



2003

## ISOE INFORMATION SHEET

### JAPANESE OCCUPATIONAL EXPOSURE DURING PERIODICAL INSPECTION AT PWRs & BWRs ENDED IN FY 2002

#### ISOE Asian Technical Center - NUPEC Information Sheet No. 21

This ISOE information sheet presents the Japanese occupational exposure results during the periodical inspection at PWRs and BWRs ended in FY 2002, and trends from FY1988 to FY2002 by reactor type or generation (Conventional type/Improved type\*). Table 1 and 2 give the average collective dose per reactor during the periodical inspection for PWRs and BWRs, respectively, ended in FY 2001 and FY 2002. The collective dose of conventional type of BWRs in FY 2002 was still relatively high level, although it decreased in comparison with the one of FY2001. It was due to repair, such as shroud replacement etc. The collective dose for conventional and improved type of PWRs decreased was due to the reduction of the outage days by the periodical inspection and to the absence of large modification work.

Figures 1 to 3 show the average collective dose per reactor by reactor type and by generation from FY 1988 to FY 2002. The evolution of annual exposure depends largely on the dosimetric results of the Conventional type for both PWRs and BWRs since the Improved type has progressed steadily in a low level as compared with the Conventional type. Figures 4 through 7 show the correlation between collective dose and length of the periodical inspection period ended in FY 1993 to FY 2002. From these figures,

it can be seen that the results for Improved type are marked in the lower and shorter portion than the Conventional type as a whole.

**Table 1. Average dose results during periodical inspection ended in FY 2001 and FY 2002: PWRs**

Plant type	Average collective dose (in person-Sv)	
	FY 2001	FY 2002
Conventional type	1.89	1.37
Improved type*	1.13	1.03
Total PWRs	1.44	1.21

**Table 2. Average dose results during periodical inspection ended in FY 2001 and FY 2002: BWRs**

Plant type	Average collective dose (in person-Sv)	
	FY 2001	FY 2002
Conventional type	3.98	2.23
Improved type*	1.51	0.97
Total BWRs	2.45	1.66

\* Improved type plants came into commercial operation in and after FY 1983 with improved design features intended for enhanced reliability, lower exposure and more efficient inspection works.

