<Reference>

Survey on torus room wall in Unit 1 of Fukushima Daiichi Nuclear Power Station

June 13, 2014

Tokyo Electric Power Company

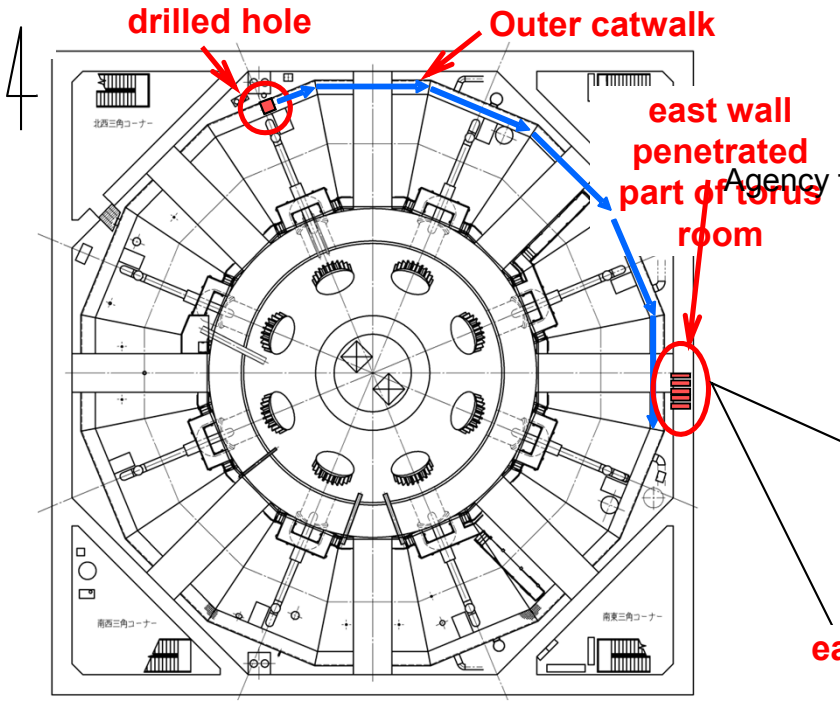
TEPCO 東京電力

IRID

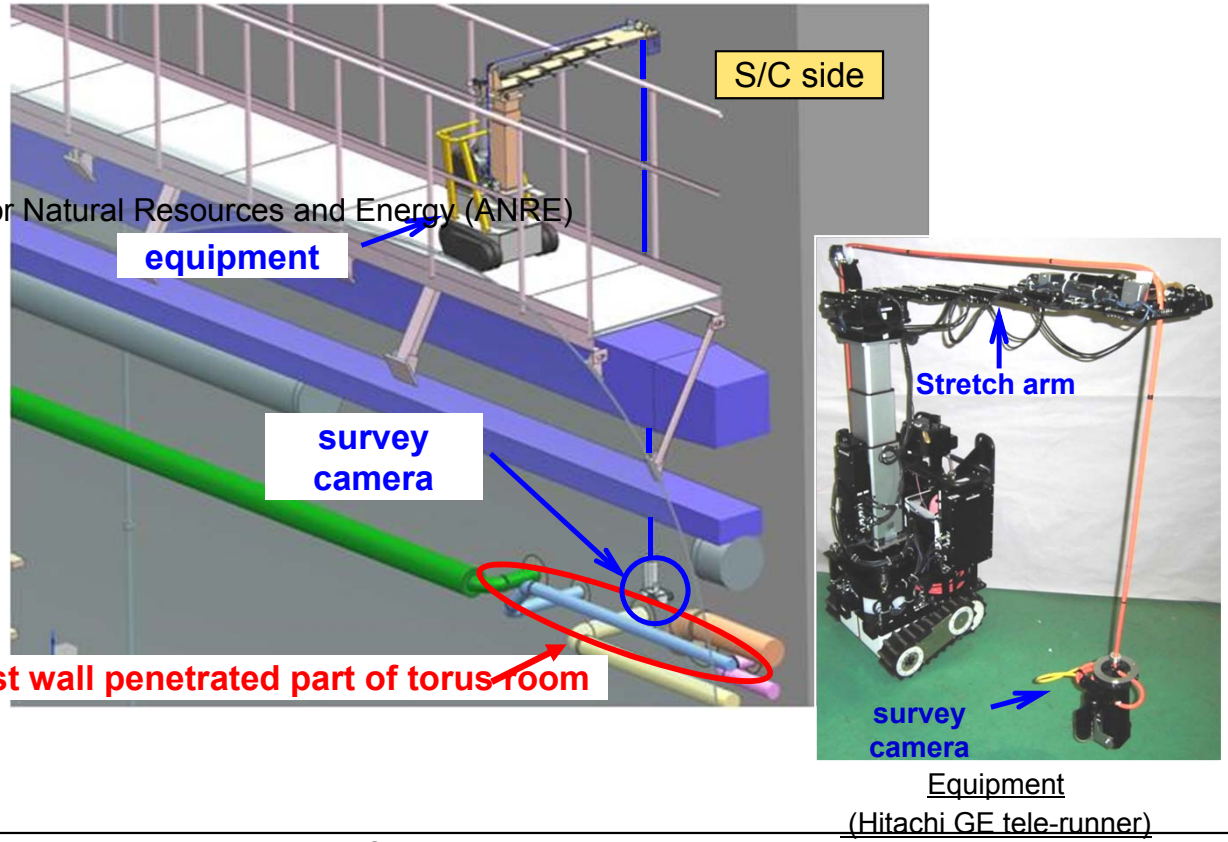
Overview

Equipment (under development aid of Agency for Natural Resources and Energy to “pointing leakage point of container and maintenance technique”) for investigation on upper