Enclosure 2

Radiography Event Special Study Breakdown

Figure 1 displays the annual number of occurrences of radiography events during the 10-year period FY 2004 to FY 2013. A trend analysis determined that the total number of occurrences for both NRC and Agreement State licensees represents a statistically significant, increasing trend (indicated by the trend line). Note that four States became Agreement States during the 10-year period. This causes the difference between the NRC-regulated and Agreement State-regulated events to widen. Because of this influence, trending was only performed on the total number of occurrences.

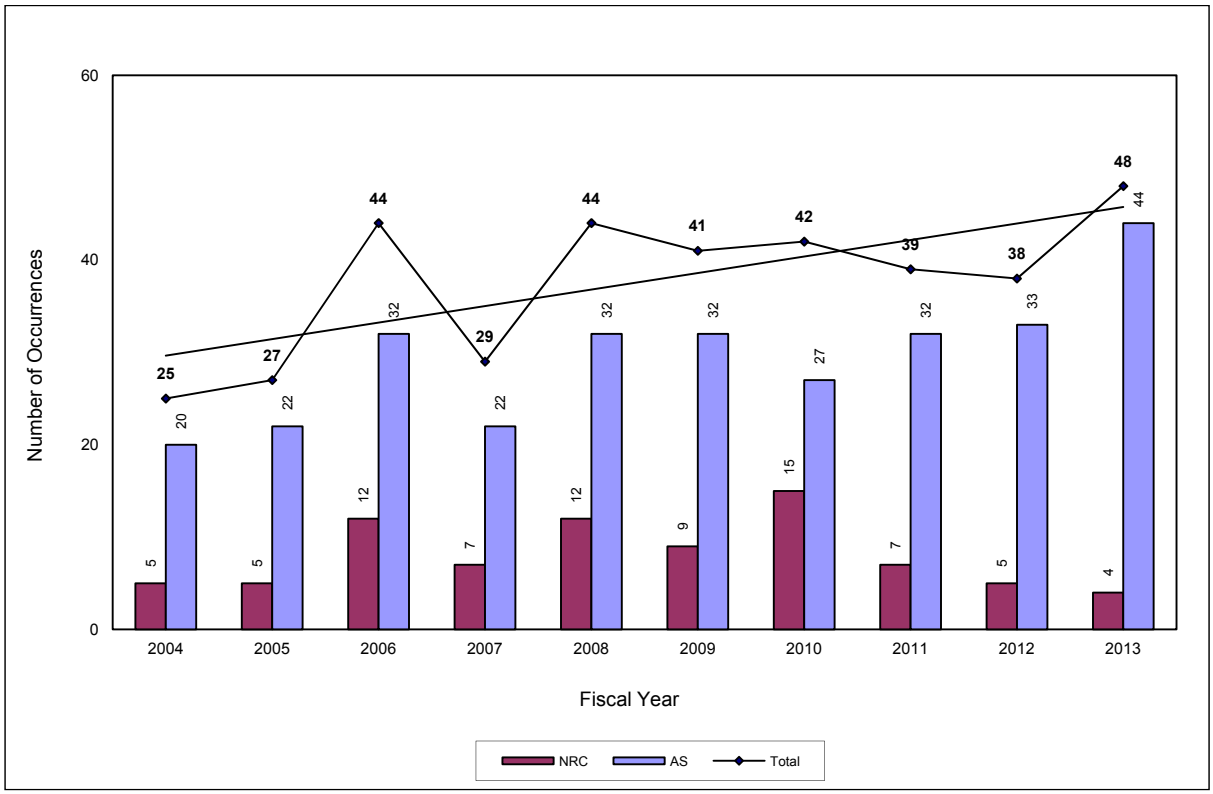

Figure 1. Radiography event occurrences for the 10-year period FY 2004 through FY 2013 (377 total, 296 Agreement State-regulated, 81 NRC-regulated)

Figure 2 displays the same data as Figure 1, but excluding FY 2004 and FY 2005. The total number of occurrences does not represent a statistically significant, increasing trend for the remaining 8-year period. Note that the FY 2013 total data is just a few occurrences higher than the preceding years.