Figure 1

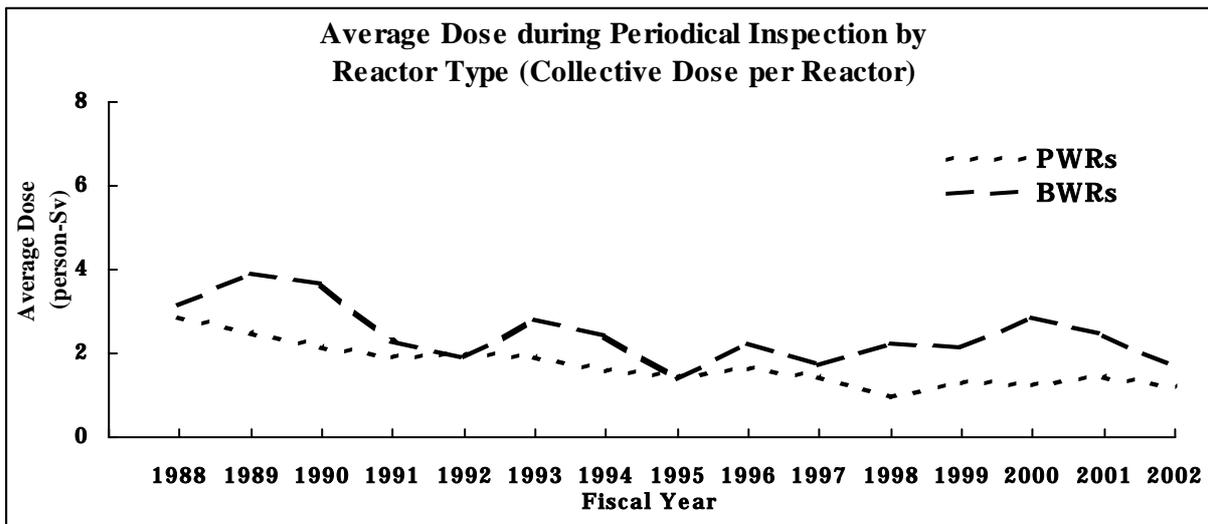


Figure 2

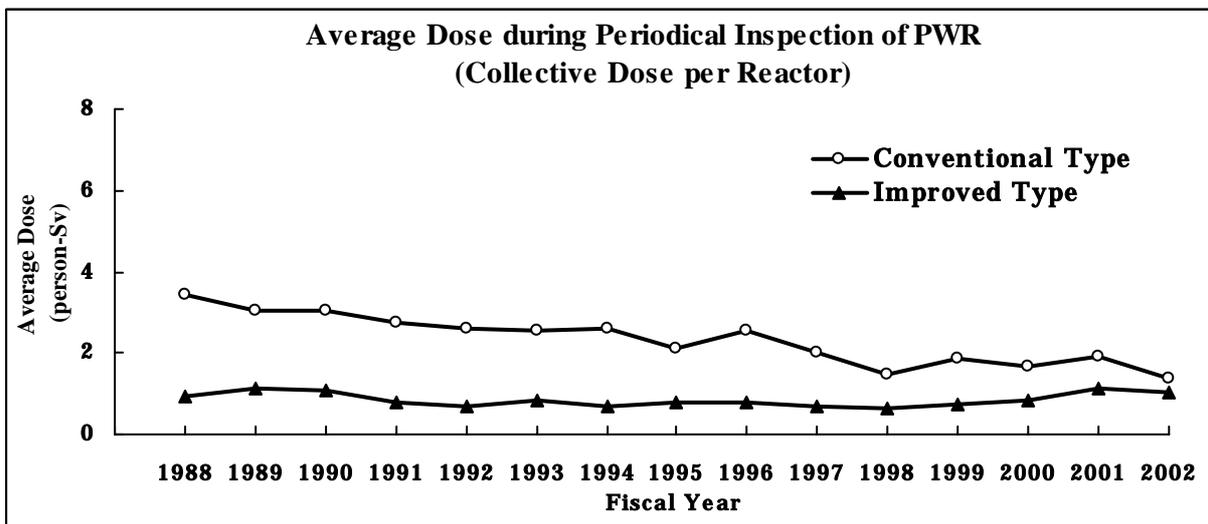