part of S/C was put in from the drilled hole in northwest area, and investigated penetrated area of wall of torus room from outer cat walk.

- Matter: investigation surface of penetrated pipes(5 points) and confirmation whether water leaks or not.



Surveying route (B1F of Reactor Building)



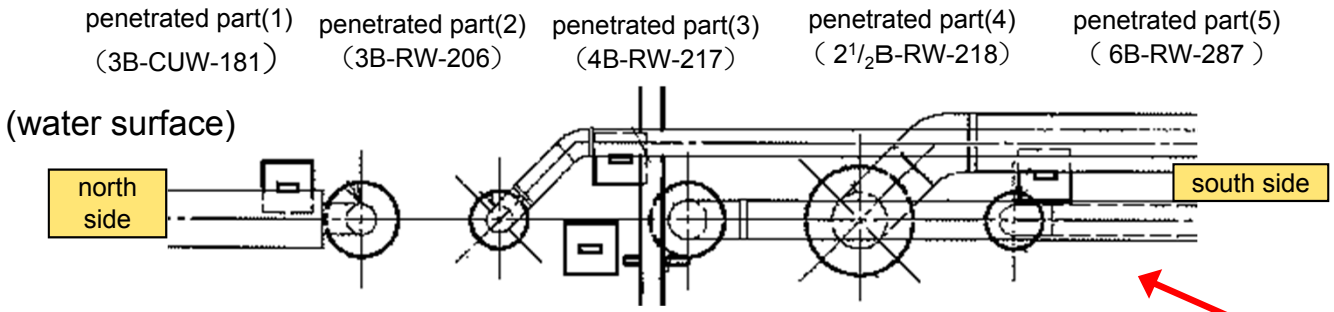
Agency for Natural Resources and Energy (ANRE)

Equipment
(Hitachi GE tele-runner)

