<Reference>

“Development of a technology to investigate inside the Reactor Primary Containment Vessel (PCV)” -Site test “Investigation B1” on grating around the pedestal inside Unit 1 PCV-

April 6, 2015

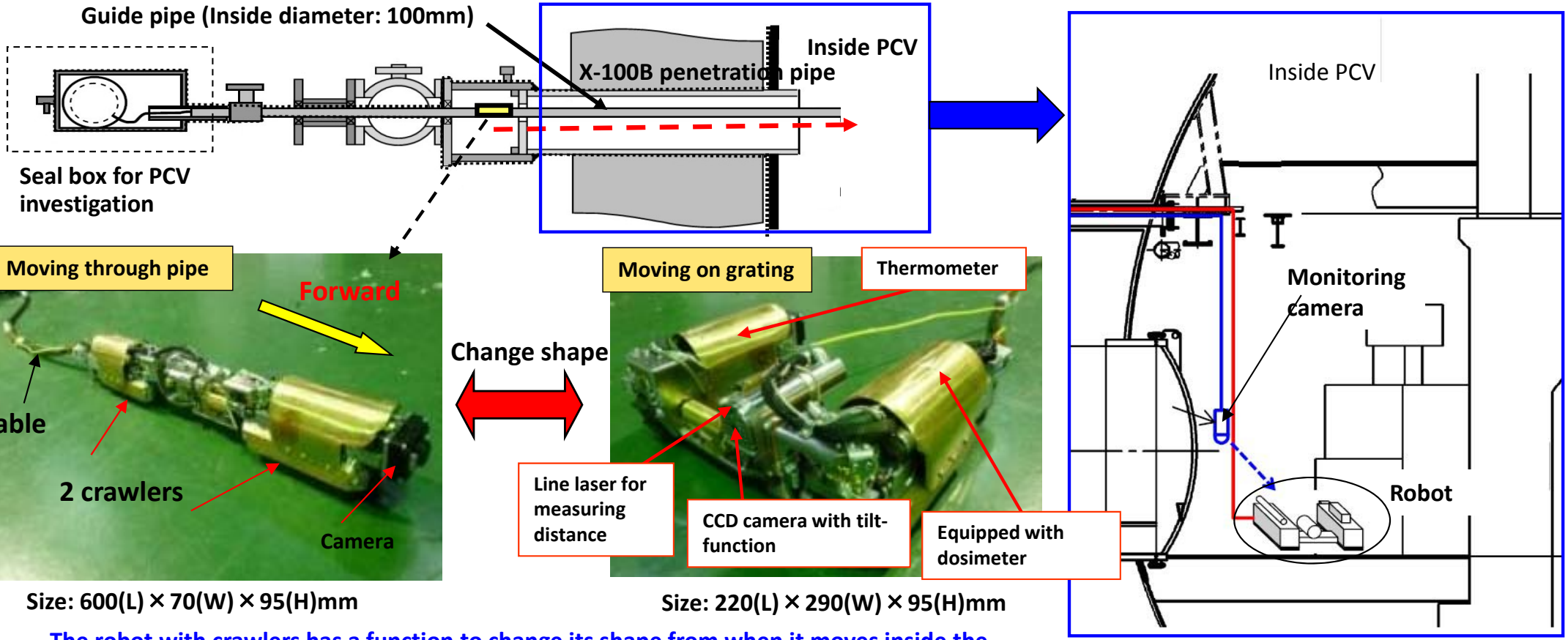
Tokyo Electric Power Company

東京電力 TEPCO

IRID

1. Investigation overview

At Fukushima Daiichi NPS Unit 1, investigation is planned using a robot for the purpose of earning information on the 1st floor grating inside the Primary Containment Vessel (PCV). The robot will be inserted from X-100B penetration pipe.



Size: 600(L)×70(W)×95(H)mm

Size: 220(L)×290(W)×95(H)mm

The robot with crawlers has a function to change its shape from when it moves inside the narrow pipe (X-100B penetration pipe: inside diameter: 100mm) to when it reaches inside the PCV and moves around the grating.

