

<Reference>

# Results of Survey on the PCV Penetration Vicinity at High Places in the 1st Floor of Unit 2 Reactor Building at Fukushima Daiichi Nuclear Power Station

July 24, 2013

Tokyo Electric Power Company

# 1. Outline of Survey Results

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## ◆ Purpose

To obtain atmosphere dose rates and information on presence of obstacles in the upper space and around PCV penetrations at high places in the Unit 2 Reactor Building's 1st floor through a survey using a robot, and apply the results in developing measures for R/B interior dose-rate reduction and work plans for PCV investigation and repairing.

## ◆ Survey coverage

Survey on the PCV penetration vicinities at high places in the 1st floor of Unit 2 Reactor Building

- Dose rate measurement, and visual verification (conditions of obstacles)

## ◆ Machines used

1 high-access survey robot and 1 PackBot

## ◆ Implementation unit

9 TEPCO employees (5 at Main Anti-Earthquake Building and 4 on site), and 5 cooperative company employees (2 at Main Anti-Earthquake Building and 3 on site)

## ◆ Survey schedule

July 23 (Tue.), 2013	12:09	Entry of the robot into R/B
	15:06	Retreat of the robot from R/B

## ◆ Radiation exposure

Worker: 0.74mSv (Largest; Planned dose was 2.0mSv)

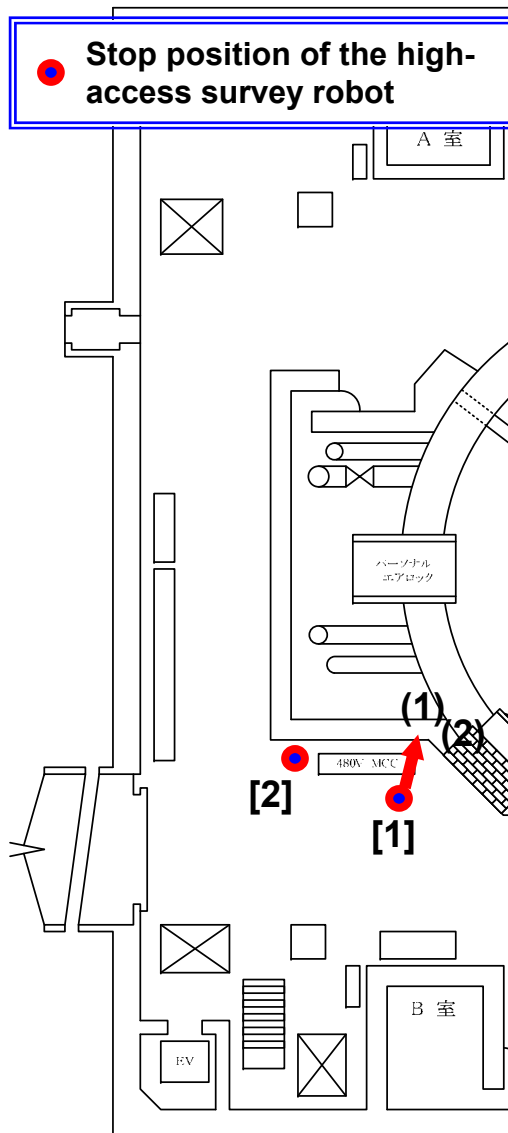
High-access survey robot: 43.9mSv    PackBot: 46.3mSv



[High-access survey robot](#)