Figure 3

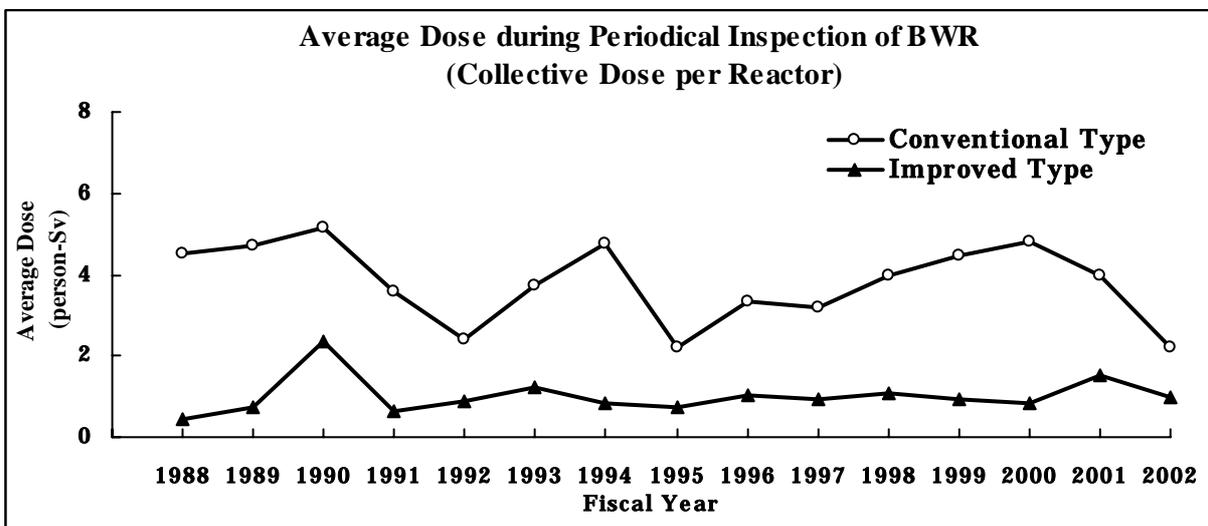


Figure 4

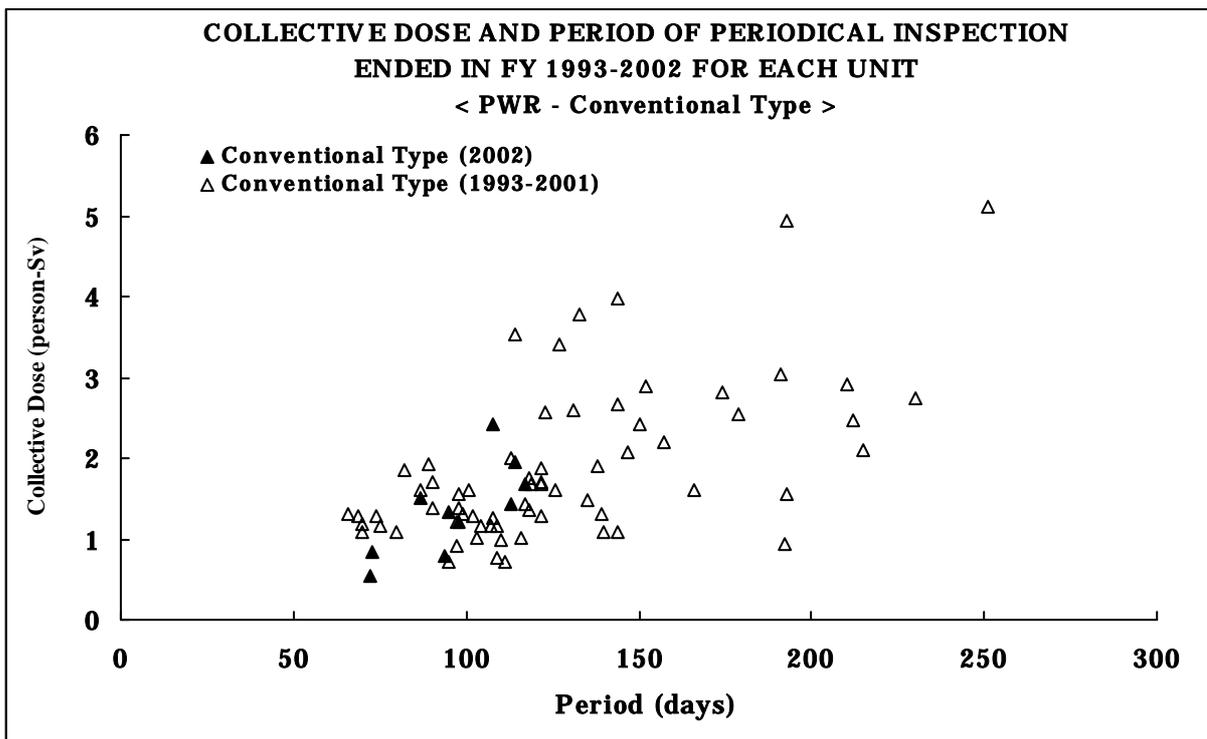


Figure 5

