TABLE 4.16.4.2–1.—*Radiological Exposure and Health Risk from 8,000 Pit Shipments from Pantex Plant to Other Potential Sites*

GENERAL PUBLIC	NEVADA TEST SITE	SAVANNAH RIVER SITE	HANFORD SITE	MANZANO WEAPONS STORAGE AREA
Cumulative Dose (Person-Rem)	0.80	1.2	1.2	0.20
Maximally Exposed Individual (rem)	1.6×10^{-3}	1.6×10^{-3}	1.6×10^{-3}	1.6×10^{-3}
Expected excess LCFs from Incident Free Impacts	4.0×10^{-4}	6.0×10^{-4}	6.0×10^{-4}	1.0×10^{-4}
Expected excess LCFs from Plutonium Dispersal Accidents	1.6×10^{-7}	2.0×10^{-7}	3.2×10^{-7}	1.6×10^{-8}
Maximum Annual Individual LCF Risk from Dispersal Accidents	4.0×10^{-11}	1.0×10^{-10}	1.0×10^{-10}	1.0×10^{-11}

The public risk from dispersal accidents is the expected number of latent cancers caused by accidents involving the dispersal of radionuclides from SSTs. The accident scenarios analyzed here have the following characteristics:

- Accidents that involve either a severe collision and fire (such as a collision with a heavy truck or fixed object that also involves a fuel fire) or a very long duration fuel fire (such as an accident with a fuel tanker or train that involves a fuel fire).
- Accidents that result in a fire-driven dispersal.

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 4.16.4.2–1 presents radiological risks from dispersion accidents occurring during intersite weapon shipments. The accidental dispersal of radionuclides from these shipments is estimated to cause a maximum of 3.2×10^{-7} excess LCFs in the population along pit shipment routes with a maximum annual individual excess LCF risk of 1×10^{-10} for the Hanford Site and SRS alternatives. The annual LCF risk from all causes for an individual in the U.S. is 2.2×10^{-3}.

4.16.5 Cumulative Impacts

The cumulative impacts presented here include impacts of the continued operations at Pantex Plant combined with impacts associated with activities described in the WM PEIS, SSM PEIS, and S&D PEIS. Since the Pantex Plant EIS Proposed Action and the SSM PEIS No Action Alternative represent a continuum of operations, the impacts associated with any new mission or facility that could be implemented at Pantex Plant are discussed in the context of that continuum. The impacts from the WM PEIS program are combined with those of the Pantex Plant EIS Proposed Action. The impacts from the S&D PEIS are combined with those of the SSM PEIS No Action Alternative. A detailed discussion of this methodology is presented in section 4.2.

Pantex Plant-related transportation impacts result in a small increase in cumulative exposures from nationwide radioactive material shipments. Under the Proposed Action, Pantex Plant-related intersite transportation activities will result in a maximum annual collective dose