water Storing Facility (including underpass area close to the High Temperature Incinerator Building), and other related data, forecasted on July 26, are shown in the Attachment material-2.

(2) Middle term forecast

Regarding the accumulated water in the Unit 1 and 2 building and Unit 3 and 4 building, from the viewpoint of reducing the risks of discharging to the ocean and leaking into the groundwater, water transfer is planned with considering the capacity of the Process Main Building, by setting the intermediate target of the accumulated water level in the building at OP. 3,000, for the purpose of keeping enough reserve for the accumulated water level by reaching to OP. 4,000 and keeping the accumulated water level lower than the groundwater level.

Also, treatment of the accumulated water in the Process Main Building is planned taking the situation of installing the middle and low level waste water tanks, and the operation availability and maintenance period of the radioactive material treatment equipment into consideration.

On the other hand, the accumulated water level in the High Temperature Incinerator Building is kept below OP. 4,200, and the transfer is planned when certain amount of store capacity is reserved in the Process Main Building. Treatment of the accumulated water in the High Temperature Incinerator Building is carried out when enough store capacity of the Process Main Building is reserved for accepting the accumulated water in the High Temperature Incinerator Building.

Stored amount in each unit building (Unit 1 to 4 (including condenser and trench)), and storing and treatment situation in the Accumulated Water Storing Facility (including underpass area close to the High Temperature Incinerator Building), forecasted for 3 months, are shown in the Attachment material-3.

Stored amount in each building and the water storage equipment is forecasted to reduce through the transfer and treatment. According to the forecast for 3 months, water levels in the buildings of both Unit 2 and 3 are estimated to decrease to OP. 3,000 in the end of August or later, supposing that there is no change in the water injection amount and no effect of rainfall, although the forecast could vary in accordance with the operation availability of the radioactive material treatment equipment, or other parameters.

Also, the water treated by the radioactive material treatment equipment can be stored in the middle and low waste water tanks, which are currently being installed.

END

Storage and treatment of high level radioactive accumulated water (July 19, 2011)

Lines	
—	High level radioactive water
—	Treated water (saltwater)
—	Treated water (concentrated saltwater)
—	Treated water (freshwater)
—	Freshwater

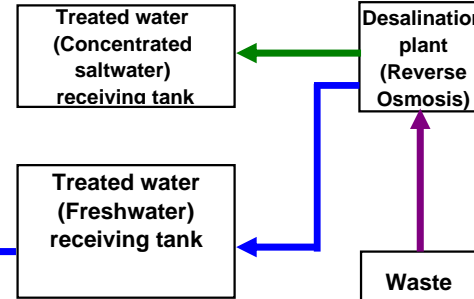
	Stored volume	Change from last report	Storage capacity
Concentrated saltwater receiving tank	14,467m ³	+2,499m ³	28,000m ³
Freshwater receiving tank	1,558m ³ *4	—	5,000m ³

*4 Since desalination plant is operated and the water level is not still, the figure is a reference.

	Chlorine Concentration*3
Before Desalination	8,000ppm
After Desalination	19ppm

*3 Data on July 13

	Volume of water injection to Reactor (July13-July19)	Change from last report
① Freshwater	613m ³	+613m ³
② Treated water (Freshwater)	2,116m ³	▲572m ³
Cumulative volume of treated water	6,710m ³	



	Stored volume	Change from last report	Storage capacity
Wastewater	618m ³	+285m ³	1,200m ³
SPT(B)	928m ³	+21m ³	3,500m ³