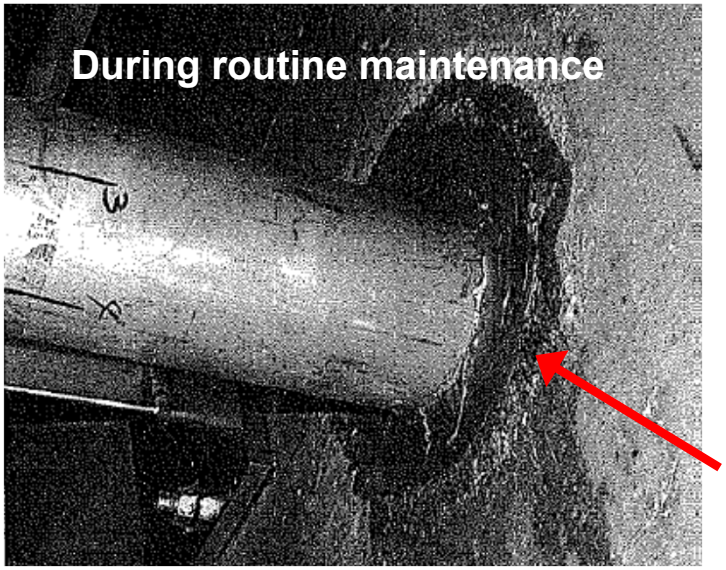
Image of investigation on torus east wall

measure

- taking photo on penetrating parts and confirm leak point
- dispersing tracer* and picking out leak points (*tracer: clay particles)



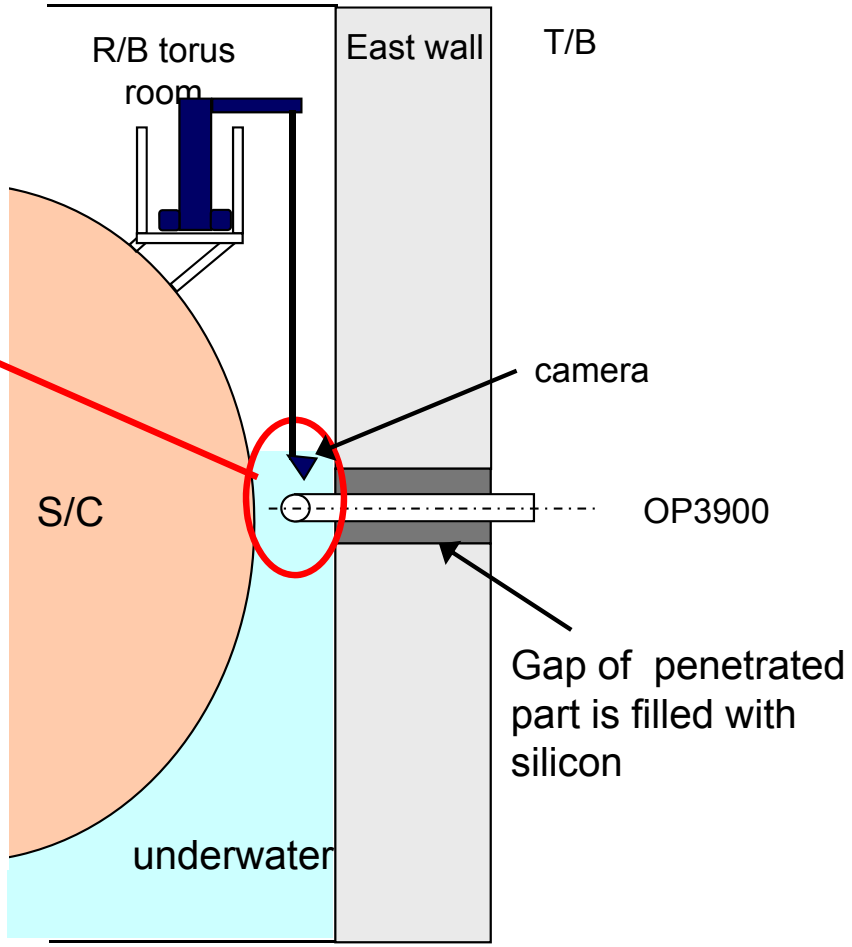
east wall penetrated part of torus room



Gap of penetrated part is filled with silicon

Typical image of penetrated parts

(penetrated part (1) photo: October 2000)



