transport personnel and members of the general public as well as the potential release of radioactive material during an accident. The ADROIT code calculates the impacts from both incident-free transport and potential accidents resulting from pit shipments between Pantex Plant and the alternative pit storage sites. Table 4.16.4.1–1 summarizes the impacts associated with shipments of 20,000 pits.

The incident-free transport of pits would result in a maximum of 1.5×10^{-3} excess LCFs in the exposed population on and along the roadways. The baseline cancer fatality incidence in the general public is 20 percent.

The public risk from dispersal accidents is the expected number of latent cancers caused by accidents involving the dispersal of radionuclides from SSTs. Given a very severe transportation accident, radioactive materials could be dispersed into the atmosphere and subsequently expose the general public in the vicinity of the accident to ionizing radiation. Table 4.16.4.1–1 presents radiological risks from dispersion accidents occurring during intersite weapon shipments. The accidental dispersal of radionuclides from these shipments is estimated to cause 5×10^{-7} excess LCFs in the population along the pit shipment routes with a maximum annual individual excess LCF risk of 1×10^{-10} for the SRS alternative. The annual LCF risk from all causes for an individual in the U.S. is 2.2×10^{-3}.

4.16.4.2 *Impacts of Relocating 8,000 Pits*

Under this option, 8,000 pits would be relocated from Pantex Plant to one or more of four candidate storage sites: NTS, SRS, Hanford Site, and Manzano WSA at KAFB.

Table 4.16.4.2–1 summarizes the impacts associated with 8,000 pit shipments. Impacts related to loading or unloading pits into SSTs are discussed in Section 4.12, Intrasite Transportation.

The incident-free transport of pits would result in a maximum of 6×10^{-4} excess LCFs in the exposed population on and along the roadways.

TABLE 4.16.4.1–1.—*Radiological Exposure and Health Risk from 20,000 Pit Shipments from Pantex Plant to Other Potential Sites*

GENERAL PUBLIC	NEVADA TEST SITE	SAVANNAH RIVER SITE	HANFORD SITE	MANZANO WSA
Cumulative Dose (Person-Rem)[1]	2.0	3.0	NA	0.5
Maximally Exposed Individual (rem)	4×10^{-3}	4×10^{-3}	NA	4×10^{-3}
Expected Excess LCFs from Incident Free Impacts	1×10^{-3}	1.5×10^{-3}	NA	2.5×10^{-4}
Expected Excess LCFs from Plutonium Dispersal Accidents	4×10^{-7}	5×10^{-7}	NA	4×10^{-8}
Maximum Annual Individual LCF Risk from Dispersal Accidents	4×10^{-11}	1×10^{-10}	NA	1×10^{-11}

[1] Using a dose rate of 1 mrem/yr at 1 meter from the surface of the trailer.
NA - Not Available