

Survey result of damages to air-conditioning ducts etc. in the Reactor Building, Unit 4, Fukushima Daiichi Nuclear Power Station

<The sequence of events>

- At 6:12 am on March 15, an explosion occurred at Unit 4. It was possible that hydrogen generated in Unit 3 went through air-conditioning ducts of the emergency gas treatment system and flowed into the Reactor Building, Unit 4.
- On November 8, in order to investigate the status of explosion of the Reactor Building, Unit 4, we conducted a site survey, such as damage to the air-conditioning ducts in the Reactor Building.

<Date and time of the site survey>

From 2:30 pm to 4:30 pm on November 8, 2011 (Tue)

<Survey results>

- It was likely that the explosion at Unit 4 occurred mainly on the fourth floor of the Reactor Building because (i) the floor on the fifth floor was pushed up and the floor on the fourth floor was pushed down and (ii) wire meshes attached to inlets of the air-conditioning on the fifth floor were bent to the reverse direction of the normal air flow.
- On the fourth floor of the Reactor Building, as there were no air-conditioning ducts at the original place of installation and instead, numerous rubbles presumably from air-conditioning ducts were scattered, it was possible that the explosion occurred around the air-conditioning ducts.

The status of the 5th floor, R/B, Unit 4



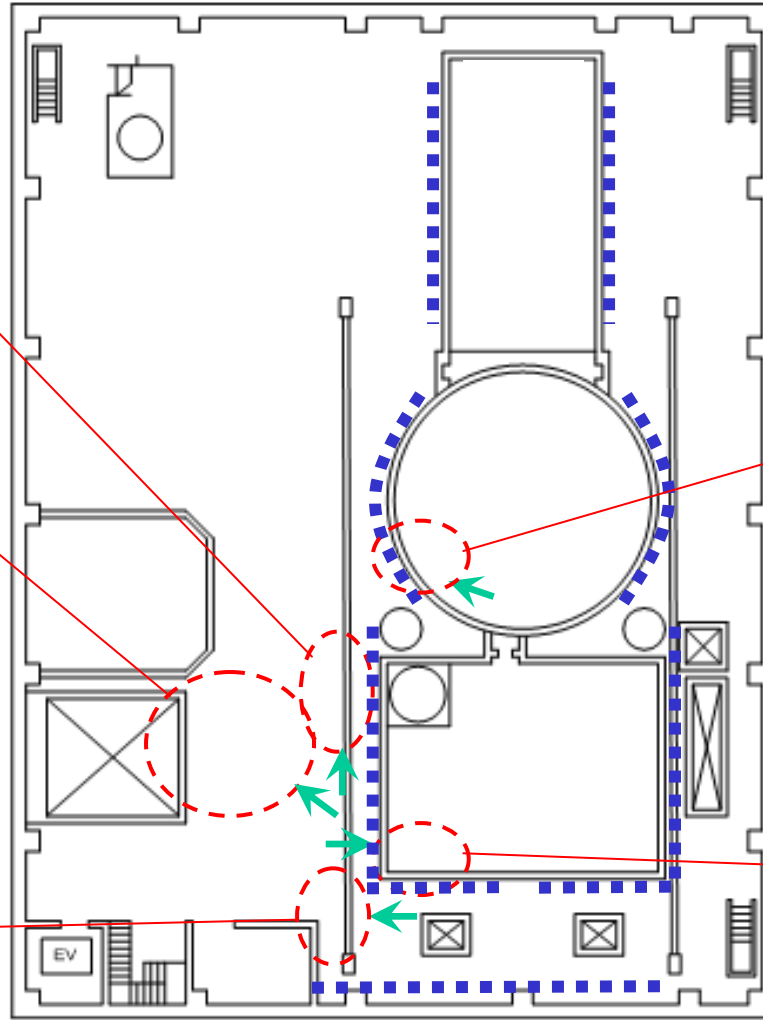
① Rebar deformed upward



② Floor curled up



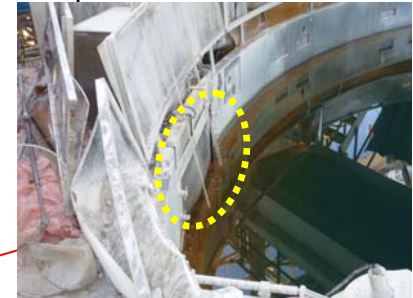
③ Floor pushed up



← : Shooting direction

■ ■ ■ : Main air-conditioning ducts (before the accident)

※R/B is a schematic drawing



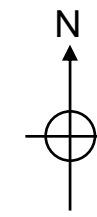
④ Wire mesh, inlet of the air-conditioning at Reactor Well was bent to the reverse direction



