OECD Nuclear Energy Agency
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ISOE

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ISOE INFORMATION SHEET

JAPANESE OCCUPATIONAL EXPOSURE DURING PERIODICAL INSPECTION AT PWRS & BWRS ENDED IN FY 2000

ISOE Asian Technical Center - NUPEC Information Sheet No. 16

This ISOE information sheet presents the Japanese occupational exposure results during the periodical inspection at PWRs and BWRs ended in FY 2000, and trends for the past decade years 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 1999 and FY 2000. The FY 2000 has been marked by the increase for conventional type of BWRs due to a large amount of modification works implemented under high radiation dose rate during periodical inspection.

Figures 1 to 3 show the average collective dose per reactor by reactor type and by generation from FY 1988 to FY 2000. 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 1990 to FY 2000. 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 1999 and FY 2000: PWRs

Plant type	Average collective dose (in person-Sv)	
	FY 1999	FY 2000
Conventional type	1.88	1.65
Improved type*	0.72	0.84
Total PWRs	1.28	1.22

Table 2. Average dose results during periodical inspection ended in FY 1999 and FY 2000: BWRs

Plant type	Average collective dose (in person-Sv)	
	FY 1999	FY 2000
Conventional type	4.45	5.35
Improved type*	0.93	0.81
Total BWRs	2.16	2.85

* Improved type plants came into commercial operation in and after FY 1993 with improved design features intended for enhanced reliability, lower exposure and more efficient inspection works.

