Phase: **Design**

> Decommissioning Process **"Dismantling PCV/RPV/Buildings"**
> Investigation Subject **"Sorting criteria of the wastes generated from the dismantling"**
> Issue **"Establishing sorting criteria by alpha, beta and gamma contamination"**

Needs

1. Sorting waste rationally

Dismantling PCV/RPV/Buildings：【Long 1】

Desired state and reasons for it

- The type and volume of waste to be processed and disposed of are affected by dismantling PCV／RPV／buildings. In order to reduce the volume of waste requiring extensive processing and disposal and to relatively increase the volume of waste that can be handled by simpler processing and disposal, it is desirable to rationalize the concept and criteria for sorting waste at the time of PCV／RPV／building dismantling.

Current state against ideal

- For understanding the properties of wastes in waste management, an analytical method to obtain data easily and quickly is developed, and efforts are initiated to use that method as a standard analytical method at the Radioactive Material Analysis and Research Facility Laboratory-1.
- In particular, because relatively high alpha contamination has been confirmed in some parts of the reactor buildings and the frequency of work in the reactor buildings is increasing as decommissioning work progresses, and because of the difficulty of measuring alpha radiation and its large contribution to the partial exposure dose, the development and standardization of a dose evaluation system based on internal intake of alpha-ray emitting nuclides and others is being promoted ahead of other

Issues to be resolved

- There are issues for low-dose wastes to require a lot of time for measurement due to their huge volume, and for high-dose wastes to be difficult to sample and analyze.
- Based on the outcomes of Issue No. DRB101, sorting criteria by alpha, beta and gamma contamination should be investigated for the PCV／RPV／buildings, taking into account the investigation on the disposal method.
- It is desirable that requirements, requisites, and points to note are presented from the processing and disposal side to the dismantling side of PCV／RPV／buildings.
- It is desirable to have a measurement method and its accuracy corresponding to the alpha, beta and gamma contamination of the surface of building waste generated.

Relevant Issues

- ➤ DRB-102 "Understanding properties and volume of objects to be dismantled"
- ➤ DRB-203 "Developing dismantling scenario and sorting strategy"

- DRB-204 "Establishing work sequence"
- BST-002 "Visualization technology (including 3D)"
- BST-003 "Measurement and analysis technology"