Revised

<Reference>
December 6, 2013
Tokyo Electric Power Company

Measuring Radiation Dose at the Lower Part of Unit 1 and 2 Exhaust Stack in Fukushima Daiichi NPS

東京電力 TEPCO

Plan for measuring radiation dose

■Purpose

The results of examining photos taken with a telescopic camera revealed some damages on a part of diagonal bracings of Unit 1 and 2 exhaust stack.

In order to disassemble and reinforce the exhaust stack in future, radiation dose near the pipe joint part of the emergent gas treatment system (hereinafter referred to as “SGTS”) at the bottom part and the distribution of radiation dose in the height direction will be investigated, for the radiation dose near the pipe joint part was high, and the distribution of radiation dose at the upper part of exhaust stack was not investigated yet.

■Measuring points

- Exhaust stack lower part: At 5 points near SGTS pipes

  (Already completed on November 21 and 22)

- Exhaust stack upper part: At every approx. 10-meter distance within approx. 50m from the ground

  (Detailed measurement plan and time under scheduling)

Overview of measuring the radiation dose

■Measuring date:　On November 21 and 22, 2013

■Measuring points:

(1)Joint part between SGTS pipe and exhaust stack　(Measuring point 1: GL approx. 0.8m)

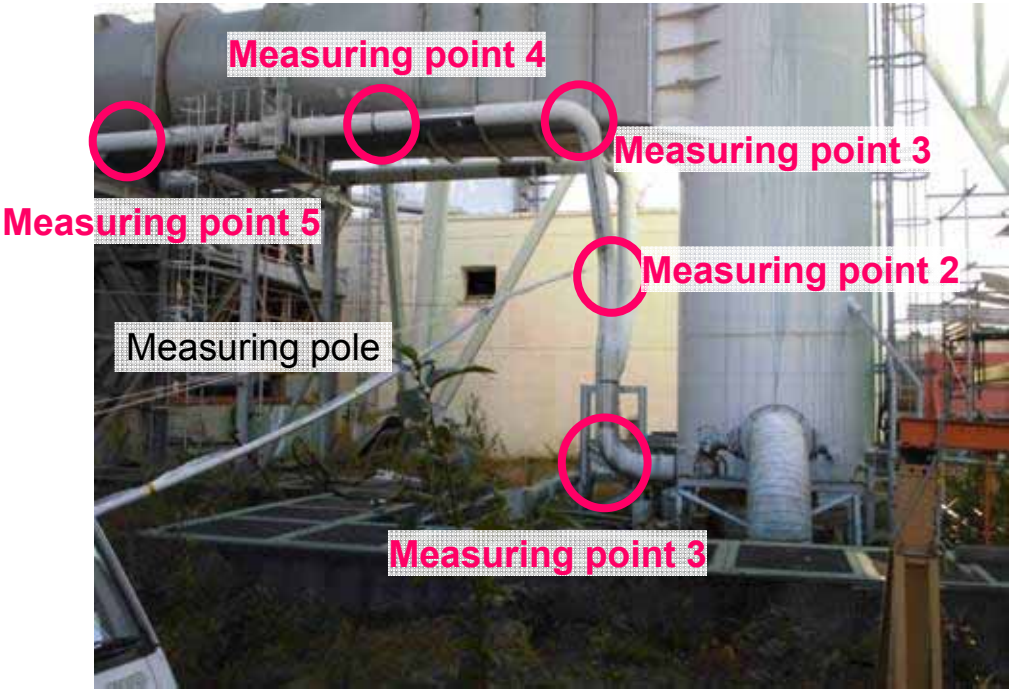
(2)Vertical part of SGTS pipe (Measuring point 2: GL approx. 4m)

(3)3points of horizontal part of SGTS pipe　(Measuring point 3, 4, and 5 GL approx. 7m)

■Measuring method:

