TABLE 4.12.2.1–1.—*Estimated Transportation and Staging Worker Exposures for the Proposed Action (Includes Transfers Associated with Pit Repackaging for 20,000 Pits)*

NUMBER OF WEAPONS LEVEL	10-YEAR WORKER EXPOSURE (PERSON-REM)	YEARLY AVERAGE EXPOSURE (PERSON-REM)	EXCESS CANCER FATALITIES FOR 10-YEAR EXPOSURE
2,000	61	6	0.024
1,000	48	5	0.019
500	41	4	0.016

addition to the pit movements described above. Table 4.12.2.1–1 presents the estimated exposures to the 50 people (based on current operation levels) who are directly involved with transportation and staging operations. Workers who are not directly involved are not allowed in the vicinity of material transfer operations. These exposures were estimated using historical dosimetry information from the Transportation and Staging Department. No public exposure to radiation is expected from non-incident onsite material transfers and Zone 4 staging operations (Pantex 1996c; Battelle 1994).

Excess cancer fatality risks were calculated using a dose-to-risk conversion factor of 4×10^{-4} excess cancer fatalities per person-rem (NAP 1990). Assuming an operations on 2,000 weapons activity level and assuming that the same 50 people remain involved in material handling for the 10 years under evaluation in this EIS, there would be an additional 0.024 excess cancer fatalities in this group due to this exposure. The probability of cancer fatalities from all causes in the general population is estimated at approximately 20 percent, which implies that 10 of 50 workers who are not exposed to radioactivity from Pantex Plant will develop a fatal cancer anyway.

Assuming that a maximum exposed worker receives less than 300 millirem per year (which is consistent with historical doses [see Table 4.12.1.3–1]) over the timeframe evaluated in this EIS, the incremental increase in lifetime fatal cancer probability from the projected exposure period of 10 years is approximately 1.2×10^{-3} (1 chance in 833). The estimated probability of an average member of the public developing a fatal cancer from causes not related to this radiation exposure is 0.2 (1 chance in 5).

4.12.3 Impacts of No Action Alternative

Under the No Action Alternative, DOE will perform the following onsite transportation and staging activities at Pantex Plant:

- Dismantlement activities with accompanying onsite hazardous material transfers until the 12,000 pit storage limit is reached (e.g., weapons, pits).
- Stockpile management activities with accompanying onsite hazardous material transfers (e.g., weapons, tritium reservoirs).
- The transportation associated with the repackaging of pits from AL–R8 containers into other DOT-criteria containers (i.e., onsite pit transfers of up to 12,000 pits between Zone 4 and Zone 12).
- Storage of 12,000 pits with accompanying inspection, inventory, and surveillance activities at Zone 4.
- Continuation of Zone 4 staging of weapons, CSAs, and RTGs with accompany-