

TABLE 4.14.4.3-2—Representative Impacts from Pantex Plant Radiological Accidents

SCENARIO	DESCRIPTION	INVOLVED WORKER (rem—50-year CEDE)	MAXIMALLY EXPOSED OFFSITE INDIVIDUAL (rem—50 year CEDE)	NON-INVOLVED WORKER (rem—50 year CEDE)	PUBLIC DOSE (person-rem)	ANNUAL SOCIETAL RISK (excess cancer fatalities per year)
1	Explosive driven plutonium dispersal from internal event	Fatalities	Cell: 49 (11) <sup>a</sup> Bay: 34	Cell: 2300 (600) <sup>a</sup> Bay: 34	1,200 (660) <sup>a</sup>	6.3 x 10 <sup>-6</sup> (3.5 x 10 <sup>-6</sup> ) <sup>a</sup>
3	Explosive driven plutonium dispersal from external event/natural phenomena	Possible fatalities*	60	40	16,000	7.2 x 10 <sup>-6</sup>
5	Tritium reservoir failure from internal event	2 rem	1.1 x 10 <sup>-2</sup>	0.30	0.030	9.5 x 10 <sup>-7</sup>
6	Pit breach from internal event	7 rem	1 x 10 <sup>-4</sup>	4 x 10 <sup>-3</sup>	0.00037	1.5 x 10 <sup>-9</sup>
7	Multiple tritium reservoir failure from external event/natural phenomena	Possible fatalities*	0.74	50	110	2.2 x 10 <sup>-8</sup>
8	Fire driven release from external event/natural phenomena	Possible fatalities*	34	3,000	1,100	2.9 x 10 <sup>-7</sup>
9	Tritium or plutonium release caused by seismic event or aircraft accident	Possible fatalities*	2.0	3.7	0.40	6.8 x 10 <sup>-8</sup>

<sup>a</sup>For cell leak area of 5 square inches.

\*Fatalities are possible if personnel are present in the vicinity of the facility.