

# **Identification of Important Solutions by Surveying the Reports related to the Fukushima Daiichi Nuclear Power Plant Accident**

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Regarding radiation exposure of the members of the public and radiation workers due to the release of radioactive substances from the Fukushima Daiichi Nuclear Power Plant accident, several issues on dose/risk estimation, and on radiation protection were enumerated by domestic and international professional bodies. In order to apply those lessons learned and experiences for the development of protective actions and for the improvement of the system of radiation protection in the future, identification of main solutions is necessary. For this, by surveying dose and risk estimation reports published by the professional bodies, uncertainty factors have been categorized and assessed from the viewpoint of their characteristics such as the possibility of a substitute plan, etc., to identify the major requirements and corresponding solutions. Then, the relationship between those solutions and radiation protection issues were clarified. Consequently, it was found that the important solutions, which means common and noteworthy challenges for both dose/risk estimation and radiation protection issues, were implementation of personal monitoring at the emergency exposure situation for reduction of the uncertainty of dose estimation, and quantified assessment of low-dose radiation risks, which is the basis of adequacy judgement of risk evaluation and radiation protection standards.