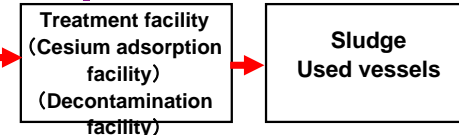
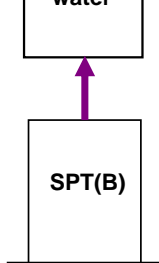
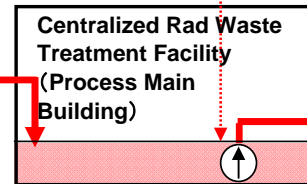
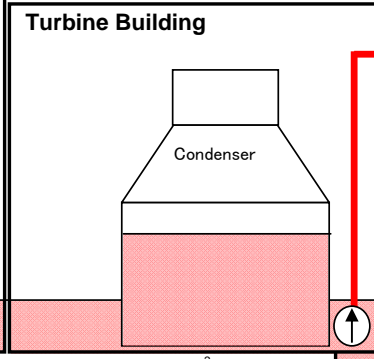
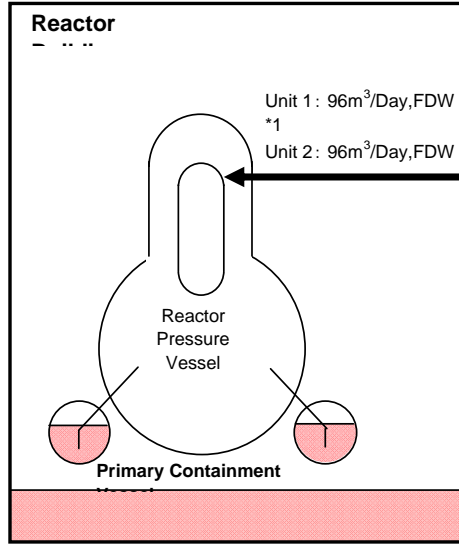
Place for Sampling	Chlorine Concentration *4
Process Main Building	1.7E+06 Bq/cm ³
Outlet of Cesium adsorption facility	5.4E+03 Bq/cm ³
Outlet of Decontamination facility	2.4E+00 Bq/cm ³

*4 Data on July 13

(Notation is data of Cs-...)

Nuclide	DF *5
I-131	< 3.6E+01
Cs-134	5.2E+05
Cs-137	7.1E+05

*5 Data on July 13



*1,*2 7/17 14:25~ Volume of water injection to Reactor is changed from 84m³/day to 96m³/day

Facility	Accumulated volume	Change from last report	Water level in Turbine Building	Transfer to
Unit 1	16,880m ³	▲20m ³	OP.4,929	Process Main Building
Unit 2	26,700m ³	▲400m ³	OP.3,513	
Unit 3	29,700m ³	▲600m ³	OP.3,572	
Unit 4	22,200m ³	▲600m ³	OP.3,589	
Total	95,480m ³			

Storage facility	Accumulated volume	Change from last report	Water level	Treated volume (July 13-19)	Cumulative treated volume	Storage volume	Storage volume	Storage volume
Process Main Building	17,120m ³	+1,530m ³	OP.4,843	4,510m ³	24,250m ³	Sludge	194m ³	+36m ³
HTI Building	4,960m ³	+150m ³	OP.3,525			Used vessels	71	+14
Total	22,080m ³							

