

Decontamination Work in the Reactor Fuel Examination Facility

Yuma Ida, Hiroki Obata, Yasuhiko Kimura, Atsushi Onozawa

Japan Atomic Energy Agency,
Ibaraki-ken, Japan

Corresponding Author : Yuma Ida <ida.yuma@jaea.go.jp >

1. Abstract/introduction

Reactor Fuel Examination Facility (RFEF) is one of the largest hot laboratories in Japan. This lab is dedicated to perform the post irradiation examinations of spent fuel and has 8 concrete cells and 5 lead cells.

There are many kinds of the contaminated equipment in the hot cells, therefore, it is very important to prevent the exposure of the workers who maintain and inspect those equipment

The decontamination is performed to reduce the workers exposure with two reduction target, air dose rate and the dose rate from the surface contamination.

After all the spent fuels are moved to the other hot cells, the remote decontamination, which is to swab the floor and the wall of the hot cell with the manipulator arms, is carried out to reduce air dose rate in the cell to 1mSv/h or less. Moreover, the direct decontamination by man access is performed to rub the area where can't be rubbed by the remote decontamination to reduce the surface contamination.

There are three important points for the man access decontamination. One of them is the respiratory protective equipment which is varied with the progress of decontamination from heavy one to light one. The second point is the size of the hot cell, since it is necessary to open the roof hatch for the decontamination of the higher wall of the large hot cell, it's not necessary for small one. This point is deeply related to the last point which is the decontamination period, because the larger hot cell including the decontamination of high wall requires the longer decontamination period. For example, it varies from 1 week to 1 month.

In this presentation, explaining about typical decontamination work in RFEF which is included air dose rate reduction trend, required period and required worker, etc to share the way of hot cell maintenance and to discuss how efficient cell maintenance.