

## ANNUAL TREND IN ABNORMAL OCCURRENCE EVENTS FROM FY 1998 - 2008

Table 1 shows the number of events reported annually that were determined to meet the Abnormal Occurrence (AO) criteria. A total of 108 events were found to meet the AO criteria for the period FY 1998 - 2008. Of these 108 events, 39 of the events were by U.S. Nuclear Regulatory Commission (NRC) licensees and 69 of the events were by Agreement State 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 2008 are compared. Also, there were no discernable trends when analyzing NRC AO data and Agreement State 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, there were no loss/stolen source events in the last 11 years that met the AO criteria. The average number of AOs per year over the last 11 years is 9.8.

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

Year	Radiation Levels Exceed Limit		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
2008	0	0	5*	5*	0	0	0	0	5	5
<b>Totals</b>	<b>0</b>	<b>1</b>	<b>30</b>	<b>58</b>	<b>4</b>	<b>10</b>	<b>5</b>	<b>0</b>	<b>39</b>	<b>69</b>

\*Include events involving a dose to embryo/fetus.