Figure 1

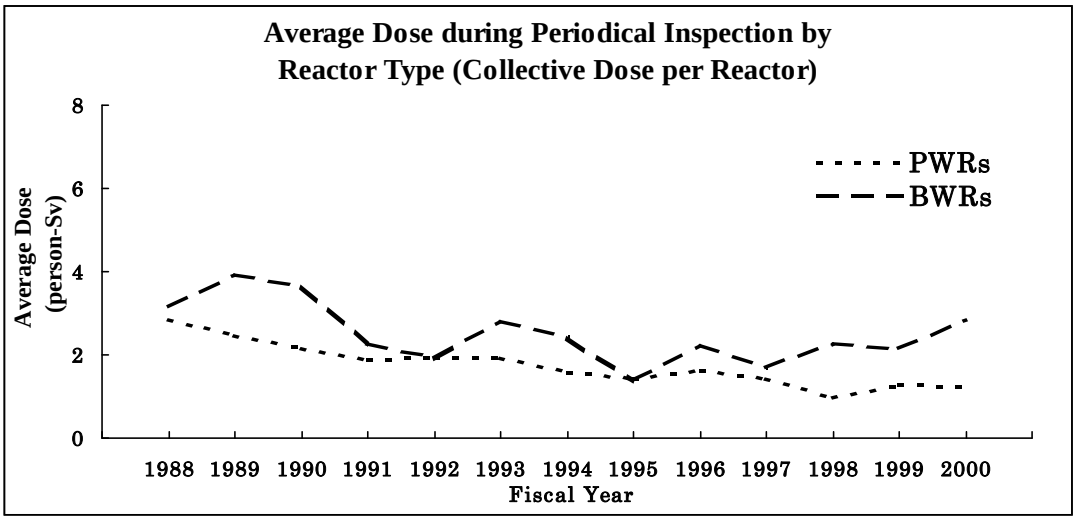

Figure 2

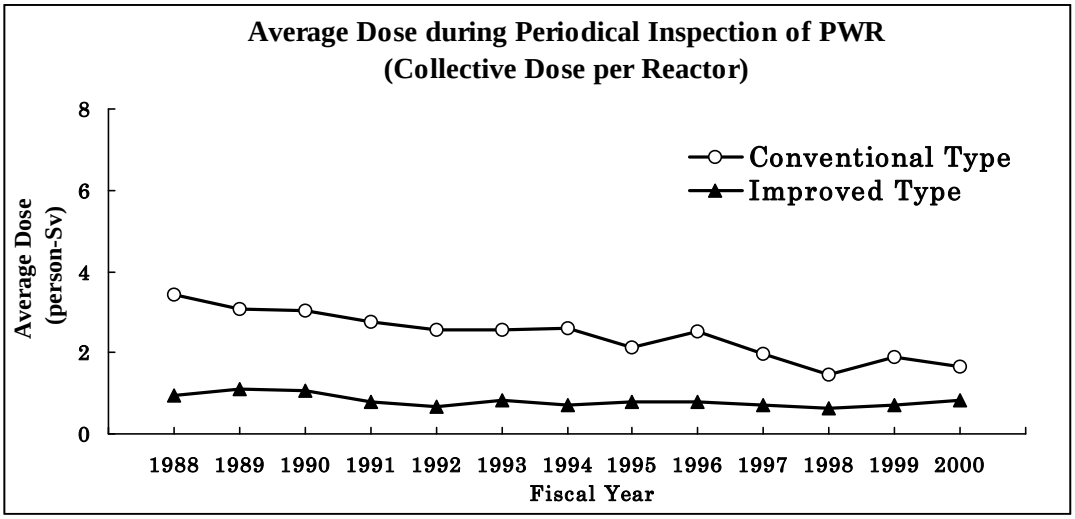

Figure 3

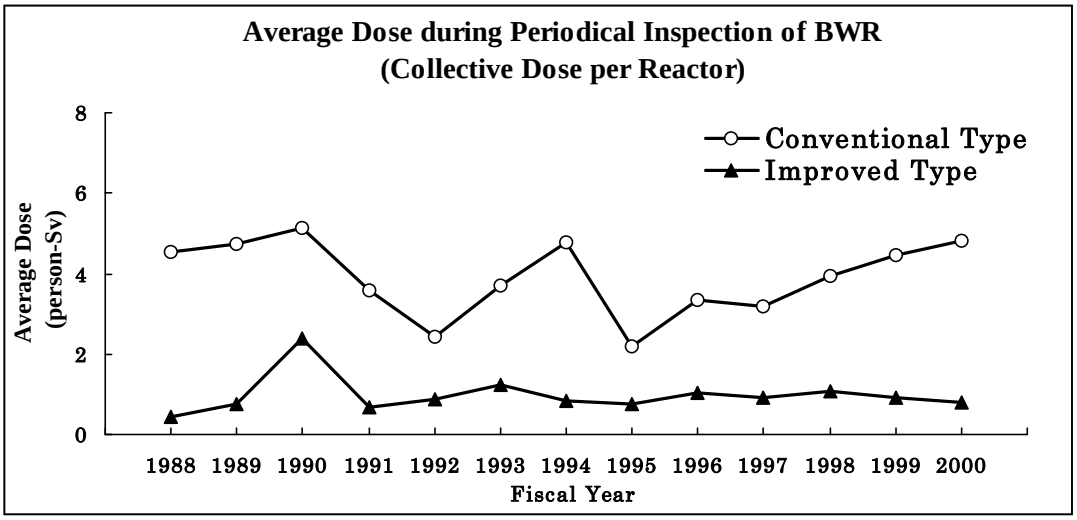