2. Investigation method

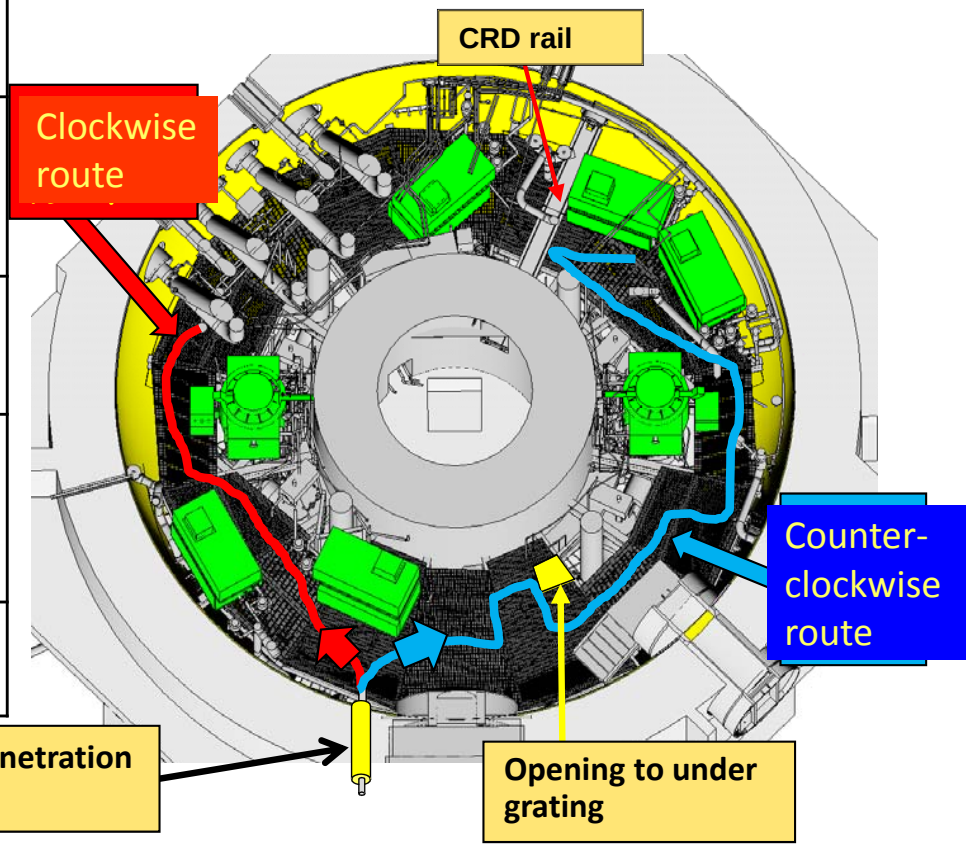
The investigation will be conducted twice (Clockwise route, counterclockwise route)

Investigation plan

No.	Purpose	Location	Content	Device
①	Investigating obstacles for further investigation under the grating outside the pedestal (“Investigation B2”)	Opening to access under the grating	Video	CCD camera
②	Investigating obstacles for further investigation inside the pedestal	CRD rail	Video	CCD camera
③	Investigating environment	On the access route *	Temperature Radiation	Thermometer Dosimeter
	Investigating existing structures		Video	CCD camera

*Investigation will be conducted within the possible area.

Access route



3. Investigation location

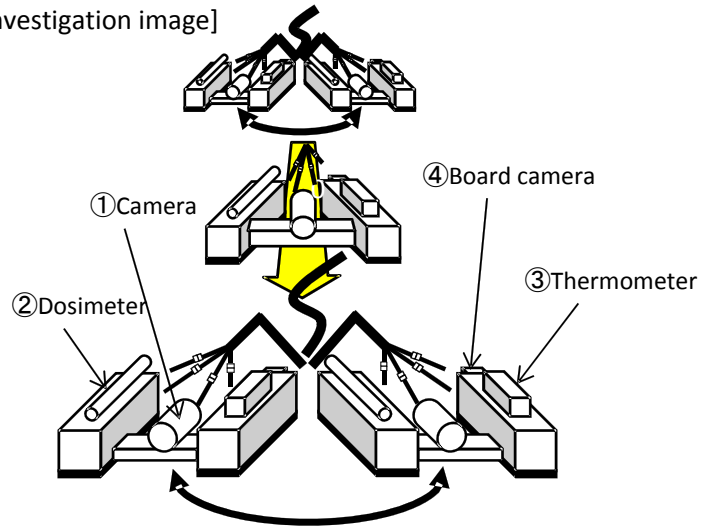
The robot stops and collects data (images, temperature, dosage etc.)at each investigation location