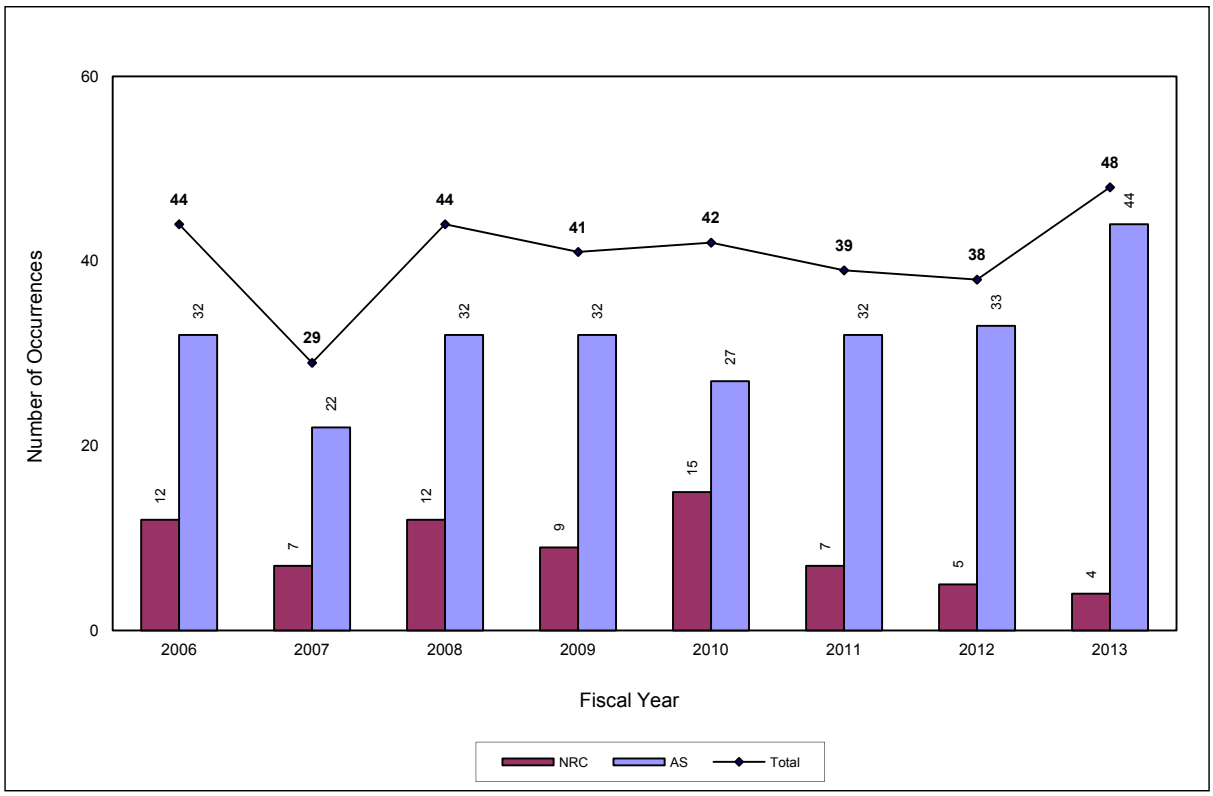

Figure 2. Radiography event occurrences for the 8-year period FY 2006 through FY 2013 (325 total, 254 Agreement State-regulated, 71 NRC-regulated)

Figure 3 displays the same data as Figure 1, adding FY 2002 and 2003. Similar to the 8-year data displayed in Figure 2, the total number of occurrences does not represent a statistically significant, increasing trend for the 12-year period.

