

Decommissioning Process **“Fuel Debris Retrieval”**
Investigation Subject **“Improving working environment”**
Issue **“Site Boundary Dose Assessment”**

Needs

1. Evaluating site boundary doses

Desired state and reasons for it

- Since the exposure dose at the site boundary are expected to increase due to fuel debris retrieval, it is desirable to evaluate the dose appropriately and minimize it.

Current state against ideal

- TEPCO conducted a comprehensive risk review in 2015, covering a wide range of risks that could potentially impact outside the site boundary.
- As a result, TEPCO clarified risk sources and spill routes and operations for mainly liquids and dust, and then identified 190 items to be addressed.
- The items, including those that had been identified previously, are being reevaluated from a new perspective, and the need for taking additional countermeasures is being organized, and the content and timing of such measures are being investigated in terms of priority, aiming to further reduce risks that could affect areas outside the site boundaries.

Issues to be resolved

- It is necessary to evaluate the exposure dose at the site boundary (for direct radiation, skyshine, and dust effects) at each stage of the decommissioning process, including fuel debris retrieval, by precisely estimating the condition at each stage.
- If the increase of the exposure dose at the site boundary exceeds the permissible range, the debris retrieval method should be reviewed, and additional measures should be taken. Otherwise, countermeasures for other factors such as radiation shielding for storing waste should be considered.

Relevant Issues

- FDR-106 “Understanding contamination status inside buildings”
- FDR-205 “Establishing confinement function”
- FDR-206 “Measures against dust”
- BST-002 “Visualization technology (including 3D)”