

Implementation Progress Status of Recurrence Prevention Measures for APD Misuse/Disuse

Recurrence prevention measures (Announced on August 27)		Detailed measures (Announced on August 27)	Date on which the measure implementation was started	Verified effectiveness
Before work				
1	Identification of individuals who have an APD	Those who have APD: White Tyvek Those in transit: Blue Tyvek or regular work clothes	August 27, 2012 (Full-scale implementation) October 21, 2012 (Yellow Tyvek for those who do not go to work site but have APD such as truck/bus drivers)	This measure has enabled us to check for APD among those wearing white Tyvek (2 below). Yellow Tyvek has been added in order to clearly identify those who do not go to the work site (wearing blue Tyvek) but have an APD (wearing white Tyvek).
2	Checking for APD for those with white tyvek	Check for APD visually or by touching at the Main Anti-earthquake Building, rest areas and the exit of J-Village.	August 10-27, 2012	Similarly to other measures (1, 4, 5 and 6), TEPCO has been performing the final check for APD before workers go to the work site, which prevented workers without APD from working in the site and APD misuse.
		Check for APD visually or by touching at the main gate of Fukushima Daiichi Nuclear Power Station.	Trial implementation: September 26, 2012 Full-scale implementation: October 1, 2012	
3	Consideration of methods to check for APD externally	Consider methods to check for APD other than doing so by touching for the purpose of reducing burden on workers .	As a result of evaluating a method to check for APD utilizing a detector (which allows for checking without touching), it was found that there is a possibility of malfunction. Since Tyvek with the chest area transparent is planned to be worn by all workers by February 2013 (as mentioned in 5 below), consideration of other methods has been suspended.	
During work				
4	Mutual check for APD, Measures to prevent APD to be left behind	Mutually check for APD	August 16, 2012	Adding mutual check for APD in the basic operations has increased workers' awareness of APD usage and minimized carelessness to a certain extent.
		The person in charge of work is responsible for determining measures to prevent APD to be left behind for each work.	August 27, 2012	Implementing the planned measures and confirming their effectiveness has increased the awareness of APD usage among cooperative company workers (people in charge and regular workers) and contributed to continuous measure implementation.
5	Introduction of Tyvek with the chest area transparent	Require the workers who engage in work for which alarm is set to go off when the exposure dose exceeds 3mSv to wear a Tyvek with the chest area transparent, the expansion of the implementation area is under consideration.	October 15, 2012 The implementation area is to be expanded (Planned to be applied to all employees starting from February 2013)	Checking for APD at work has prevented APD misuse. (As a result of more than 600 random checks performed until the end of December 2012, no issue has been found.)
6	Random check for APD	TEPCO supervisor or a responsible main contractor worker is to perform random check when visiting the work site	August 16, 2012	
After work				
7	Radiation dose comparison between APD and glass badge	TEPCO to perform comparison between APD and glass badge, evaluation of variation in radiation dose, cooperative company to check for peculiar data.	Check of data obtained during the period from November 2011 to June 2012: Started in July 2012 August 31, 2012: Reported to the Ministry of Health, Labour and Welfare Check of data obtained in July 2012 and later: Ongoing	These measures are evaluated to be effective since checking the APD data can serve as a trigger for finding similar noncompliances (though no such noncompliance has actually been found).
8	Daily check of APD data	Comparison between APD data and work records of the same person	August 22, 2012	
Measure to prevent loss of APD				
9	Abolishment of clip-on APD	APD allowing to be hung from the neck is to be used instead of the clip-on APD formerly used which can be easily dropped.	August 23, 2012	This measure has been effective to prevent APD from dropping off. (No such case has been reported so far.)
Measures to foster awareness of proper APD usage				
10	Enhanced education on radiation protection	Emphasize the importance of proper APD usage for understanding the actual radiation exposure dose.	August 6, 2012	Providing education on radiation protection has allowed workers to smoothly understand the importance of APD usage. Considering that providing details of APD misuse cases may lead to occurrence of other similar issues, we decided not to revise the textbook or distribute special handouts (Emphasize was put on the importance of proper APD usage while using the existing textbook).
11	Investigation on cases of APD misuse	Perform a survey on APD misuse	Summarized on August 27, 2012	No APD misuse has been reported. The purpose of these measures is to hear and understand the actual condition of the work site.
		Accept APD misuse cases at the consultation center	August 27, 2012	
		Continue surveys targeted for all workers	Survey (on topics except for APD) will be performed on all employees in September. After the results are summarized, a survey on APD usage is planned be conducted.	
12	Informing workers on the importance of APD usage	Put up posters	August 18-27, 2012	These measures served to foster awareness of APD usage which in turn made other measures to be more effective.
		Managers to remind workers to put on APD	August 20-22 and 27-29 3 days per month later on (until March 2013)	
		Reminder using recorded voice	September 3, 2012	This measure was implemented as a kick-off of APD misuse recurrence prevention measure implementation. There is no need to repeat this particular measure considering that the overall effectiveness of APD misuse prevention measures has been confirmed.
		Distribute beverage with a sticker attached	Distributed on August 20, 2012, Completed on August 22, 2012	
13	Informing workers on more severe punishment for APD misuse	Inform workers that worker registration will be cancelled in the case that APD misuse is found.	August 28, 2012	These measures are evaluated to be effective for preventing APD misuse.
		Stipulate the toughened rules in the radiation control specification.	Became effective on August 28, 2012	