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**ISOE INFORMATION SHEET**

**KOREA, REPUBLIC OF;**

**SUMMARY OF NATIONAL DOSIMETRIC TRENDS**

ISOE Asian Technical Center - Information Sheet No. 31

**Personnel Dose Management by KHNP**

For the year 2006, the total radiation dose of personnel engaged in radiation works related with the operation of 20 NPP units and was 10.958 man-Sv and the average collective dose per unit was 0.55 man-Sv. In general, the total collective dose greatly depends on the outage duration for maintenance works. For the year 2006, the total collective dose was slightly lesser than that for the year 2005 (11.93 man-Sv) partly because outage maintenance works lasted for 467 days at 14 NPP units. However, this figure is very low compared with the world average collective dose as seen in Figure 1, thus showing superior management capability of radiation safety control at Korean NPPs.

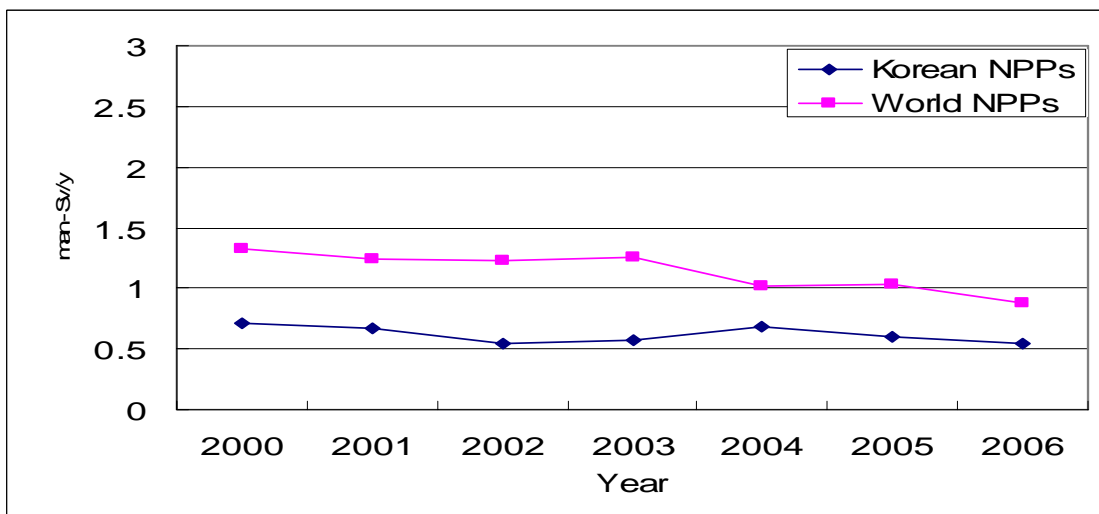


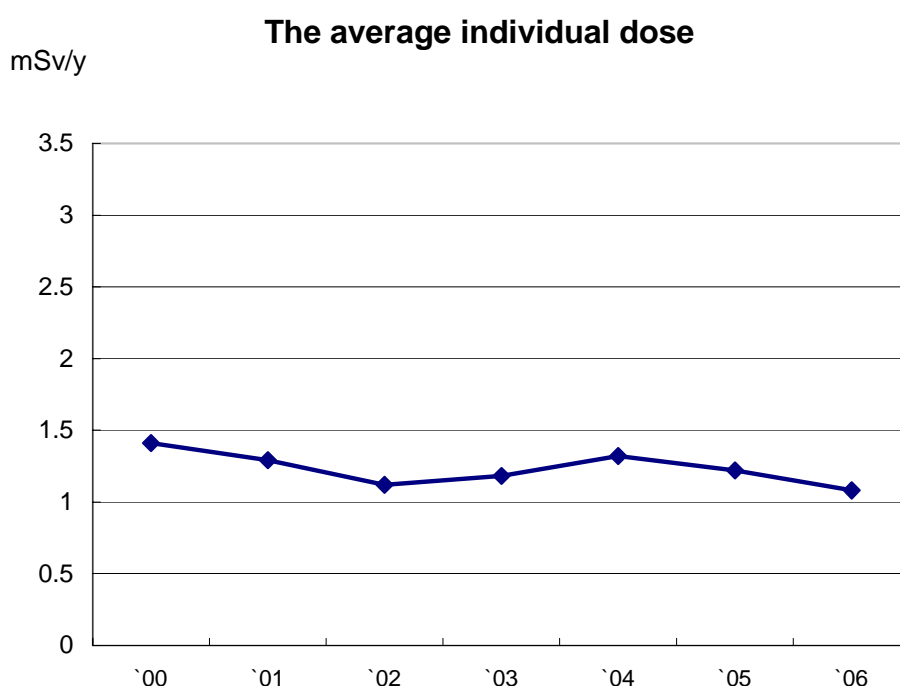
Figure 1. Trend of the average annual collective dose per unit

Meanwhile, the average annual individual dose was 1.08 mSv/y. There was no personnel that had radiation dose exceeding the annual dose of 20 mSv during the period between 2002 and 2006. Most of radiation workers (77%) received radiation dose below 1 mSv. Thus, Korean NPP industry has been well adapted to the ICRP recommendations and domestic Atomic Energy Laws. The following table shows the average collective dose per unit for Korean NPPs and world NPPs.

**Table 1. Comparison of average collective dose per unit**

Year	2000	2001	2002	2003	2004	2005	2006
Korean NPPs	0.71	0.67	0.55	0.57	0.69	0.60	0.55
World NPPs	1.32	1.24	1.23	1.25	1.02	1.03	0.88

(unit : man-Sv/y)



**Table 2. The average individual dose**

Year	2000	2001	2002	2003	2004	2005	2006
Korean NPPs	1.41	1.29	1.12	1.18	1.32	1.22	1.08

(mSv/y)

To achieve these results, KHNP established an implementation plan for overall improvement of reduction of radiation doses at NPPs and has continuously made efforts in ALARA activities for areas of reactor operation and improvement of facility/equipment, securing new automatic maintenance equipment, improvement of management.

However, the importance of ALARA activities is more emphasized since the radiation levels inside the NPP systems are increasing as the reactors are becoming aged and also the scope of maintenance work is increasing. Especially, although personnel doses are well managed below the legal dose limits, the need to reduce worker dose further is raised for worker health and safety. Accordingly, KHNP has been making efforts for the reduction of personnel doses based on the second mid-and long-term dose reduction program, which was made in 2001 and is to be applied up to the year 2010.