## 2. Survey Results (Visual Verification)

### – Upper Part of the Personal Airlock Room –

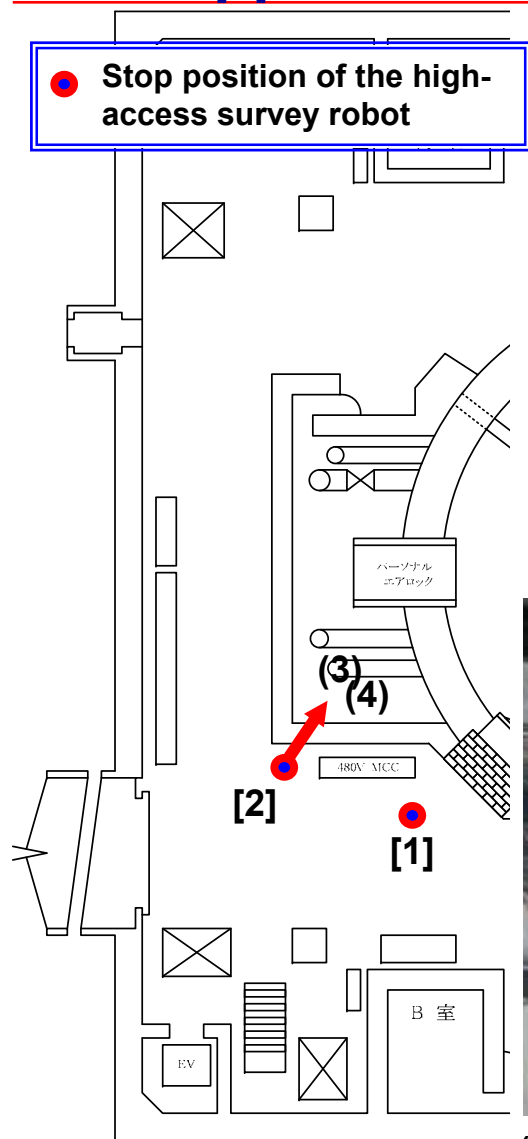


(1) Picture point [1] Upper part of the personal airlock room (4.4m above the floor)



(2) Picture point [1] Upper part of the personal airlock room (4.7m above the floor)

### 3. Survey Results (Visual Verification) – Upper Part of the Personal Airlock Room –



(3) Picture point [2] Upper part of the personal airlock room (5.6m above the floor)

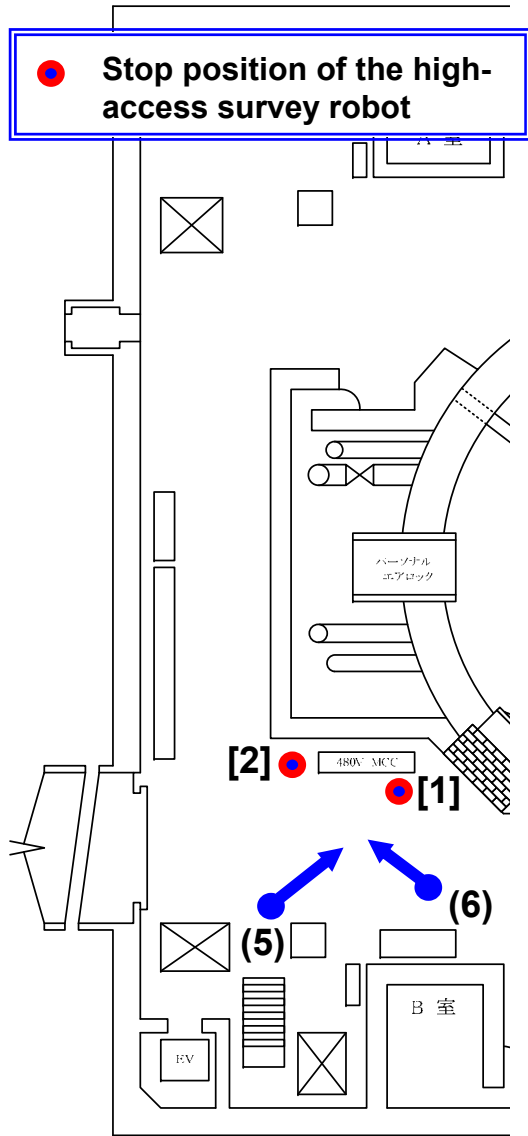


(4) Picture point [2] Upper part of the personal airlock room (5.2m above the floor)

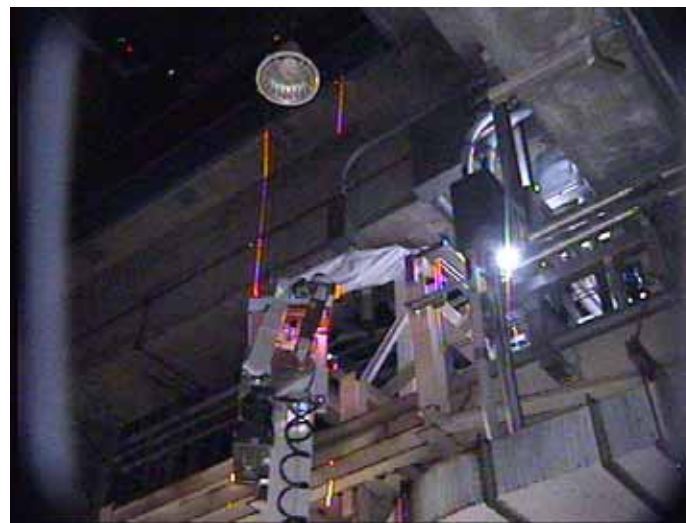


Enlarged image of the left photo (indicated in a red circle)

