ANNUAL TREND IN ABNORMAL OCCURRENCE EVENTS FROM FY 1998 - 2007

Table 1 shows the number of events reported annually that were determined to meet the Abnormal Occurrence (AO) criteria. A total of 98 events were found to meet the AO criteria for the 10-year period 1998 - 2007. Of these 98 events, 34 of the events were by U.S. Nuclear Regulatory Commission (NRC) licensees and 64 of the events were by Agreement State (AS) licensees. Eighty percent of the AO events are medical events. However, the relative higher number of medical events determined to be AOs is not necessarily an indication of relative performance between the medical industry and other industries. One reason why medical events make up a large fraction of AOs is that medical therapy procedures use large sources of radiation in very close proximity to or within the body. Due to the close proximity of the sources, small errors in source location can cause high radiation doses to unintended locations, resulting in unintended doses that exceed the AO criteria. There is no discernable trend in the total number of AO events when data from FYs 1998 through 2007 are compared. Also, there were no discernable trends when analyzing NRC AO data and AS AO data separately.

It is noteworthy that although events involving the loss or theft of material account for about 45 to 50 percent of the number of events reported to NRC each year, only 1 loss/theft event in 9 years have been found to meet the AO criteria. The average number of AOs per year over the last 10 years is 9.8.

Table 1 - **Comparison of the Annual Number of Abnormal Occurrence Events**

Year	Lost/Stolen		Medical		Personnel Overexposure		Fuel Cycle Facility		Totals	
	NRC	**AS**	**NRC**	**AS**	**NRC**	**AS**	**NRC**	**AS**	**NRC**	**AS**
1998	0	0	3	1	1	0	1	0	**5**	**1**
1999	0	0	3	7	0	2	1	0	**4**	**9**
2000	0	0	1	6	1	0	0	0	**2**	**6**
2001	0	0	0	0	1	1	0	0	**1**	**1**
2002	0	1	1	3	1	3	0	0	**2**	**7**
2003	0	0	5*	7	0	2	0	0	**5**	**9**
2004	0	0	2	12*	0	1	2	0	**4**	**13**
2005	0	0	3	6*	0	0	0	0	**3**	**6**
2006	0	0	2*	5*	0	1	1	0	**3**	**6**
2007	0	0	5*	6	0	0	0	0	**5**	**6**
Totals	**0**	**1**	**25**	**53**	**4**	**10**	**5**	**0**	**34**	**64**

*Include events involving a dose to embryo/fetus.