

Analysis on Radiation Exposure Dose of Radiation Workers in NPPs of Korea based on ISOE and KISOE databases

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Information System on Occupation Exposure (ISOE) is in operation at OECD/NEA. Many countries where commercial NPPs are in operation have joined ISOE and reported periodically occupational doses such as collected doses to ISOE in order to share them with ISOE member countries and have chances to enhance their NPPs' radiation protection programs by mutual comparisons. Korea Institute of Nuclear Safety (KINS) are operating Korea Information System on Occupational Exposure (KISOE), which is to analyze the occupational exposure of radiation workers in various fields including nuclear energy, industry, research, education and medical application, etc. in Korea for the purpose of improvement of radiation protection program for radiation workers.

In this study, radiation exposure doses of radiation workers in NPPs of Korea were analyzed based on ISOE and KISOE databases. The analyses were performed on temporal trends of number of NPPs, number of radiation workers, annual collective dose and annual average dose for types (PWR and PHWR) of NPPs.

Number of NPPs and radiation workers have increased gradually during the past decade. Nonetheless, collective doses and average individual doses have a tendency of gradual decrement, except the period when Refurbishment of Wolsong Unit 1 (PHWR type reactor) was in progress. Based on overall results of the analyses, it could be concluded that radiation protection programs for radiation workers in NPPs of Korea have been continuously improved in Korea.

Keywords: ISOE, KISOE, Occupational Exposure, Nuclear Power Plants, Radiation Worker, Korea