# 4. Survey Condition (Camera Image from PackBot)

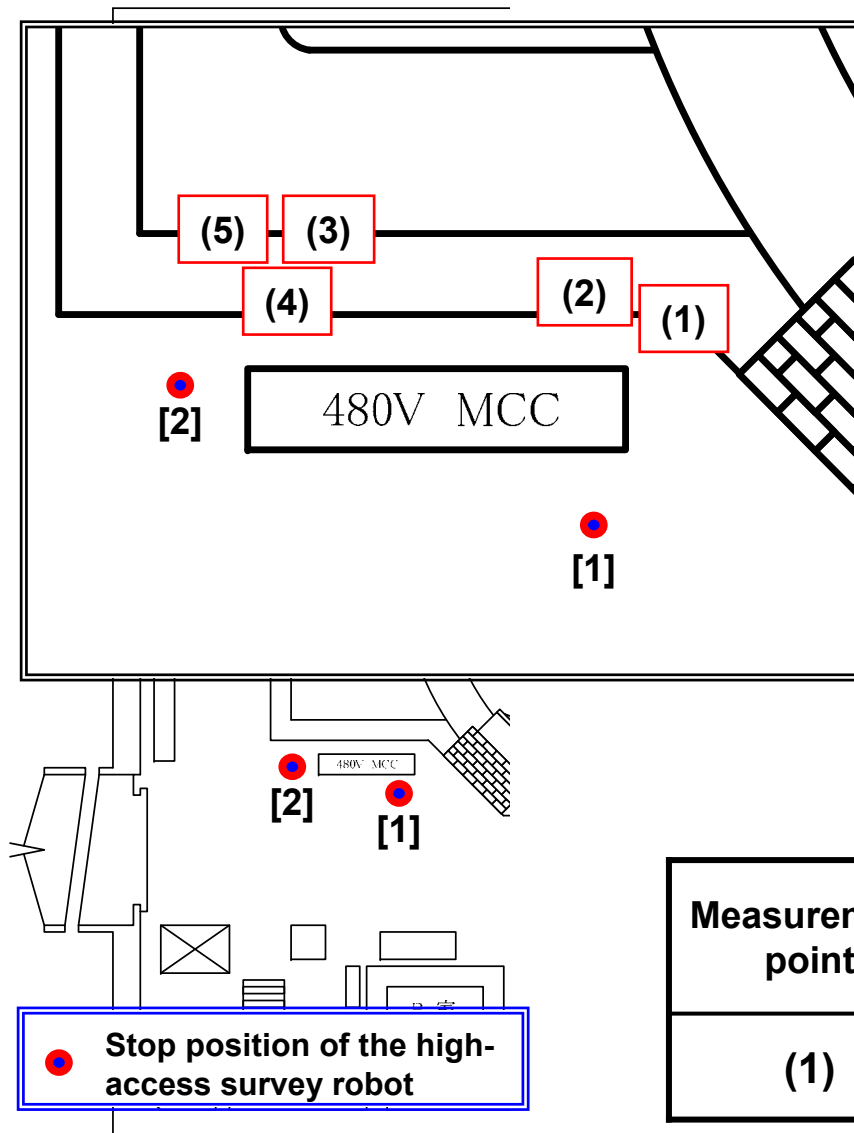


**(5) Stop position of the high-access survey robot [1]**



**(6) Stop position of the high-access survey robot [2]**

## 5. Measurement Results (Ambient Dose Rate, etc.)



Measurement point	Measurement height [m]	Dose rate [mSv/h]
(1)	4.7	19.3
(2)	4.4	19.6
(3)	5.2	14.9
(4)	5.1	14.6
(5)	5.6	14.6

Measurement point	Measurement height [m]	Temperature [°C]	Humidity [%]
(1)	4.7	29.3	63

## 6. Summary

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### ◆ Survey results

- A survey was conducted to investigate conditions from the southwest area to the upper part of the personal airlock room at Unit 2 Reactor Building.
- The PCV penetration could not be checked by looking.
- Information was obtained on how narrow and small the accessible parts around the upper PCV are.
- No particular damage was found in the machinery and equipment.

### ◆ Next step

- We will determine whether and where to expand the survey at Unit 2, and whether to conduct the survey at the other Units.