

Summary of group discussion in ISOE ATC Information Exchange Meeting on Benchmarking for Radiation Protection in 2022

1. Evaluation of the Radiation Protection Plan referring ISOE standards

- Good practices
 - Actions to avoid unnecessary dose (Transit dose)
 - At the entrance of the building, a map of the zone divisions can be checked.
At the entrance of the work room, a dose map for each room is displayed so that workers can easily see it.
 - Signs clearly marked with different color according to dose rate level are indicated at the entrance of the area
 - Participation of the plant senior management in development of radiation protection plan
 - The deputy director of the plant, who is a member of the plant senior management, provides opinions and appropriate directions for the proposal of the working group for dose reduction as the chairman of the working group.
 - Planning and implementation of dose evaluation
 - Dose prediction is planned on the basis of past record and analogically based work by a worker's side. Actual does is confirmed by interviewing the workers.
- Recommendation
 - Action to avoid unnecessary dose (Transit dose)
 - It is recommend to introduce a graphic tool for signs of the working area and transit route considering effectiveness of the tool.

2. Observation of the plant

- Good practices
 - Good management of controlled area
 - A cautionary notice, "Don't touch the handrail of the boundary fence in D zone," is a good practice from view point of control of radioactive contamination.
 - Equipment for partition is ample and well stored by the radiation protection department. The setting of the undressing place is devised so that it can be

set up efficiently.

- The introduction of an auto-lock function for doors at the entrance of high-dose areas is very good from the viewpoint of radiation protection.
- It is good from viewpoint of radiation protection that examination of preliminary monitoring is carried out before the body surface monitoring.
- Two monitors are placed beyond the gate to see various places of controlled areas. Those monitors are useful to confirm safety with clear screen.

➤ Visualization of worker experience level

- Introduction of color coding of helmet for less-experienced workers is good so that it is possible to give attention to less-experienced worker.

● Recommendation

➤ Implementation of further warning in the controlled area

- Although there is a notice of poster at the high dose area where shielding is setting in the dry well, electronic display board could give attention more thoroughly.
- Although A4 size posters are used, it would be better to use more large size poster related to notice for safety or hazard prediction activities.

● Proposal

➤ Countermeasure in the case of entering and leaving controlled area

- In addition to checking inside of the mouth, check of items carried into the controlled area is proposed.
- Length of a string of the personal dosimeter (APD) is too short to wear on the abdomen of woman. Improvement is needed so that the length can be adjusted.
- Only two detectors for preliminary monitoring are equipped before seven detectors for body surface monitoring. It would be better to increase detectors or use other type of monitors, or other solution should be considered to avoid the congestion of workers.

➤ Work management in the controlled area

- The device for work registration is equipped in controlled area. Work description of area between entrance of the controlled area and place of this device is registered as subject of “others.” Although dose rate would be very

low in that area, it would be difficult to link the dose to work subject if worker should receive high dose in the area. It would be better to install the device in another place near from the entrance.



Device for work registration

- Revision of zoning in the controlled area
 - If the predicted dose due to the work in the cement-mixer room is not so high, it would be better to revise the zoning from D zone to B zone.