

June 4, 2011

Tokyo Electric Power Company

Change in the storage level of waste water transferred to the Process Main Building

1. Summary

In regard with the large quantity of radioactive wastewater at turbine buildings of Unit 2 and 3 (hereafter stated as “high level wastewater”), we decided to urgently transfer it to the Process Main Building and High Temperature Incinerator Building, as we cannot deny the possibility of its leakage (May 15th, 2011 “A report on the transfer to the Main Process Building and High Temperature Incinerator Building”).

After that, based on the prior report; we implemented the transfer to the Main Process Building and High Temperature Incinerator Building. As the water level reached the criterion (the first basement, floor level of the building), and transfer to the High Temperature Incinerator Building intervenes with other works, we suspended the transfer and checked the water level. As a result, the water level at the Main Process Building was stabled, however, it was confirmed that the water level at the High Temperature Incinerator Building tends to be decreasing. From later investigation, it is considered that there is a high possibility of leakage to the adjacent underground corridor, and transfer is being suspended. However, as the amount of high level wastewater at Unit 2 and 3 tends to be increasing, this is to report the result of the consideration to transfer beyond the criterion as stated in the prior report.

2. The summary of modification and the reason

(1) Modification summary

Storage level of the Main Process Building and related matters stated in the prior report will be amended (reference: Exhibit1). Summary of modification is as shown below:

【Main Process Building】

	Before modification	After modification
Transfer Amount	Approx. 10,000m ³	Approx. 11,500m ³
Criteria	Up to the first basement, floor level (OP3700)	Up to the first basement, bottom of penetrated area (OP4200)

(2) Modification reason

The water level of high level wastewater of Unit 2 and 3 tends to be increasing due to injection of water to reactors. To prevent possible leakage to the environment, transfer and storage is being carried out to/at Centralized Radiation Waste Treatment Facility, however, if the transfer is kept suspended longer, the risk of leakage will increase as the water level may increase beyond OP4000, before the Radioactivity Treatment System commences its operation (after June 15th). Therefore, this modification is to reduce the risk of possible leakage by making modifications to the high level wastewater storage level of the Main Process Building.

By making modifications to the storage level regarding the transfer to the Main Process Building as stated above, high level waste water of 1,500m³ can be transferred, and three days can be postponed in regard with the water level of turbine buildings Unit 2 and 3 reaching OP4000. We believe this will reduce the risk of possible leakage.

(3) About the criteria

With regard to the transfer of high level waste water at Unit 2 and 3, priority is put on preventing contamination by not allowing any leakage of high level waste water outside the system.

High level wastewater is transferred from Unit 2 to the Main Process Building basement, and the water level has reached close to the first basement, floor level. The water level is stable (as of May 30th 2011). In transferring beyond the initial criterion, we need to define the new criterion in order to prevent possible leakage outside the system.

For the prevention of leakage from the building, we will use the underground water pressure, and maintain the water level of the building below the water level of underground water. To maintain the necessary water level difference of over 40cm, the daily/seasonal fluctuation of water level of underground (assumed at 50cm) must be taken into account. Therefore, if the water level difference becomes below 90cm, and underground water level is decreasing, we will transfer in a way to decrease water level at the building.

On the other hand, treatment to block water leakage at the penetrated part within and out of the Main Process Building has already been completed. However, taking in account of the fact that there was a leakage from the High Temperature Incinerator Building to the adjacent underground corridor, we will examine the reliability of penetrated area of the Main Process Building. As the water level of the Main Process Building second basement area (water already being stored) is stable, leakage cannot be confirmed regarding this area. However, as it is difficult to completely deny the possibility of leakage at the penetrated area of first basement, storage will be carried

out only up to below the bottom of the penetrated area with adequate margin (OP4200).

(4) Evaluation of retransferring facility

In the prior report, it is stated that “In any rare cases such as water level of turbine buildings of Unit 2 and 3 increases, and there arises a risk of leakage outside the system, transfer up to 90cm below the underground water level is also to be considered. However, in such cases, transfer should only be up to the level where blockage of water leaks is completed, and facility for retransfer shall be prepared in case the underground water level decreases.” (2. Implementation Plan (1) Overview of the transfer plan)

If the criterion of water level at the Main Process Building is modified, the difference of the maximum water level of “the bottom of penetrated area at first basement” (OP4245) and underground water level (OP6510 as of May 31st) is over 90cm (226.5cm), and retransfer to another facility is considered unnecessary even in case we took in account of the 50cm water level fluctuation (daily underground water level fluctuation of 20cm, and seasonal fluctuation).