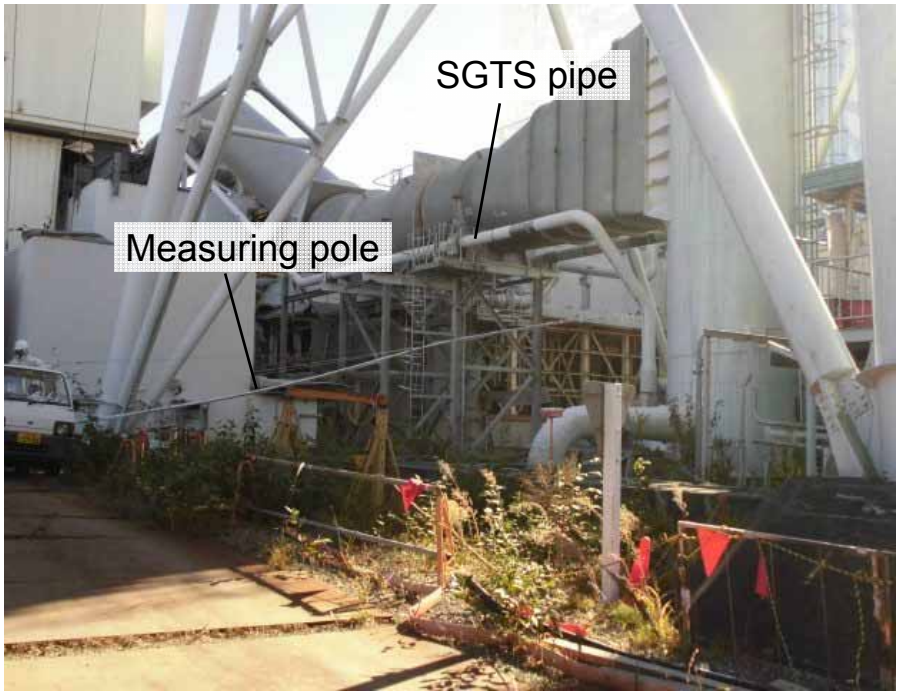
・Park a track vehicle installed a pole equipped with a dosimeter on the tip, on the north of Unit 1 and 2 exhaust stack

・Measure the atmosphere radiation dose using a measuring pole equipped with a dosimeter



Measuring points

* The photo is replaced on Dec. 6, 2013.

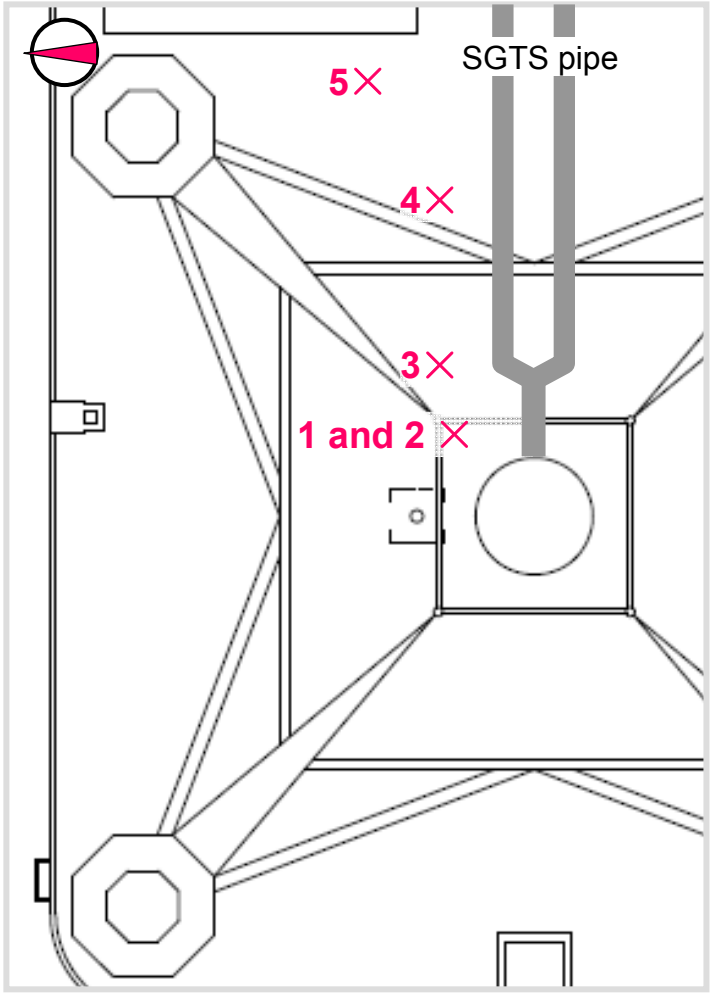


Measuring under implementation

Results of measuring the radiation dose rate

The highest value measured was 95mSv/h, 1.5m away from the measuring point 1.

Point number	Name of the point	Distance from measuring location pipe	Atmosphere radiation dose at measuring location
1	SGTS pipe joint part*1	1.5m	95 mSv/h
		2.8m	59 mSv/h
		2.9m	46 mSv/h
		3.9m	22 mSv/h
2	SGTS pipe vertical part	1.6m	48 mSv/h
3	SGTS pipe horizontal part (1)	0.5m	47 mSv/h
4	SGTS pipe horizontal part (2)	0.6m	54 mSv/h
5	SGTS pipe horizontal part (3)	2.7m	19 mSv/h