Figure 4

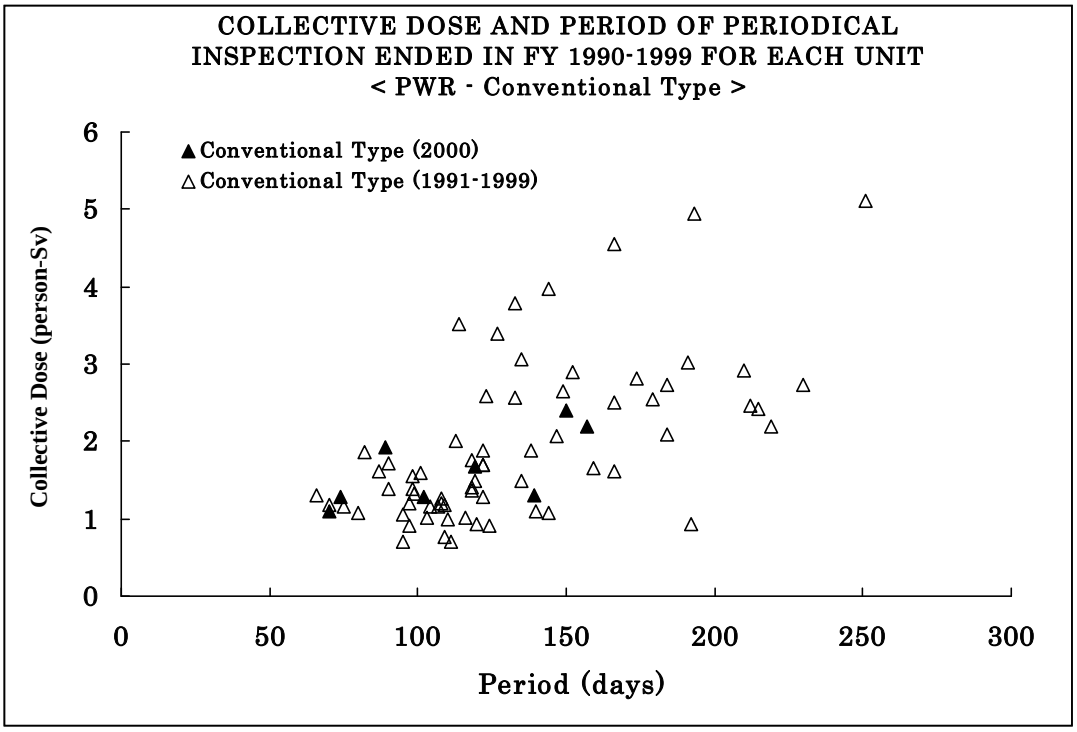

Figure 5

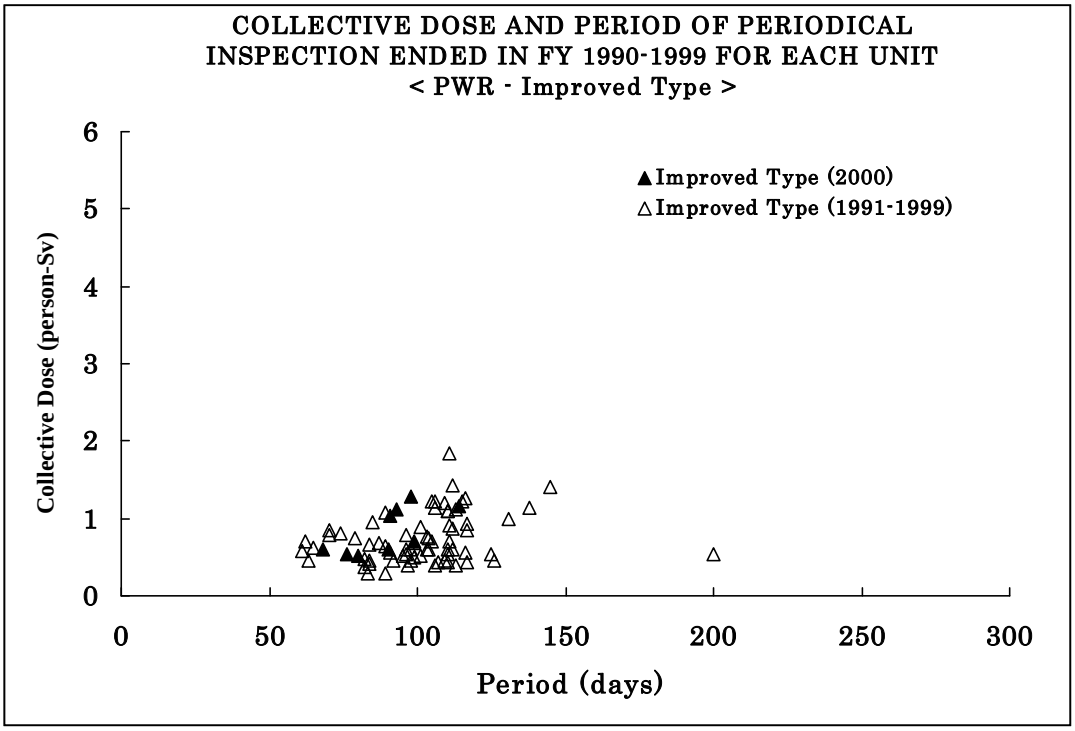

Figure 6

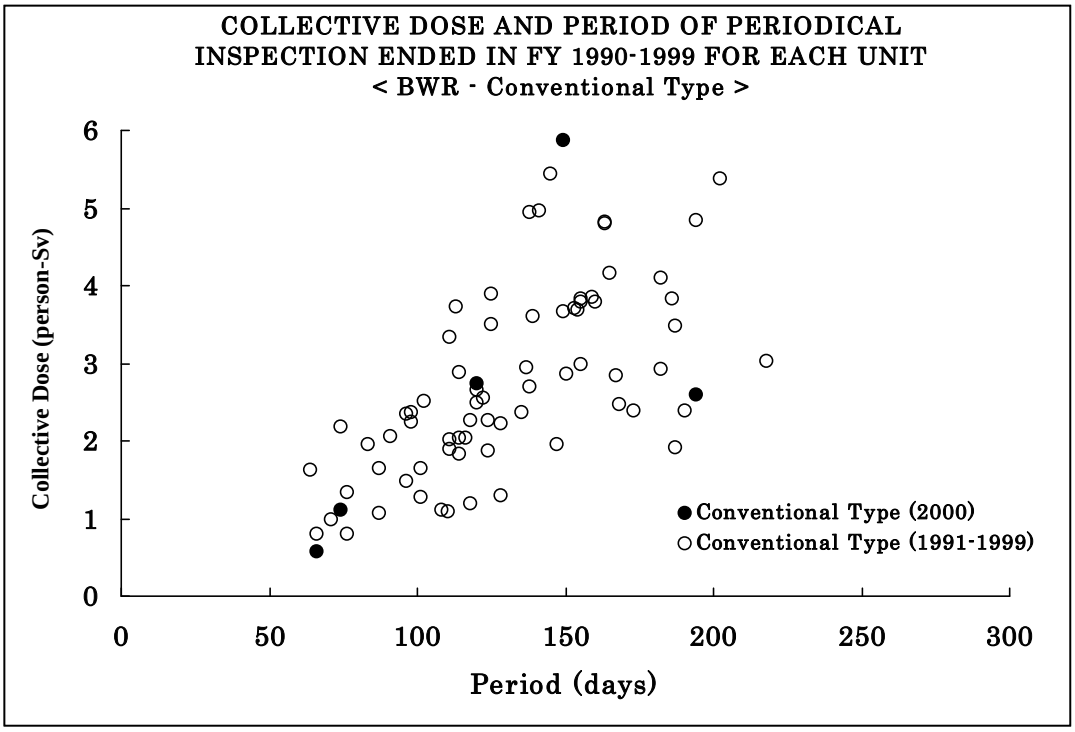

Figure 7