If we take in account of the evaluation of underground water inflow to the building ($2.7\text{m}^3/\text{day}$), available storing capacity of Granulated Solidification Matter Storage Tank A, C is approximately $1,000\text{m}^3$, and it will be able to receive approximately 370 days.

(5) Radiation protection

The Main Process Building will store high level wastewater up to basement level. The evaluation of radiation dose at the building exterior wall when water is transferred to the basement first level is assumed at $1.1 \times 10^{-2} \text{mSv/h}$, and radiation level is adequately reduced. The airborne radiation has decreased from before the transfer (Maximum 0.9mSv/h) to after the transfer (Maximum 0.3mSv/h). This is considered to be because the origin of the radiation decayed as the time passed, but radiation increase due to the transfer has not been confirmed.

On the other hand, evaluation of radiation dose at the floor within the building when water is transferred to the basement first level is assumed at 1mSv/h , however as radiation dose is expected to be over 100mSv/h in some areas such as near the aperture, it was initially determined that facilities for retransfer is to be prepared in cases where wastewater is to be transferred beyond the first basement level. However, as we are currently modifying the storage level at the Main Process Building in order to reduce the risk of leakage outside the system, and it is difficult to prepare a facility to retransfer the water, we will implement radiation protection by work management. We will prohibit works at first floor, in principle, if wastewater is transferred to the first

basement, and if there is any need of work, we will prevent works near the highly radiated area such as apertures as much as possible, and will make an adequate guideline for radiation protection, follow the guideline, and work with adequate gears.

(6) Securing safety of work

In cases where work is implemented at On-site Bunker Building / Incineration Workshop Building, etc, safety measures are to be implemented taking in account of the possibility of leakage from the Main Process Building and High Temperature Incinerator Building.

Concrete walls (etc) will be used to block high level wastewater flowing from trenches (etc) which has the possibility of leaks, to other buildings. There is a leakage of high level wastewater from the High Temperature Incinerator Building to underground corridor, and in the rare case where wastewater of the Main Process Building leaks into the corridor, the water level of the corridor will increase to the Main Process Building criterion (below OP4200), but is not considered to reach the first basement floors of adjacent Incineration Workshop Building and High Temperature Incinerator Building (OP4200). In addition, the first basement, floor of On-site Bunker Building OP3796) is lower than the Main Process Building criterion (OP4200), however water blockage has been completed at the penetrated areas. Therefore even if there is a leak from the Main Process Building, it is not considered to enter the building.

However, when we implement our work at the Centralized Radiation Waste Treatment Facility, taking in account that high level wastewater is stored nearby; we will strengthen the monitor of the water level and check the leakage, as well as check the radiation level of the working environment, and carefully proceed with the works. If leaks are confirmed, we will check the working environment and suspend the works and the transfer until safety is secured.

END

A list of modifications regarding transfer to the Main Process Building

	Before modification	After modification
2 Implementation Plan (1) Overview of the transfer plan	Transfer amount : Main Process Building Approx. 10,000m ³	Transfer amount : Main Process Building Approx. 11,500m ³
	Criterion : Up to the first basement, floor level	Criterion (Main Process Building) : Up to the first basement, bottom of penetrated area (below OP4200)
(3)Main Process Building leak prevention plan leak prevention plan by underground water monitoring and underground water pressure	(Paragraph 2) ...water level is to be maintained below the first basement level.	(Paragraph 2) ... water level is to be maintained below the first basement, bottom of penetrated area at the Main Process Building, and below the first basement level at High Temperature Incinerator Building
(3) Main Process Building leak prevention plan Securing safety of work	(Paragraph 2) ... if leaks are confirmed, we will suspend the works and the transfer.	(Paragraph 2) ... if leaks are confirmed, we will check the working environment and suspend the works and the transfer until safety is secured.
(4) High Temperature Incinerator Building leak prevention plan Securing safety of work	(Paragraph 2) ... if leaks are confirmed, we will suspend the works and the transfer.	(Paragraph 2) ... if leaks are confirmed, we will check the working environment and suspend the works and the transfer until safety is secured.
(7) Radiation	(Paragraph 1)	(Paragraph 1)

<p>protection</p> <p>-1During storage at the Main Process Building</p>	<p>••• basically, transfer will be done up to first basement, floor level, however, radiation level will be low enough even if transfer is continued up to the first basement, as shown below.</p>	<p>••• transfer will be done up to first basement, bottom of penetrated area, however, radiation level will be low enough even if transfer is continued up to the first basement, as shown below.</p>
<p>Attachment 9 Exhibit 2 Figure 2</p>	<p>(within the flow chart) Water level within the building > OP3700</p>	<p>(within the flow chart) Water level within the building > OP4200</p>