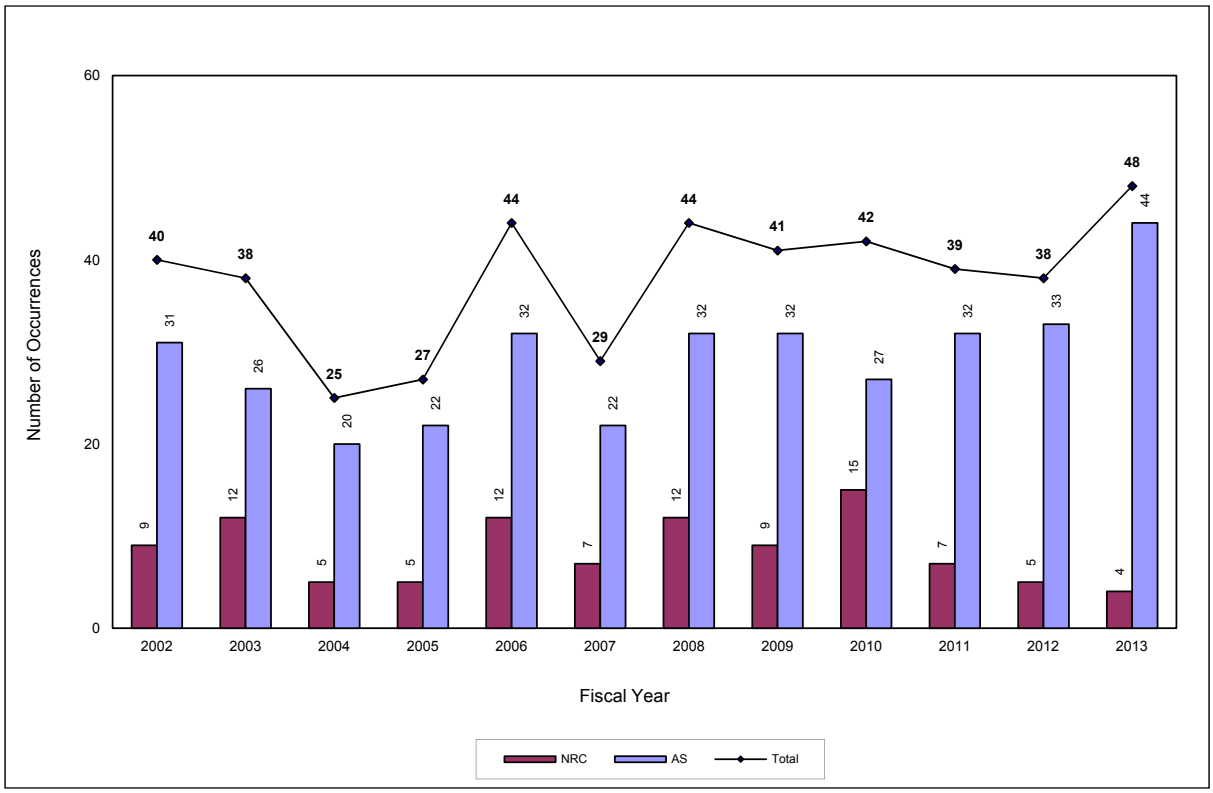

Figure 3. Radiography event occurrences for the 12-Year period FY 2002 through FY 2013 (455 total, 353 Agreement State-regulated, 102 NRC-regulated)

Figure 4 displays the number of events by type for the 10-year period FY 2004 through FY 2013. The black line represents the total number of events; the green line represents events involving equipment-related malfunctions; the red line represents radiation overexposure events; the blue line represents lost, stolen, or abandoned materials events; and the purple line represents all other types of events. The number of equipment-related events increased over the 10-year period, while the numbers of other types of events remained relatively constant.

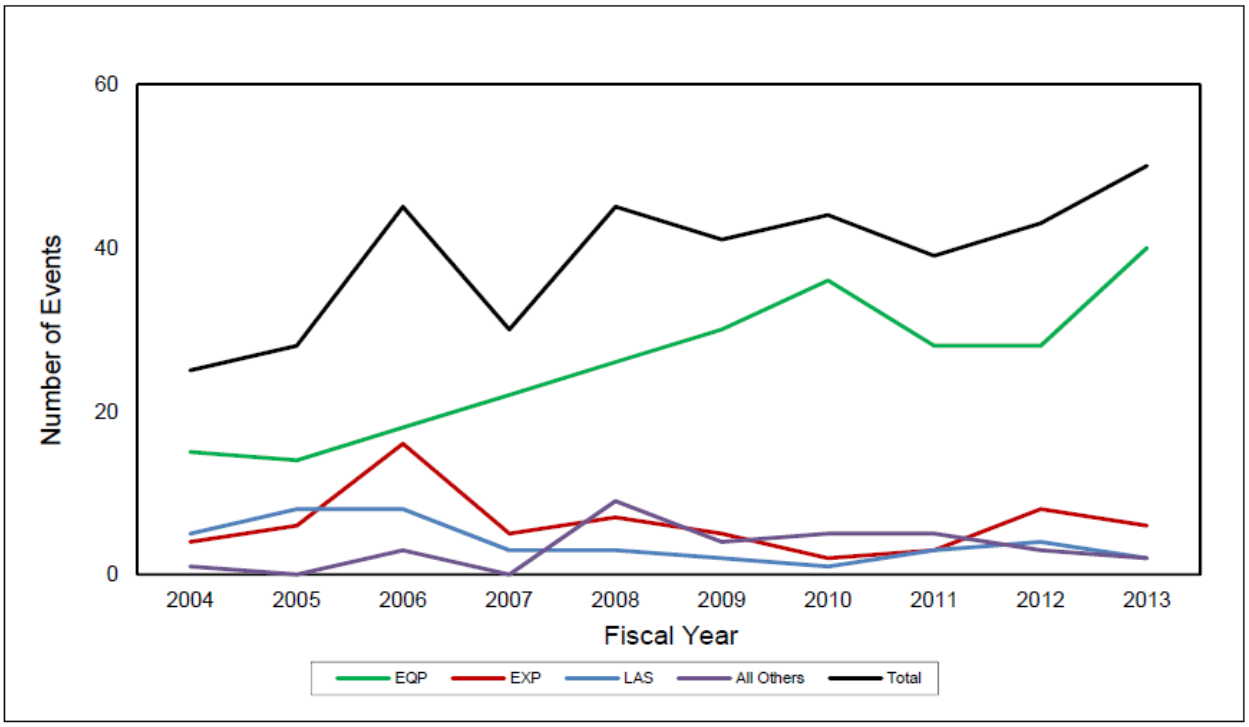

Figure 4. Radiography events by type of event for the 10-year period FY 2004 through FY 2013