B0, ～ B18, **Investigation location**
C0, ～ C11,

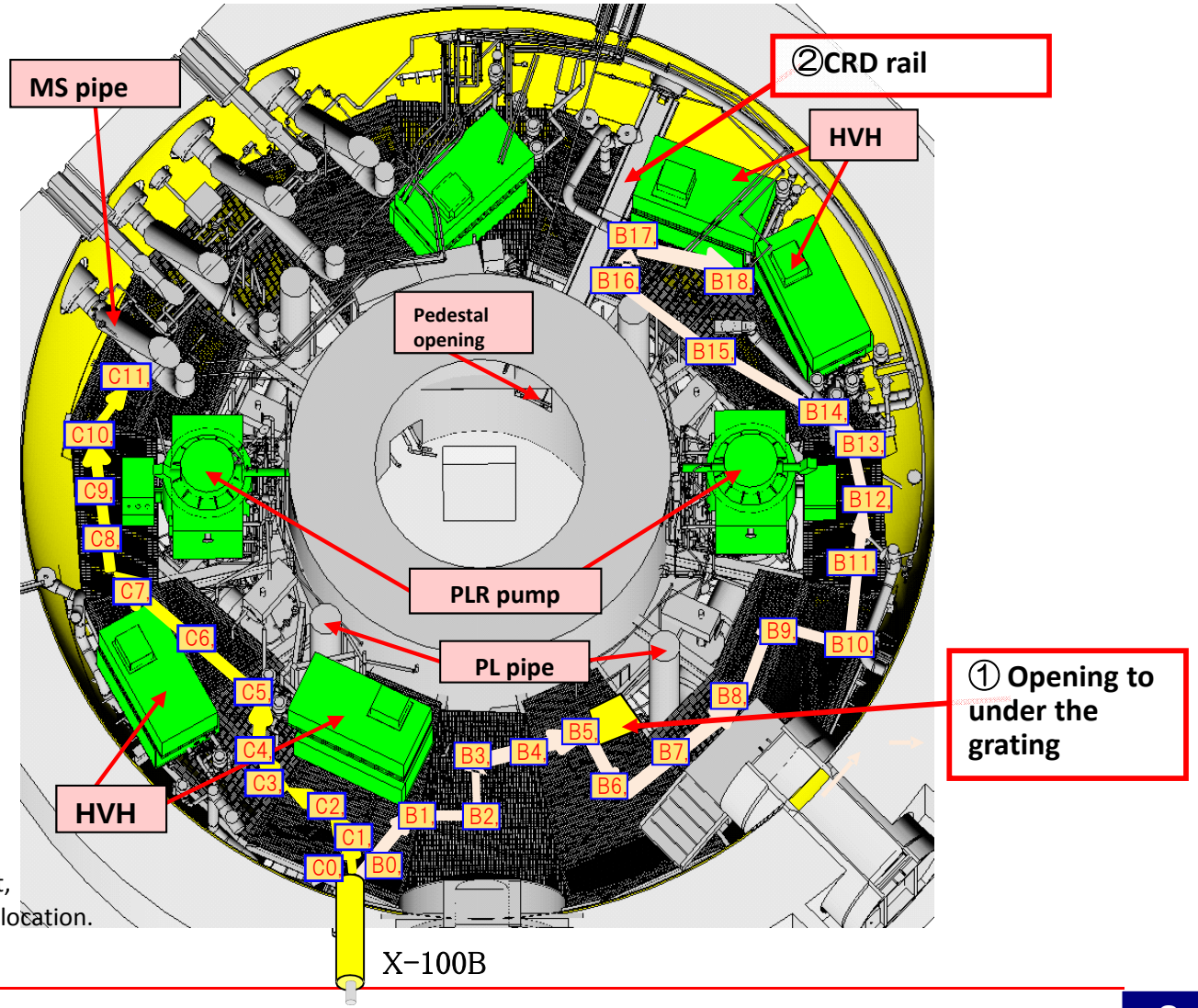
The locations may change due to environment inside the vessel.