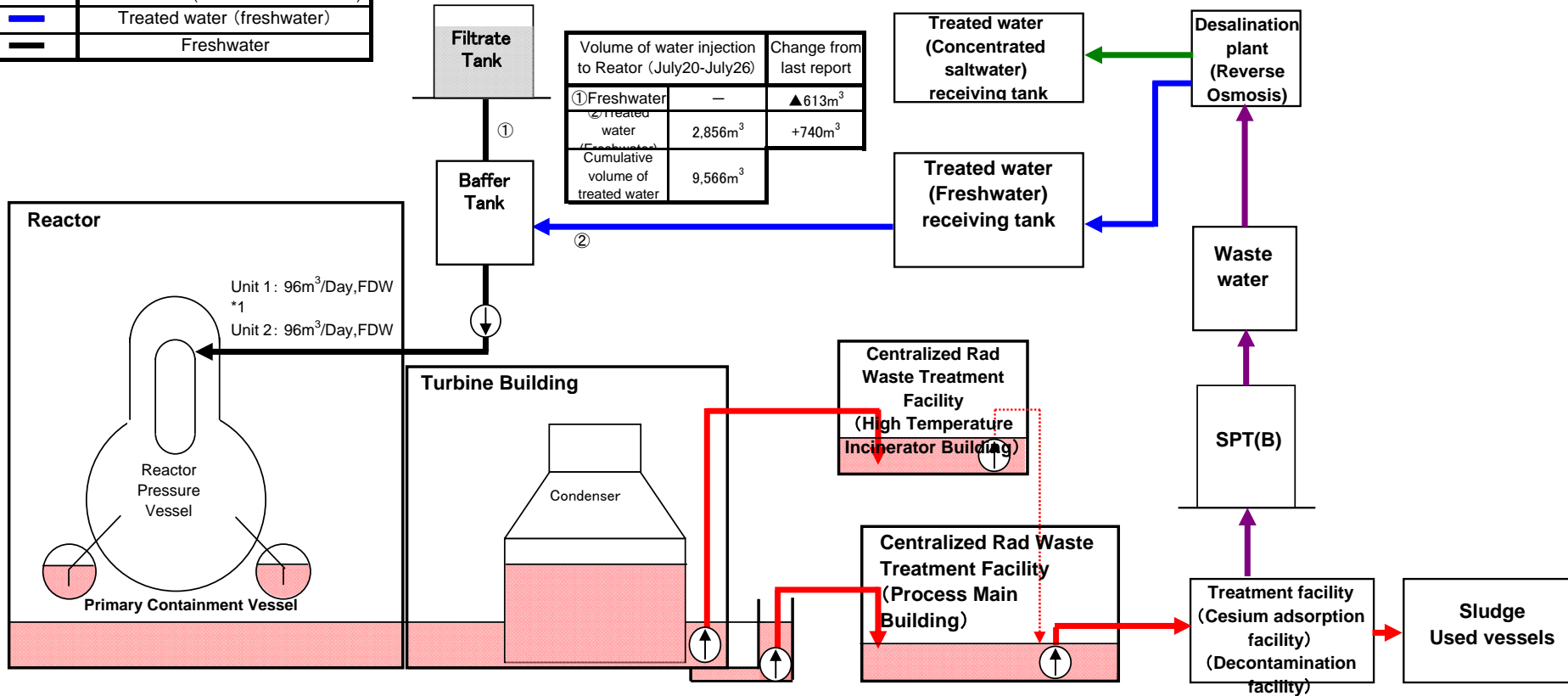
Note
 · Previous report: July 12, 2011
 · On July 14 and 15, filtrate was supplied from Filtrate Tank to Buffer Tank.
 · We continue transfer from Unit 3 to Process Main Building. (As for Unit 3, we stopped transfer because after the treatment facility got wrong and stopped, water level of Process Main Building increased. (Unit 2: 11:03 on July 15- 10:56 on July 16, Unit 3: 11:11 on July 15- 10:50 on July 16))

Storage and treatment of high level radioactive accumulated water (Forecast for July 26, 2011)

Lines	
—	High level radioactive water
—	Treated water (saltwater)
—	Treated water (concentrated saltwater)
—	Treated water (freshwater)
—	Freshwater

	Stored volume	Change from last report	Storage capacity
Concentrated saltwater receiving tank	17,995m ³	+3,528m ³	28,000m ³
Freshwater receiving tank	1,054m ³	▲504m ³	5,000m ³

	Volume of water injection to Reactor (July20-July26)	Change from last report
① Freshwater	—	▲613m ³
② Treated water (Freshwater)	2,856m ³	+740m ³
Cumulative volume of treated water	9,566m ³	

