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, 2011.

<Instruction>
TEPCO should report to NISA the situation of storing and treatment of the contaminated water in the Power Station and the future forecast based upon the current situation has 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 Central Radioactive 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 (Units 1 to 4 (including condensers and trenches)) and stored and treated amounts, and other related data in the Accumulated Water Storing Facility as of March 29, 2018, 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 Units 1 and 2 and Units 3 and 4 building will be maintained around at the level of TP. 1,564, 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 state of storage and transfer of Accumulated Water Storing Facilities.

We assume stored amounts in each unit building (Units 1 to 4 (including condenser and trench)), and stored and treated amounts, and other related data in the Accumulated Water Storing
(2) Middle term forecast

Regarding accumulated water in Units 1 and 2 buildings and Units 3 and 4 buildings, 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 TP. 2,564 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 around TP. 1,564 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 operation factor of the radioactive material treatment instruments and duration for maintenance.

We forecast stored amounts in each unit building (Units 1 to 4 (including condensers and trenches)), and storing and treatment situations in the Accumulated Water Storing Facilities for the next 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 operation factor 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
Storage and treatment of high level radioactive accumulated water (as of March 29, 2018)

Classification
- Strontium-treated water
- Treated water (Concentrated saltwater)
- Multi-nuclide removal equipment
- Receiving tank
- Desalination plant
- Wastewater supply tank
- Treated water storage tank
- Strontium-treated water storage tank
- Concentrated waste liquid storage tank
- Sludge storage tank
- Used vessel
- T.P. storage tank

Table:

<table>
<thead>
<tr>
<th>Facility</th>
<th>Storage volume</th>
<th>Change from last report</th>
<th>Water level in T.P.</th>
<th>Storage capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td>Approx. 4,260m³</td>
<td>-110m³<strong>1</strong></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unit 2</td>
<td>Approx. 9,640m³</td>
<td>-20m³</td>
<td>T.P. 370</td>
<td>-</td>
</tr>
<tr>
<td>Unit 3</td>
<td>Approx. 11,520m³</td>
<td>-50m³</td>
<td>T.P. 351</td>
<td>-</td>
</tr>
<tr>
<td>Unit 4</td>
<td>Approx. 10,680m³</td>
<td>-10m³</td>
<td>T.P. 410</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>Approx. 36,100m³</td>
<td>-110m³<strong>1</strong></td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- **1** The figures of the data are treated as a reference, because the water levels during water transfer are unstable.
- **2** The figures of the storage volume do not include those of the following volumes that have accumulated from the bottom of the tank to the height of so-called “down scale (DS),” where water gauges show 0%.
- **3** The data of the water levels in the Reactor Buildings are the data as of 7 a.m., March 29.
- **4** The figures of “Storage capacity” do not include those of the volumes that have accumulated from the bottom of the tank to the height of so-called “down scale (DS),” where water gauges show 0%.
- **5** Breakdown of the treated amount: Cesium adsorption apparatus (383,630m³)
- **6** Breakdown of the cumulative treated amount: Cesium adsorption apparatus (1,525,430m³)
- **7** Change from last report

**Notes:**
- Water transfer from the Units 1-4 to the buildings (Units 1-4, Centralized radioactive waste treatment facility) and to the treatment facility was conducted whenever necessary.
- Due to other work, water transfer to the buildings (Units 1-4, Centralized radioactive waste treatment facility) was conducted whenever necessary.
- From March 1, operations of the Cesium Adsorption Apparatus has been suspended.
- On February 22, operations of the 2nd Cesium Adsorption Apparatus was resumed. (The availability factor is 42% (previously simulated: 45%).)
- Operations of the 2nd Cesium Adsorption Apparatus have been conducted; the availability factor is 49% (previously simulated: 55%).
- Due to other work, water transfer to the buildings (Units 1-4, the Process Main Building, the High Temperature Incinerator Building) was conducted whenever necessary.

**Main operations that have been conducted during the period from March 22, 2018**
- Water transfer from the Units 1-4 to the buildings (Units 1-4, Centralized radioactive waste treatment facility) and to the treatment facility was conducted whenever necessary.
- Due to other work, water transfer to the buildings (Units 1-4, Centralized radioactive waste treatment facility) was conducted whenever necessary.
- From March 1, operations of the Cesium Adsorption Apparatus has been suspended.
- On March 22, operations of the 2nd Cesium Adsorption Apparatus was resumed. (The availability factor is 42% (previously simulated: 45%).)
Storage and treatment of high level radioactive accumulated water (as of April 5, 2018)

**Classification**
- High level radioactive water/Waste, Concentrated waste liquid
- Strontium-treated water
- Treated water (saltwater)
- Water receiving tank

**Water Injection tank (CST) (buffer tank)**

**Water injection to reactor**

**Multi-nuclide Removal Equipment**

**Treated water (Concentrated saltwater) <receiving tank>**

**Strontium-treated water**

**Evaporative concentration apparatus**

**Reverse osmosis treated water (Freshwater) <receiving tank>**

**Treated water**

**Desalination plant (Reverse osmosis)**

**Wastewater supply tank**

**SPT(B)**

**Treatment facility**

**Cesium adsorption apparatus**

**Decontamination facility**

**Centralized radioactive waste treatment facility**

**Primary Containment Vessel**

**Turbine building**

**Reactor building**

**Reacto Pressure Vessel**

**Condenser**

**Centralized radioactive waste treatment facility**

**Process main building**

**Main operations that are planned to be conducted during the period from March 29, 2018 to April 5, 2018:**

1. Operations of the Cesium Adsorption Apparatus will continue to be suspended.
2. Operations of the 2nd Cesium Adsorption Apparatus will be resumed (assumed availability factor: 25%).
3. Storage capacity of Treated Water will be changed as operations of new tanks started.
4. Breakdown of the treated amount: Cesium adsorption apparatus (383,630m³), 2nd Cesium adsorption apparatus (1,572,530m³).
5. Breakdown of the cumulative treated amount: Cesium adsorption apparatus (383,630m³), 2nd Cesium adsorption apparatus (1,572,530m³).
6. Breakdown of the used vessels: Cesium adsorption apparatus (196), 2nd Cesium adsorption apparatus (196), Storage container (2,263), Treated column (11), Used vessels (208), Filters and so forth (65).