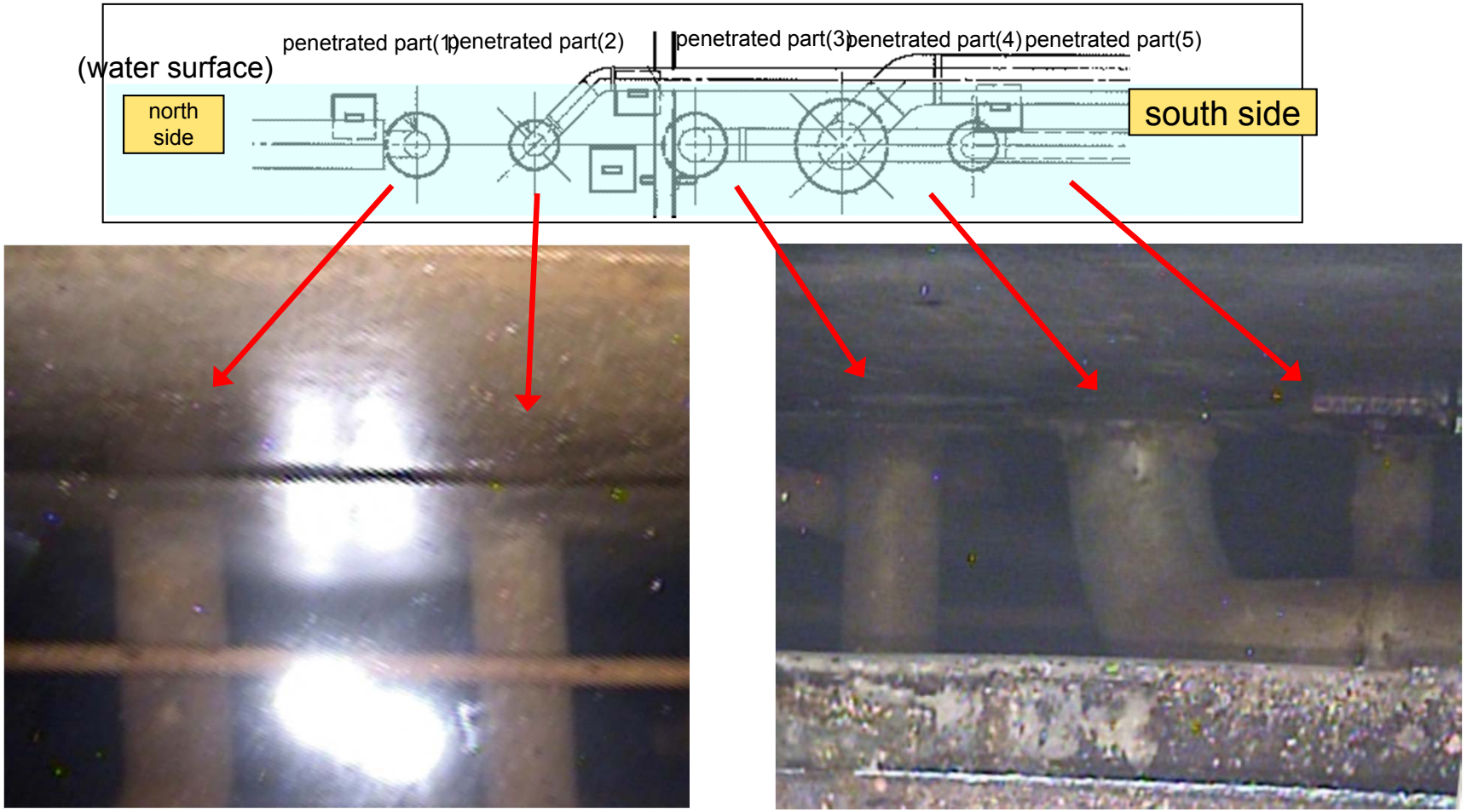
Cross section of torus room east wall

Result 1

- Surface and leakage of penetrated parts

  target: penetrated part (1) to (5)