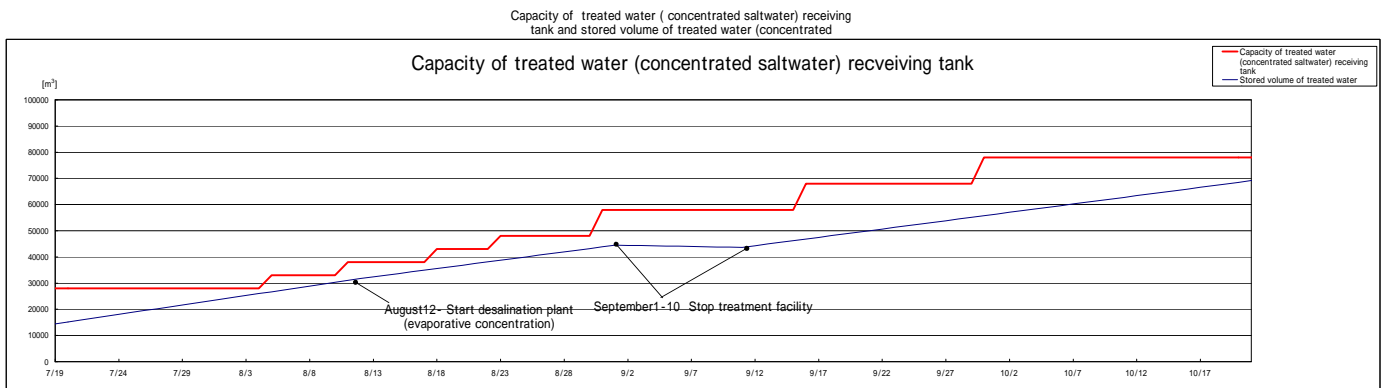
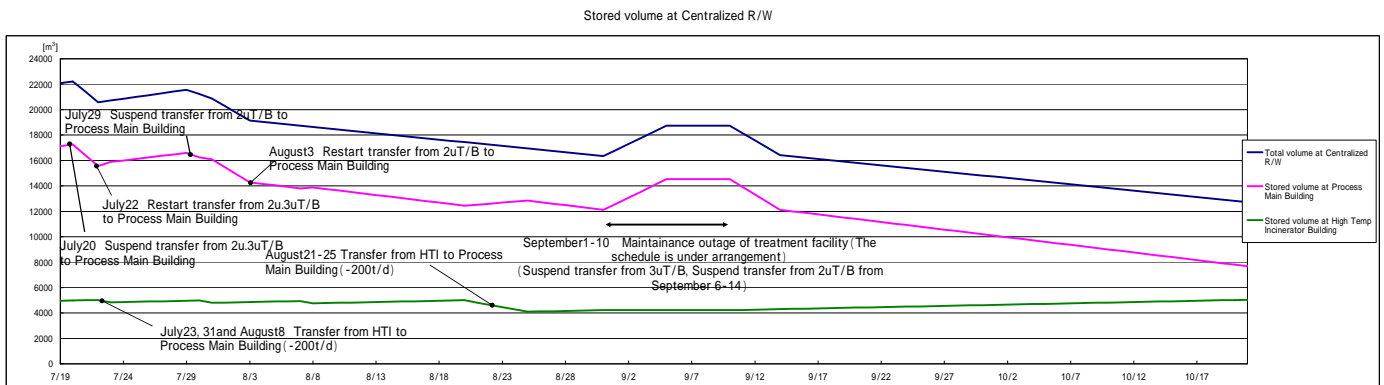
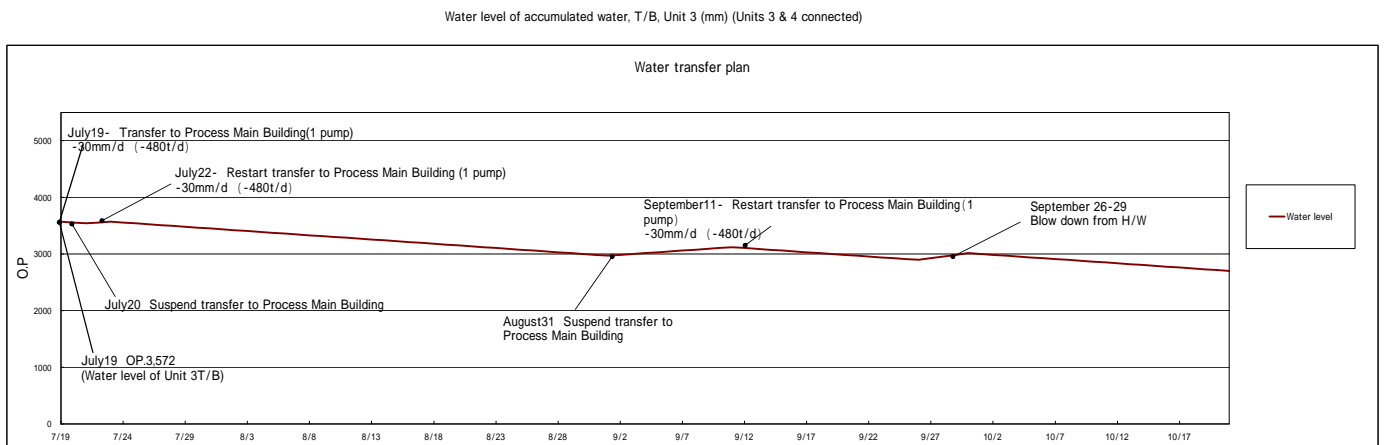
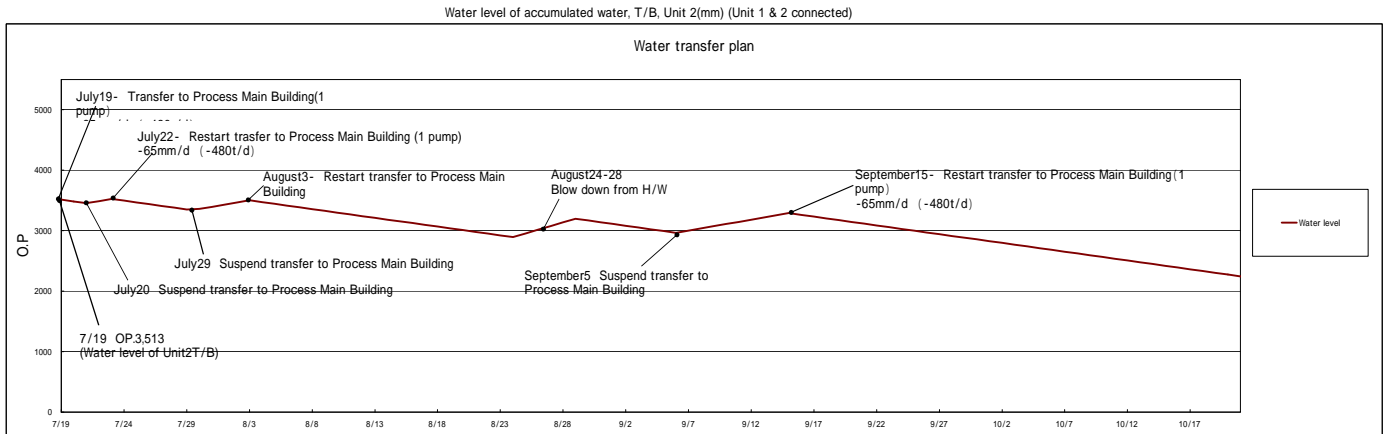


Facility	Accumulated volume	Change from last report	Water level in Turbine Building	Transfer to
Unit 1	16,840m ³	▲40m ³	OP.3,441 (T/B of Unit 2)	Process Main Building
Unit 2	26,200m ³	▲500m ³		
Unit 3	29,400m ³	▲300m ³	OP.3,527 (T/B of Unit 3)	
Unit 4	21,900m ³	▲300m ³		
Total	94,340m ³			

Storage facility	Accumulated volume	Change from last report	Water level	Treated volume (July 20-26)	Cumulative treated volume	Storage volume		Storage volume	Storage volume
						Sludge	Used vessels		
Process Main Building	17,020m ³	▲100m ³	OP.4,816	5,880m ³	30,130m ³	241m ³	85	+47m ³	800m ³
HTI Building	4,910m ³	▲50m ³	OP.3,484			14	192		
Total	21,930m ³								

Note

- We plan to resume transfer from Unit 2 to Process Main Building.
- We plan to continue transfer from High Temperature Incinerator Building to Process Main Building.
- The capacity factor of the Treatment facility is assumed at 70%.



*The assumed operation rate is 70% in July and 90% after August.