General License Event Summary for January 1, 1998, to December 31, 2008

Events Involving General Licensed Devices								
			Number of Devices per Event Type**					
Devices	Number of Events*	Total Number of Devices	LAS	EQP	LKS	RLM	TRS	OTH
Tritium Exit Signs	250	7267	7249	252	0	1	0	0
Static Eliminator	127	251	241	14	11	0	2	0
Gauges (Fixed, Portable)	119	174	126	50	5	0	2	2***
Electron Capture Devices	22	33	24	0	9	0	0	0
Fluorescence Analyzers	21	23	20	4	0	0	0	0
Gas Chromatograph	7	7	4	0	3	0	0	0
Liquid Scintillation Counter	6	6	0	6	5	0	0	0
Radioluminescent Markers	1	12	12	0	0	0	0	0
Chemical Agent Monitor	1	2	2	0	0	0	0	0
Smoke Detector	1	1	1	0	0	0	0	0
Total	**555**	**7776**	**7679**	**326**	**33**	**1**	**4**	**2**

* Note that multiple types of devices may be involved in an event. Therefore, the total for the number of events per device will be greater than the total number of general licensed events.
** Note that a device event may meet multiple event types. Therefore, the sum of the devices per event type for a given device does not represent the total number for that type of device. Also, the event type descriptions and criteria may be found in Appendix A of the FY 2008 Nuclear Material Event Database Annual Report, which may be found in Enclosure 3 of this paper.
*** Note that these two "OTH" events involved radiation dose rates in unrestricted areas exceeding applicable dose limits set forth in 10 CFR Part 20. However, no individual received an over exposure.

Events Involving General Licensed Devices	
Devices	**Isotopes Used for Device***
Tritium Exit Signs	H-3
Static Eliminator	Am-241, H-3, Ni-63, Po-210
Gauges (Fixed, Portable)	Am-241, Am-Be, Ba-133, Cd-109, Cm-244, Cs-137, Fe-55, H-3, Kr-85, PM-147, Ra-226, Sr-90, Tl-204
Electron Capture Devices	H-3, Ni-63
Fluorescence Analyzers	Am-241, Cd-109, Cm-244, Co-57, Fe-55
Gas Chromatograph	Ni-63
Liquid Scintillation Counter	Cs-137
Chemical Agent Monitors	Ni-63
Smoke Detector	Am-241
Radioluminescent Safety Markers	H-3

* Note that the isotopes listed represent the isotopes for the devices involved in this general license event study.

Byproduct Material of General Licensed Devices						
	Activity (Ci) per Event Type**					
Isotope*	LAS	EQP	LKS	RLM	TRS	OTH
H-3	111551.72	3795.27	0	20	0	0
Cs-137	16.34509	2.23094	0.00015	0	1.2	1.02
Am-241	8.715511	8.80253	1.112	0	0	0
Kr-85	3.9284	0.668	0	0	0	0
Po-210	1.9656392	0.14763	0.1409	0	0.027	0
Sr-90	0.54780796	0.12	0.000005	0	0	0
Cm-244	0.403	0.01325	0.00025	0	0	0
Fe-55	0.370629	0.02	0	0	0	0
Ni-63	0.3685	0	0.14	0	0	0
Cd-109	0.19065	0.023	0	0	0	0
Pm-147	0.004933	0.003	0.0018	0	0	0
Tl-204	0.000085	0.00005	0.00005	0	0	0
Ra-226	0.000007	0	0	0	0	0
Am-BE	0	3	0	0	0	0
Ba-133	0	0.01	0.01	0	0	0
Co-57	0	0.0087	0	0	0	0
Total	**111584.5603**	**3810.3171**	**1.405155**	**20**	**1.227**	**1.02**

* Note that an event may be classified under multiple event types. Therefore, the sum of the activity per event type for a given isotope does not represent the total amount of activity for the isotope. Also, the event type descriptions and criteria may be found in Appendix A of the FY 2008 Nuclear Material Event Database Annual Report, which may be found in Enclosure 3 of this paper.

** In some cases, the activity was not reported for an event. For theses cases, the average activity for the type of source/device was used. If the activity was not reported and an average activity could not be determined the source was not included in this table.