Phase: **Design**

Decommissioning Process **"Contaminated Water Management"**
Investigation Subject **"Ground water and contaminated water management"**
Issue **"Ensuring structural integrity"**

Needs

1. Checking equipment integrity

Contaminated Water Management：【Mid】

Desired state and reasons for it

- In order to prevent contaminated water from leaking out of the system, it is desirable to be able to evaluate and confirm the integrity of the PCV, the building, and the contaminated water treatment system at present and in the future, and also to be able to respond to the evaluation results.

Current state against ideal

- The system includes existing facilities (the PCV and buildings). It is necessary to evaluate the long-term integrity of the system. In order to do so, it is necessary to understand the current status.
- It is also necessary to evaluate the long-term integrity of the contaminated water treatment system installed after the accident, and to monitor and maintain the system appropriately. (Leakage of contaminated water may be a low risk in terms of exposure, but it has a large social impact.)

Issues to be resolved

- In order to maintain the effectiveness of contaminated water countermeasures over the medium to long term, it is necessary to ensure periodic inspection and renewal of each facility, including the land-side impermeable wall, sub-drain facilities, and existing water treatment facilities (SARRY, ALPS, etc.).
- Maintaining purification performance can be a more critical issue, as contaminated water with radioactivity concentrations several orders of magnitude higher than normal and high sludge contamination can be expected to flow into existing water treatment facilities.
- In addition, it is particularly important to proceed with research and development of a set of assumed degradation modes, evaluation methods, and countermeasures.

Relevant Issues

- CWM-102 "Understanding current status of underground and buildings"
- CWM-301 "Efficient and effective water treatment"
- PDR-303 "Site decontamination and dose rate reduction"
- PDR-304 "Switchover to uncontrolled areas"