: Access route (counterclockwise)
: Access route (clockwise)

[Investigation image]



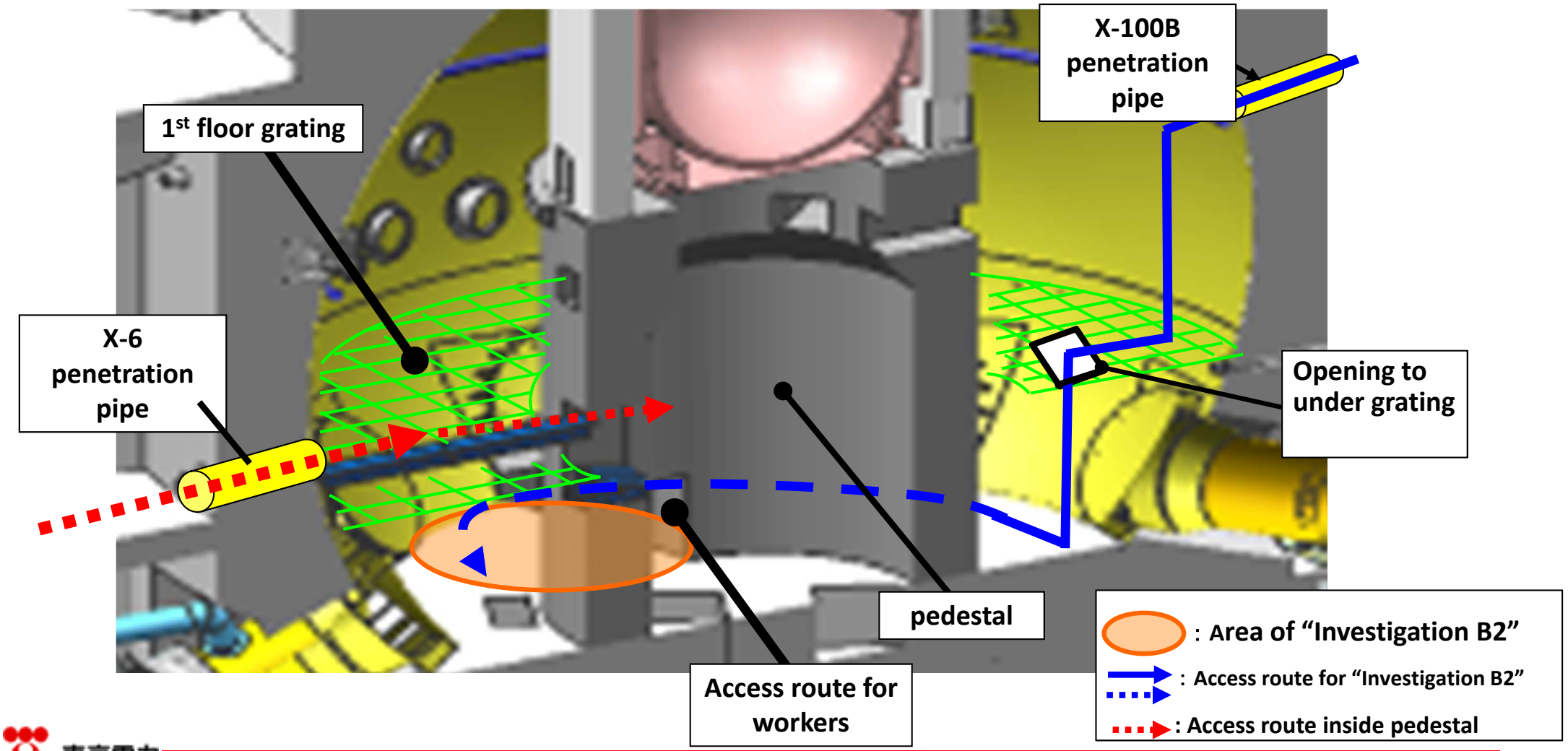
The robot moves slowly confirming its surrounding environment, moving its camera up-down and right-left on each investigation location.



4. Purpose of “Investigation B1”

- Purpose of “Investigation B1” will be collecting information on 1st floor grating.
- Investigation results ⇒ It will be used to make a plan of “Investigation B2” *.

