TABLE 4.14.2.1–2.—*Summary of Consequences to the Public from Risk Significant Accidents at Pantex Plant: Configuration 1*

SCENARIO	DESCRIPTION	FREQUENCY OF SCENARIO	POPULATION DOSE[1] (excess fatal cancer)	ANNUAL SOCIETAL RISK[2] (excess fatal cancers per year)
1	Explosive driven plutonium dispersal from internal event	Extremely Unlikely	1,200 Person-Rem (5.9×10^{-1} excess fatal cancers) Worker Fatalities	6.3×10^{-6}
2	Accidental high explosives detonation from internal event	Anticipated	No Public Impact, Worker Fatalities	NA
3	Explosive driven plutonium dispersal from external event/ natural phenomena	Not Reasonably Foreseeable	16,000 Person-Rem (8.0 excess fatal cancers), Worker Fatalities	7.2×10^{-6}
4	Accidental high explosives detonation from external event/ natural phenomena	Unlikely	Worker Fatalities, No Public Impact	NA
5	Tritium reservoir failure from internal event	Anticipated	0.080 Person-Rem (4.0×10^{-5} excess fatal cancers)	9.5×10^{-7}
6	Pit breach from internal event	Unlikely	0.00037 Person-Rem (1.9×10^{-7} excess fatal cancers)	1.5×10^{-9}
7	Multiple tritium reservoir failure from external event/natural phenomena	Not Reasonably Foreseeable	110 Person-Rem (0.055 excess fatal cancers)	2.2×10^{-8}
8	Fire driven plutonium release from external event/natural phenomena	Not Reasonably Foreseeable	1,100 Person-Rem (0.55 excess fatal cancers)	2.9×10^{-7}
9	Tritium or plutonium release caused by seismic event or aircraft accident	Unlikely	0.40 Person-Rem (2.0×10^{-4} excess fatal cancers)	6.8×10^{-8}
10	Chlorine release due to failure of system piping and valves or cylinder from natural phenomena	Unlikely	No adverse public impacts	NA
11	Chlorine release due to failure of system piping and valves or cylinder from internal event	Unlikely	No adverse public impacts	NA

[1]Appendix D presents details of the dose and excess fatal cancer consequence assessment methodology. No prompt fatalities in members of the general public from these scenarios are anticipated.
[2]Obtained by multiplying the scenario frequency by the excess cancer fatalities due to that scenario.