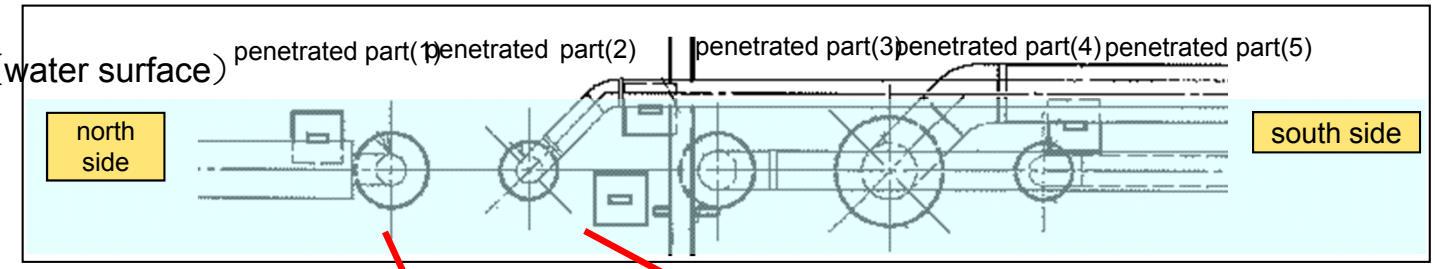
  - On images taken from the air, movement of surface floating matters were not found.



east wall penetrated part of torus room

Result 2

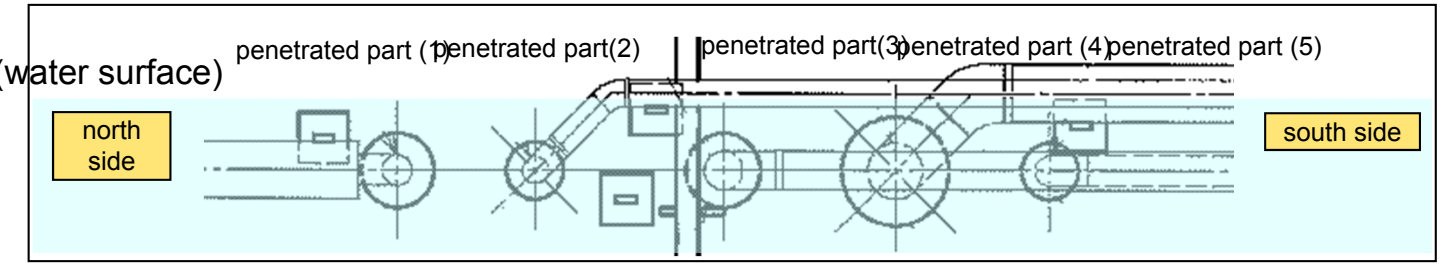
- Surface of penetrated parts　target: penetrated part (1) and (2)
  - On underwater imaging, serious damages on seal material of penetrated parts were not found.
  - For penetrated part (3) to (5), obstacle blocks underwater view.



penetrated part (1)　**east wall penetrated part of torus room**　penetrated part (2)

Result 3

- dispersing tracer and picking out leak points
  target: penetrated part (1) and (2)
  - dispersing tracer* and tracked it, leak point around penetrated part was not found.
    (*tracer: clay particles)



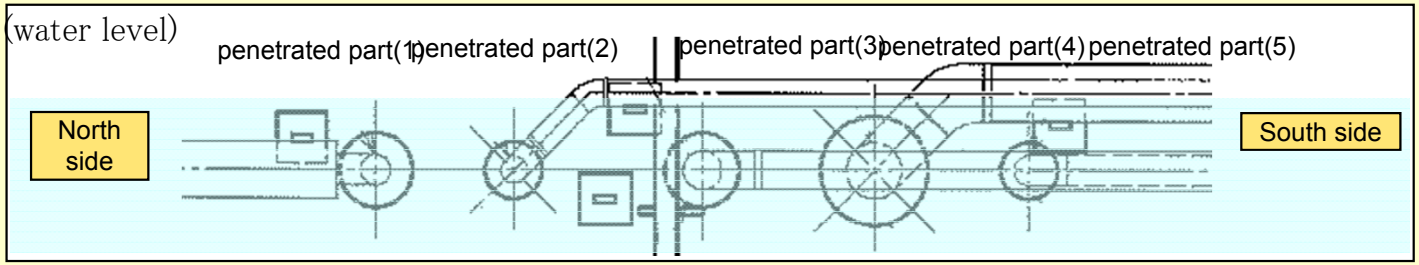
penetrated part(1) tracer penetrated part (2)

tracer dispersed around penetrated part

Resume

- Taking images of torus room wall with survey camera, we demonstrated it can confirm whether there is any leakage or not on penetrated parts.
- **For penetrated part (1) and (2)**