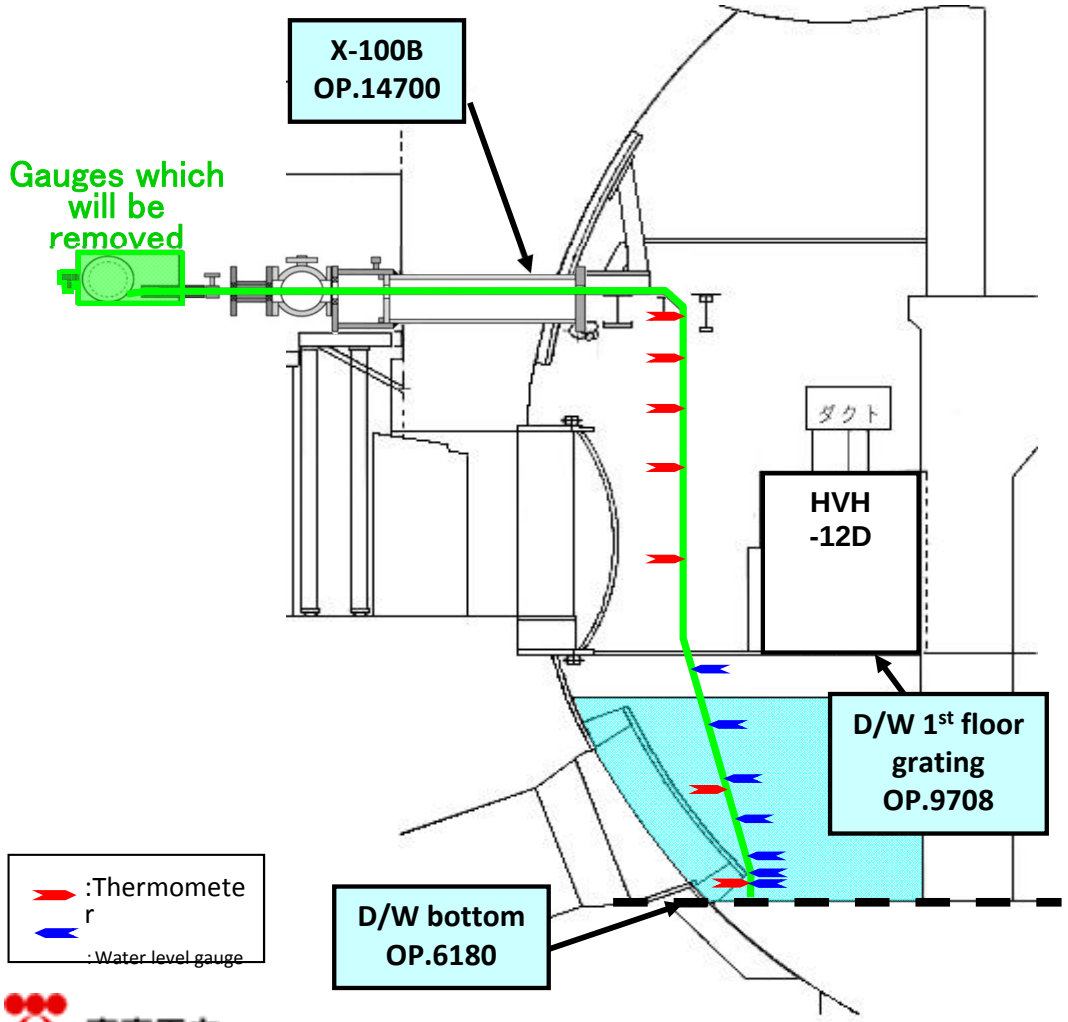
*”Investigation B2”⇒ Investigation under grating outside the pedestal



5. Others [Moving the Unit 1 PCV permanent monitoring gauge]

■Moving the permanent monitoring gauge

The permanent monitoring gauges will be removed due to the conduct of "Investigation B1" at Unit 1, and will be installed back at the same place