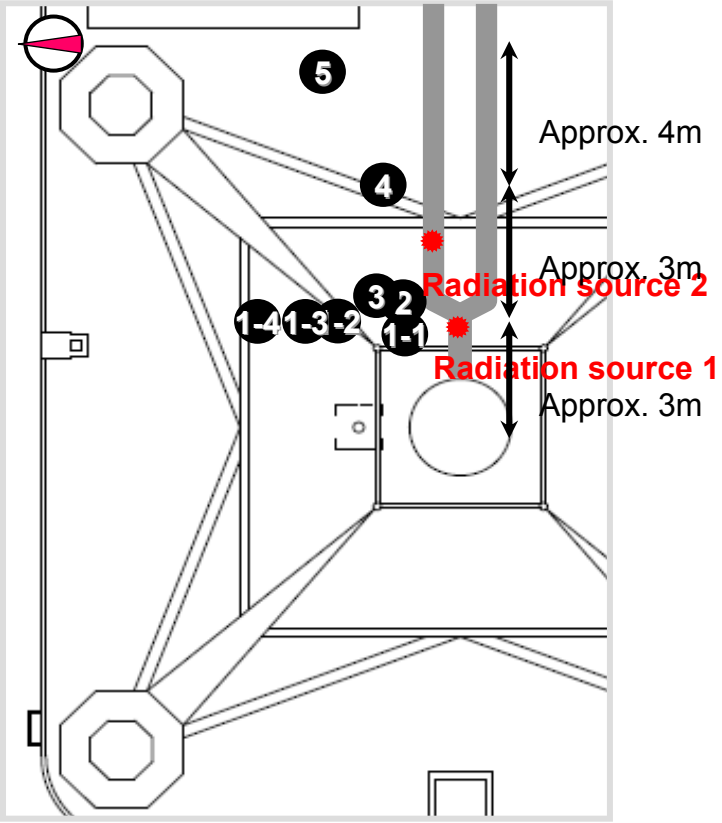
*1 We measured at the measuring point 1 several times, where we found a value higher than10Sv/h in August, 2011.

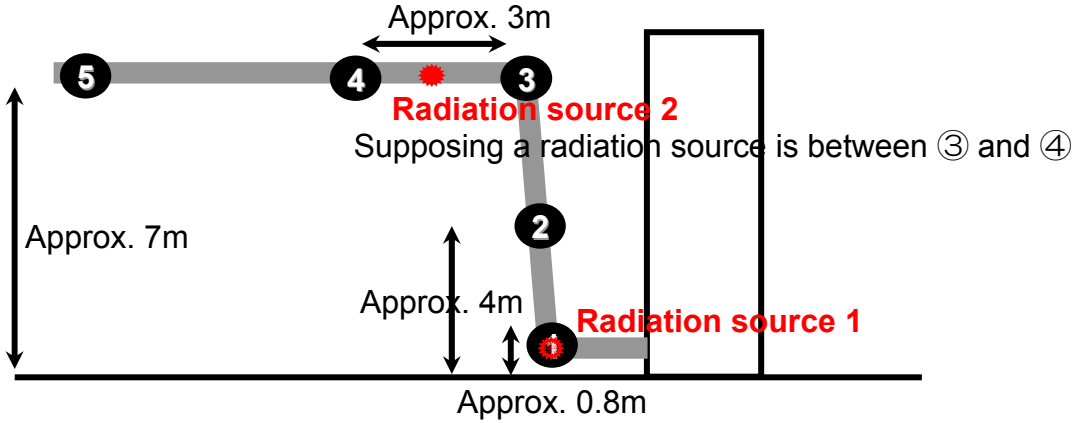
☐As a safety measure, we adjusted the bottom part of Unit 1 and 2 exhaust stack, to “No entrance” area, using ropes and barricades.

☐As soon as ready in future, we will measure radiation dose at the upper part of exhaust stack, and then examine reinforcement and disassembly of exhaust stack.

Estimated dose rate at radiation source

- ☐The measurement results at around the SGTS pipe published on August, 2011 and the images via γ camera imply that SGTS pipe joint part, the horizontal part, and the exhaust stack drainage pipe have high dose rate
- ☐Of those points, we suppose a radiation sources of atmosphere dose rate (measured this time) are SGTS pipe joint part (radiation source 1) and the horizontal part (radiation source 2), and we evaluated dose rate on the ground surface, supposing those two points are point radiation source.
- ☐As a result, we estimate that the dose rate is respectively approx. 25Sv/h on the ground surface at radiation source 1, and approx. 15Sv/h on the ground surface at radiation source 2.





	Distance from radiation source 1 (m)	Distance from radiation source 2 (m)
①-1	1.5	6.7
①-2	2.8	7.1
①-3	2.9	7.1
①-4	3.9	7.6
②	3.6	3.9
③	6.2	2.1
④	6.9	1.2
⑤	8.2	2.9