**Table:**

<table>
<thead>
<tr>
<th>Facility</th>
<th>Storage volume</th>
<th>Change from last report</th>
<th>Water level in T/B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td>Approx. 4,260m³</td>
<td>No Change</td>
<td>T.P. 381 (Unit 2 T/B)</td>
</tr>
<tr>
<td>Unit 2</td>
<td>Approx. 9,550m³</td>
<td>+10m³</td>
<td></td>
</tr>
<tr>
<td>Unit 3</td>
<td>Approx. 11,640m³</td>
<td>+20m³</td>
<td>T.P. 392 (Unit 3 T/B)</td>
</tr>
<tr>
<td>Unit 4</td>
<td>Approx. 10,670m³</td>
<td>-10m³</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Approx. 36,120m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Diagram:**

- Water transfer from the Units 1-4 to the buildings (Units 1-4, Centralized radioactive waste treatment facility) and to the treatment facility will be conducted whenever necessary.
- Due to other work, water transfer to the buildings (Units 1-4, Centralized radioactive waste treatment facility) will be conducted whenever necessary.
- Operations of the Cesium Adsorption Apparatus will continue to be suspended.
- Operations of the 2nd Cesium Adsorption Apparatus will be resumed (assumed availability factor: 25%).
- Storage capacity of Treated Water will be changed as operations of new tanks started.

**Footnotes:**
1. The figures of "Storage volume" do not include those of the volumes that have accumulated from the bottom of the tanks to the height of so-called "down scale (DS)," where water gauges show 0%.
2. The figures of the data show the operational limits.
3. The figures of "Storage capacity" do not include those of the volumes that have accumulated from the bottom of the tank to the height of so-called "down scale (DS)," where water gauges show 0%. However, each tank has the capacity that accommodates the amount of the residual water of concentrated saltwater calculated based on that of the water treated through the ALPS and other facilities.
4. The figure of "Residual water" includes the one of the volumes that have accumulated from the bottom of the tanks to the height of so-called "down scale (DS)," where water gauges show 0%. The amount of the residual water of concentrated saltwater is calculated based on that of the water treated through the ALPS and other facilities.
5. Total treated amount of Cesium adsorption apparatus and 2nd Cesium adsorption apparatus: 3,548m³.

<table>
<thead>
<tr>
<th>Storage volume</th>
<th>Change from last report</th>
<th>Storage capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshwater</td>
<td>6,647m³</td>
<td>-57m³</td>
</tr>
<tr>
<td>Treated water</td>
<td>9,253m³</td>
<td>No Change</td>
</tr>
<tr>
<td>Residual water</td>
<td>864,534m³</td>
<td>+4,264m³</td>
</tr>
<tr>
<td>Total</td>
<td>906,900m³</td>
<td>203,000m³</td>
</tr>
</tbody>
</table>

[Image: Reactor and turbine buildings with legends for different areas and facilities]
Simulation Results of Accumulated Water Treatment in Units 1-4 Turbine

Accumulated Water Level in Unit 2 Turbine Building [mm] (Units 1-2 Connected)

Accumulated Water Level in Unit 3 Turbine Building [mm] (Units 3-4 Connected)

Storage Capacity of the CentralIZED Radioactive Waste Treatment Facility

Storage Capacity and Volume of the Concentrated Saltwater Tank

Note:
- The amount of water treated through the 2nd Cesium Adsorption Apparatus is estimated to be 780m$^3$/d (Subject to change depending on the factors such as the levels of water accumulated in T/Bs.)
- "Accumulated Water Levels in Unit 2 and 3 T/Bs" are simulated water levels in consideration of the change of the water levels caused by recent rainfall, inflow of groundwater, etc.
- in the surrounding areas of the Fukushima Daiichi Nuclear Power Station.
- "Accumulated Water Levels in Unit 2 and 3 T/Bs Taking into Account the Rainfall" are simulated water levels which are calculated by adding to the accumulated water amounts which are assumed to increase at the rate 8mm/day when the surrounding areas of the Fukushima Daiichi Nuclear Power Station have the rainfall equal to the average amount of rain which fall for three months from August to October in 2015 to 2017.
- Unit 2 Turbine Building water level is controled by retained water transfer pumps in the Unit 2 reactor building.
- Unit 3 Turbine Building water level is controled by retained water transfer pumps in the Unit 3 turbine building.

Multi-nuclide Removal Equipment has been in operation (under hot test).
Extension Multi-nuclide Removal Equipment has been in operation.
The operations of the other treatment facilities have been suspended.

The residual water of concentrated saltwater which is left at the bottoms of the storage tanks has been being treated.

Water transfer from the Unit1-4 to the Centralized radioactive waste treatment facility will be changeover from the High temperature incinerator building to the Process main building.