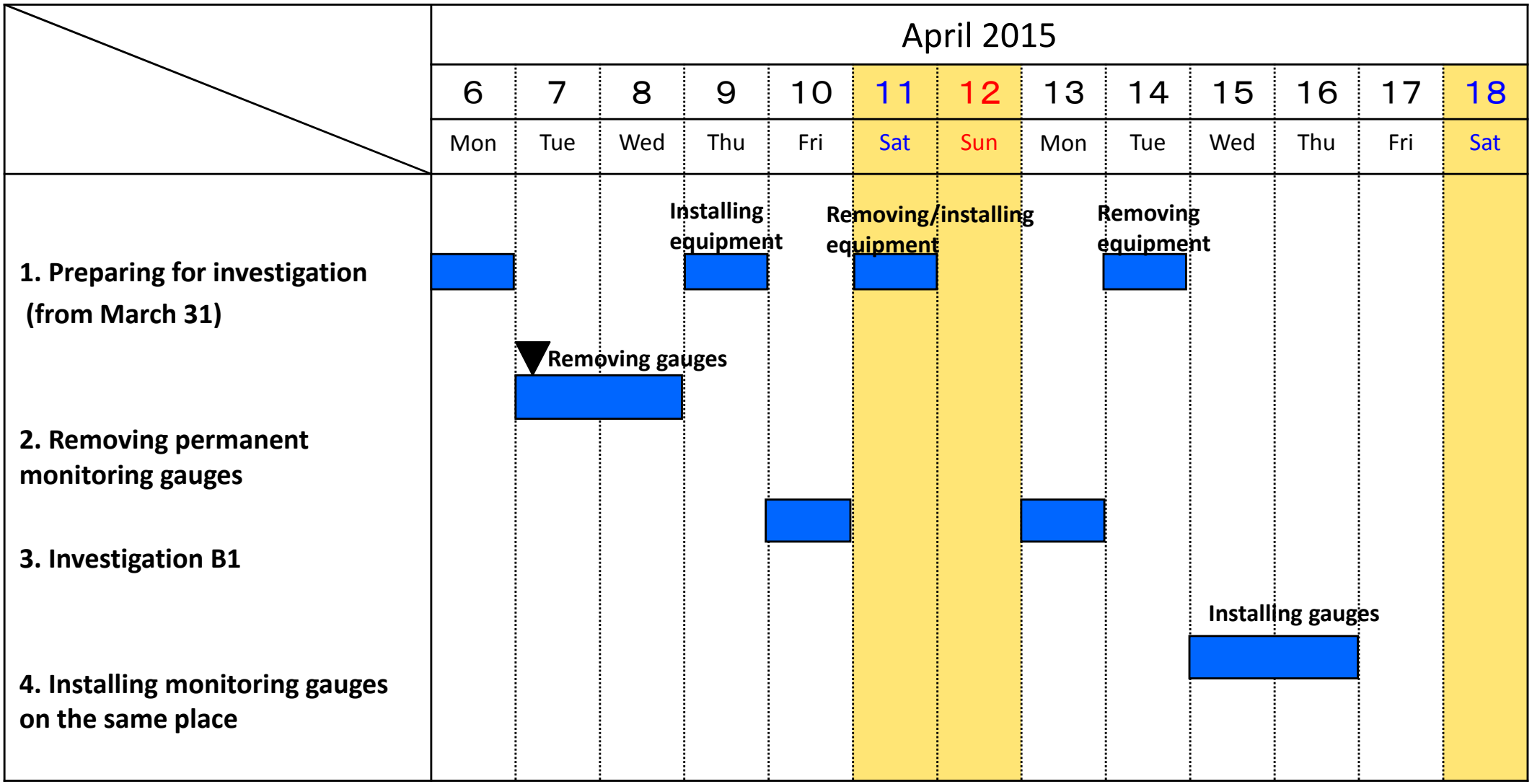
Thermometer: thermocouple	
T7	OP.14500
T6*	OP.14000
T5	OP.13230
T4	OP.12500
T3*	OP.11200
T2	OP.7500
T1	OP.6330

Water level gauge: electrode	
L7	OP.9380
L6	OP.8580
L5	OP.7780
L4	OP.7280
L3	OP.6780
L2	OP.6480
L1	OP.6330

*Thermometer for monitoring cold shutdown condition as written in the "Implementation plan Chapter 3 provision 18

They will be taken off from the list of monitoring cold shutdown during the investigation.

6. Schedule


April 2015
6 Mon
7 Tue
8 Wed
9 Thu
10 Fri
11 Sat
12 Sun
13 Mon
14 Tue
15 Wed
16 Thu
17 Fri
18 Sat
1. Preparing for investigation (from March 31)
Installing equipment
Removing/installing equipment
Removing equipment
2. Removing permanent monitoring gauges
Removing gauges
3. Investigation B1
4. Installing monitoring gauges on the same place
Installing gauges