Phase: **Design**

Decommissioning Process **"Dismantling PCV/RPV/Buildings"**
Investigation Subject **"Decontamination"**
Issue **"Decontamination and dose rate reduction"**

Needs

1. Decontaminating inside the PCV and the building to reduce radiation dose

Desired state and reasons for it

- Since the inside of the PCV is expected to remain in a high-dose environment even after the fuel debris is retrieved, it is desirable to decontaminate in order to dismantle the PCV／RPV／buildings.
- It is desirable that decontamination work can be performed in narrow areas and that it can be remotely operated. It is also desirable to make maximum use of the technology used during debris retrieval (including access) and the technology used in decommissioning of general commercial reactors.

Current state against ideal

- For fuel debris retrieval, internal investigations of the PCV／RPV and radiation source surveys and decontamination in the building to improve the environment for fuel debris retrieval operations are being planned, and related R&D is being conducted in parallel.
- Remote removal or decontamination of highly contaminated piping is especially important for fuel debris removal from Unit 2, where the radiation dose inside the reactor building is higher than in Units 1 and 3.

Issues to be resolved

- Based on the outcomes of Issue number: DRB-101, it is necessary to investigate the necessity and the method of decontamination. In particular, it is necessary to note that the difficulty in decontamination of the system has increased since equipment and facilities are damaged.
- In some cases, it is considered that shielding technology may be required instead of decontamination.

Relevant Issues

- DRB-101 "Assessing conditions inside reactor and buildings (for dismantling)"
- DRB-301 "Removing in-core structures and dismantling buildings"
- BST-002 "Visualization technology (including 3D)"