  Throwing camera underwater and tracking tracer, no leakage on penetrated parts was found.
- **For penetrated part (3) to (5)**
  - Obstacle interfered from putting camera into water.
  - View from the air, movement of surface floating matters were not found.



- For penetrated part (3) to (5), using equipment for underwater wall survey (will be operated on unit 2), we will confirm whether any leakage is found or not, before water stopping construction between buildings.
- With sonar survey had been scheduled, we review the requirement of it for no movement of tracer and the scope is small.

Survey for upper part of suppression chamber (S/C) of Unit 1

[southeast to south area]

Results

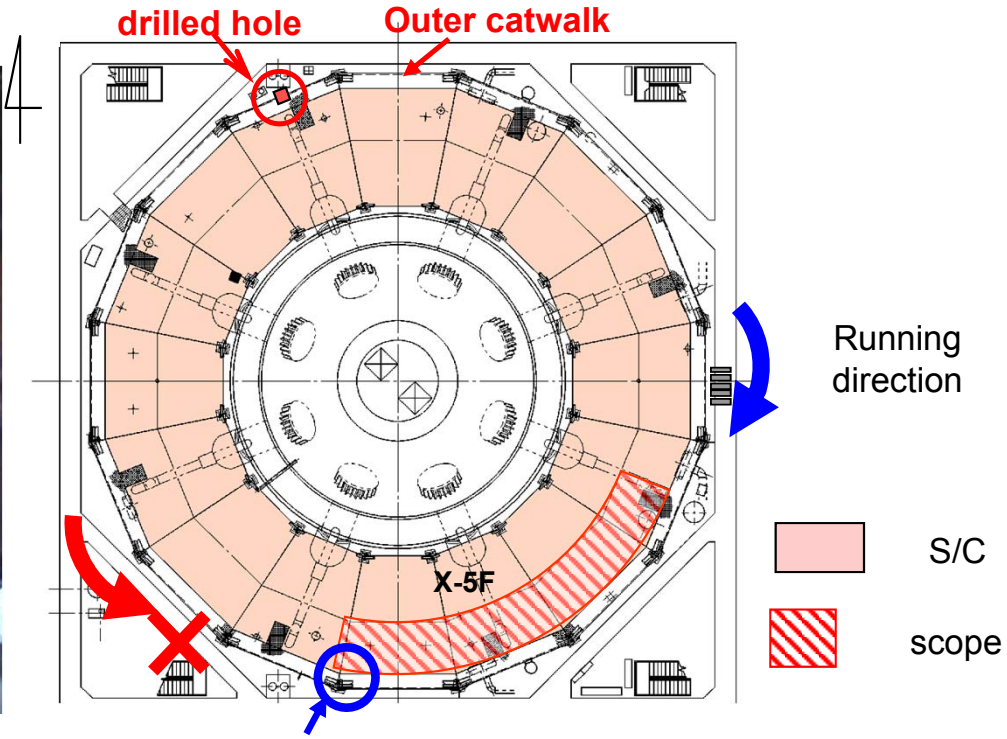
State of investigation

- On May 27 and 30, whole survey of S/C's upper part was not completed because of obstacle on catwalk。
- Confirmed whether any leakage was found or not on unfinished parts (southeast to south, near X-5F)

Results of investigation

- On upper part of S/CS/C, no leakages.
- Major dropping on catwalk is a thermal plate.

thermal plate (dropped) Typical image



thermal plate (dropped)