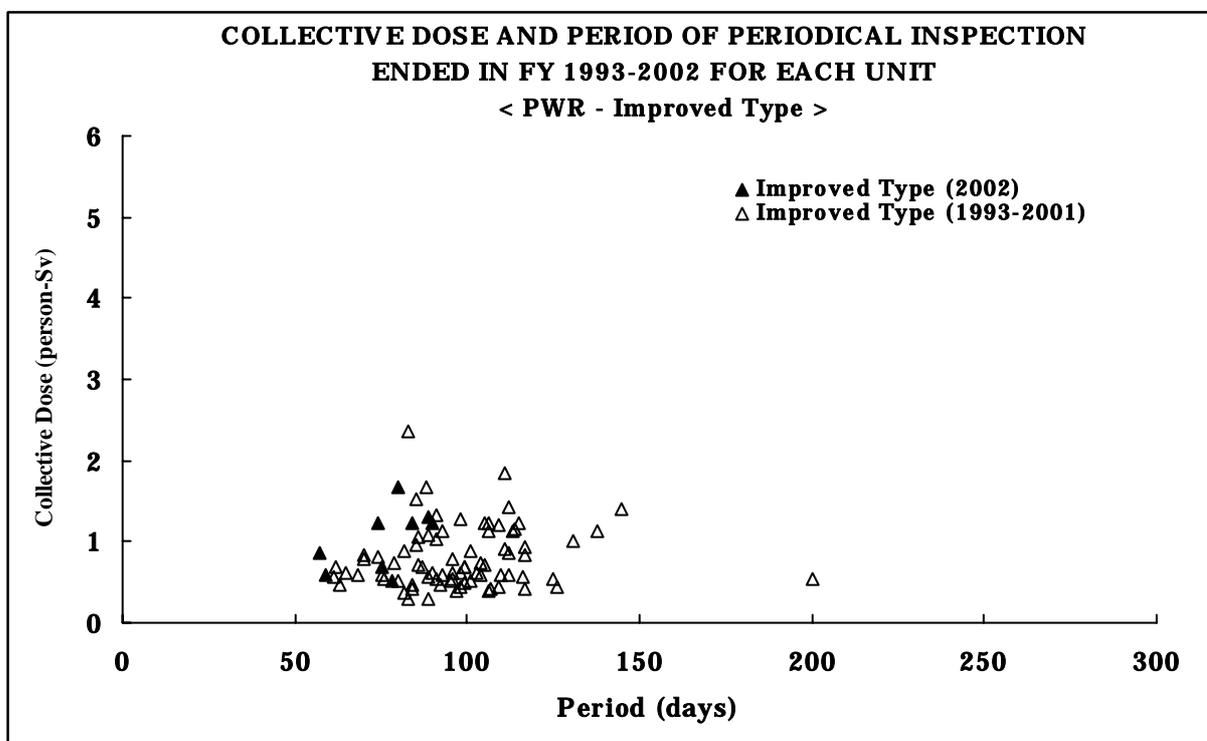


Figure 6

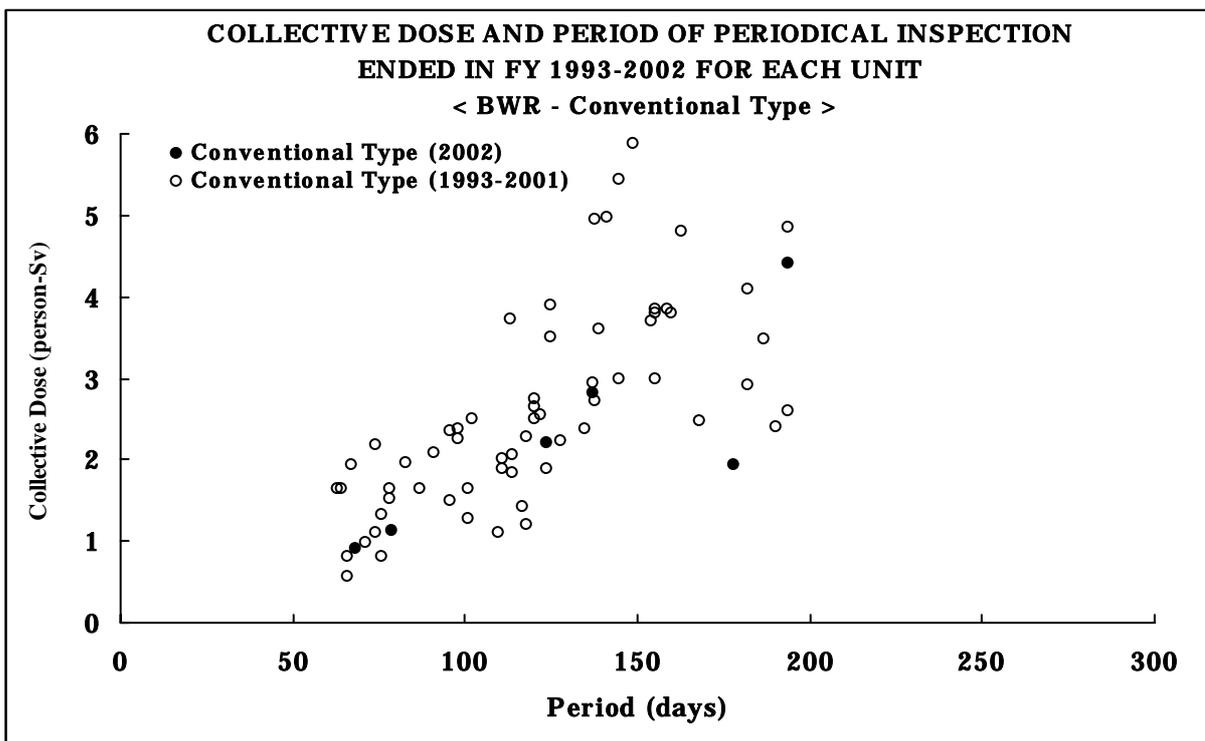


Figure 7

