# Situation of Storing and Treatment of Accumulated Water including Highly Concentrated Radioactive Materials at Fukushima Daiichi Nuclear Power Station

(28<sup>th</sup> Release)

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## 1. Introduction

This document is to report the following matters in accordance with the instruction of "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 (Instruction) "(NISA No. 6, June 8, 2011), dated on June 9.

# <Instruction>

TEPCO should report to NISA the 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 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 amounts in each unit building (Unit 1 to 4 (including condensers and trenches)), 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, as of January 3, are shown in the Attachment -1.

## 3. Forecast of storing and treatment

# (1) Short term forecast

Water transfer is planned so that the levels of the accumulated water in Unit 1&2 and Unit 3&4 building will not exceed OP. 3,000, based on the stored amount in the Accumulated Water Storing Facilities and the operating situation of the radioactive material treatment equipment. Water is transferred to the Process Main Building and/or High Temperature Incinerator Building as Accumulated Water Storing Facilities.

Treatment is implemented considering the situation of storage and transfer of Accumulated Water Storing Facilities.

We assume stored amounts in each unit building (Unit 1 to 4 (including condenser and trench)),

and stored and treated amount in the Accumulated Water Storing Facilities (including underpass area close to the High Temperature Incinerator Building), and other related data as of January 10, as shown in Attachment -2.

#### (2) Middle term forecast

Regarding accumulated water in Unit 1&2 building and Unit 3&4 building, from the viewpoint of reducing the risks of discharging to the ocean and leaking into the groundwater, it is necessary to keep enough capacity for the accumulated water in the building until its level reaches OP. 4,000 and to keep the accumulated water level lower than the groundwater level.

On the other hand, based on the view of limiting inflow of underwater to buildings and reducing the amount of emerged accumulated water, we are planning to transfer accumulated water keeping its level in the building below OP. 3,000 considering water tank capacity.

As for accumulated water of the Process Main Building and the High Temperature Incinerator Building, we are planning to treat the accumulated water considering the situation of construction of middle and low level waste water tanks, the operating ratio of the radioactive material treatment instruments and duration for maintenance.

We forecast stored amounts in each unit building (Unit 1 to 4 (including condensers and trenches)), and storing and treatment situations in the Accumulated Water Storing Facilities (including underpass areas close to the High Temperature Incinerator Building) for 3 months, as shown in Attachment -3.

Stored amounts in each building and the water storage equipment are forecasted to be unchanged in case transfer and treatment were implemented as scheduled without rain. However, it would be subject to change depending on the operating ratio of the radioactive material treatment instruments and so on.

Also, the water treated at the radioactive material treatment equipment (fresh water and condensed salt water) can be stored in the middle and low level waste water tanks.

END

Attachment-1

#### Storage and treatment of high level radioactive accumulated water (as of January 3, 2012)



Note.

Last report as of Dec 27, 2011

Transferred from Units 2 and 3 to Process Main Building & High Temperature Incinerator Building. (water transfer implemented intermittently for anti-freezing operation and water-level controldue)

• The second cesium adsorption apparatus implemented (operating ratio: 44.6% (previous estimated operating ratio: 50%) (reference))

From Dec 20, the cesium adsorption apparatus suspended.

From Dec 27, the second cesium adsorption apparatus resumed operation.

On Dec 27, the water was transferred from On-site Bunker Building to Process Main Building.



Storage and treatment of high level radioactive accumulated water (assumed situation as of January 10, 2012) Attachment-2

Note:

·Water in Unit 2 and Unit 3 will be transferred to Process Main Building and High Temperature Incinerator Building. (We will start to transfer the water for anti-freezing operation and water-level control)

The second cesium adsorption apparatus will be operated. (Estimated operation ratio is 40%)

The cesium adsorption apparatus will be suspended.

The second cesium adsorption apparatus will be shut down due to filter cleaning (On January 4, the second cesium adsorption apparatus was shut down).



Announc of water treatment is assumed to be 1,020m7 d (it can be adjusted according to level of accomulated water in 17.5.)
Assume 5mm increase per day of accumulated water level of T/B including influences of rainfall in case we consider 3-year-averaged rainfall near 1F

from August to October.

- From mid December pump transfer amount will be changed for anti-freezing of hose.