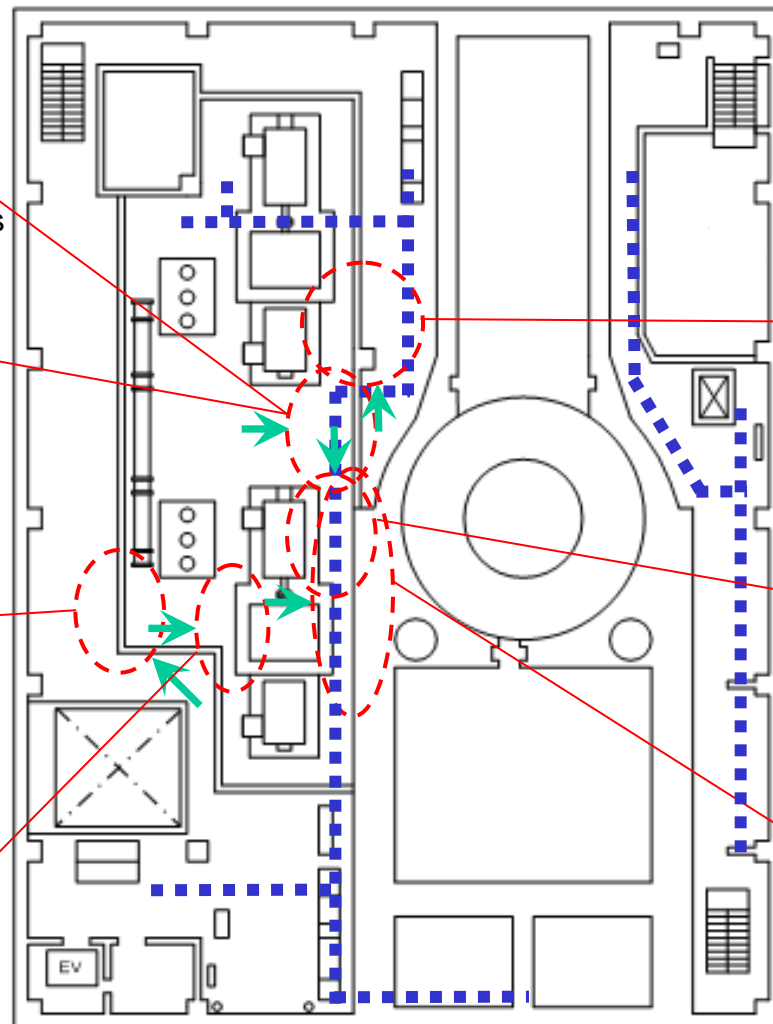
⑤ Wire mesh, inlet of the air-conditioning at Spent Fuel Pool was bent to the reverse direction

The status of the 4th floor, R/B, Unit 4

← : Shooting direction
 ■■■ : Main air-conditioning ducts (before the accident)



※R/B is a schematic drawing



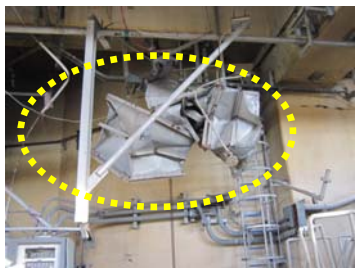
⑩ Rubbles from air-conditioning ducts



⑪ Rubbles from air-conditioning ducts (no air-conditioning ducts above)



⑫ The original place of installation of air-conditioning ducts



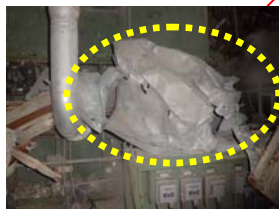
⑥ Rubbles from air-conditioning ducts



⑦ Rubbles from air-conditioning ducts



⑧ Floor pushed down



⑨ Rubbles from air-conditioning ducts

The status of the 3rd floor, R/B, Unit 4



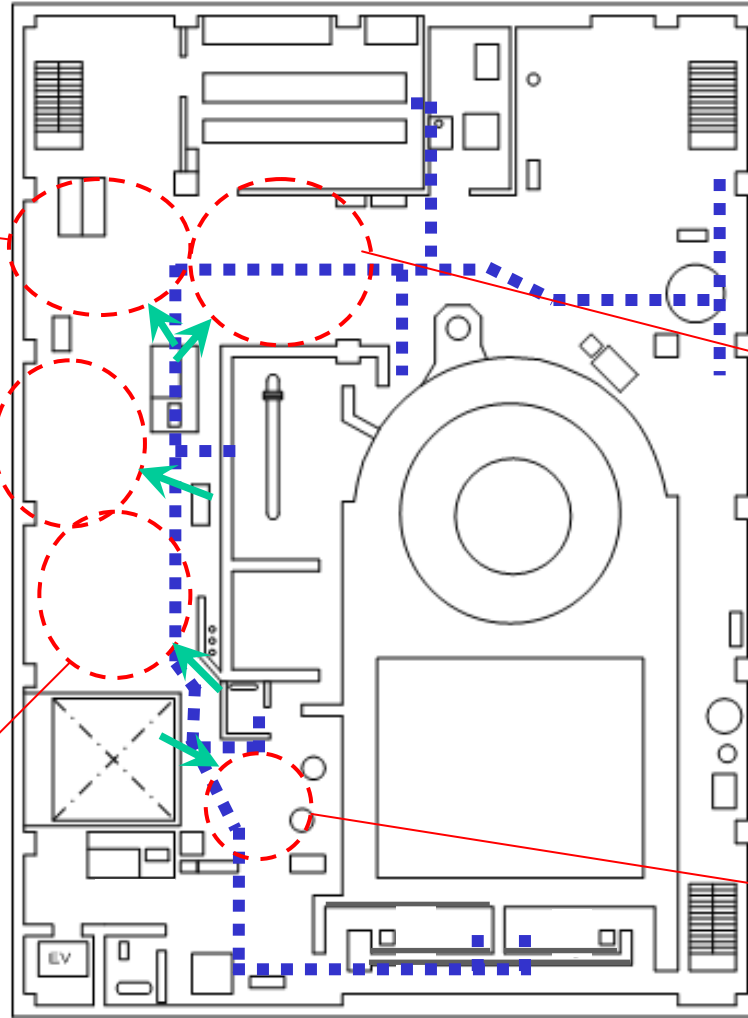
⑬ Damages to the floor



⑭ Floor pushed down
(in front is rubbles from air-conditioning ducts)



⑮ Rubbles from air-conditioning ducts



← : Shooting direction
 ■■■ : Main air-conditioning ducts (before the accident)
 N
 ※R/B is a schematic drawing



⑯ Rubbles from air-conditioning ducts



⑰ Rubbles from air-conditioning ducts