2003 EIS

tank residuals causing a later secondary peak, and with long-term releases from solid wastes, including ILAW, appearing during the last several thousand years of the 10,000-year post-closure analysis. Figure S.19 illustrates these results.

SAC was also employed to evaluate the relative role in overall release of different waste types, including solid waste, past liquid discharges, past tank leaks, future tank losses, tank residuals, unplanned releases, and facilities including canyon buildings. The variability in the results is due to variability in the inventory, release, and transport of the contaminants. In the simulation, the contribution to technetium-99 from solid waste releases to groundwater would amount to approximately 20 percent of the cumulative release from all Hanford sources. For uranium, releases from solid waste to groundwater are much lower. The majority of the technetium-99 and uranium releases from wastes (other than ILAW) were predicted to occur from liquid discharge sites (e.g., cribs, ponds, ditches) used in the past and from unplanned releases on the Central Plateau and from off-plateau waste sites.

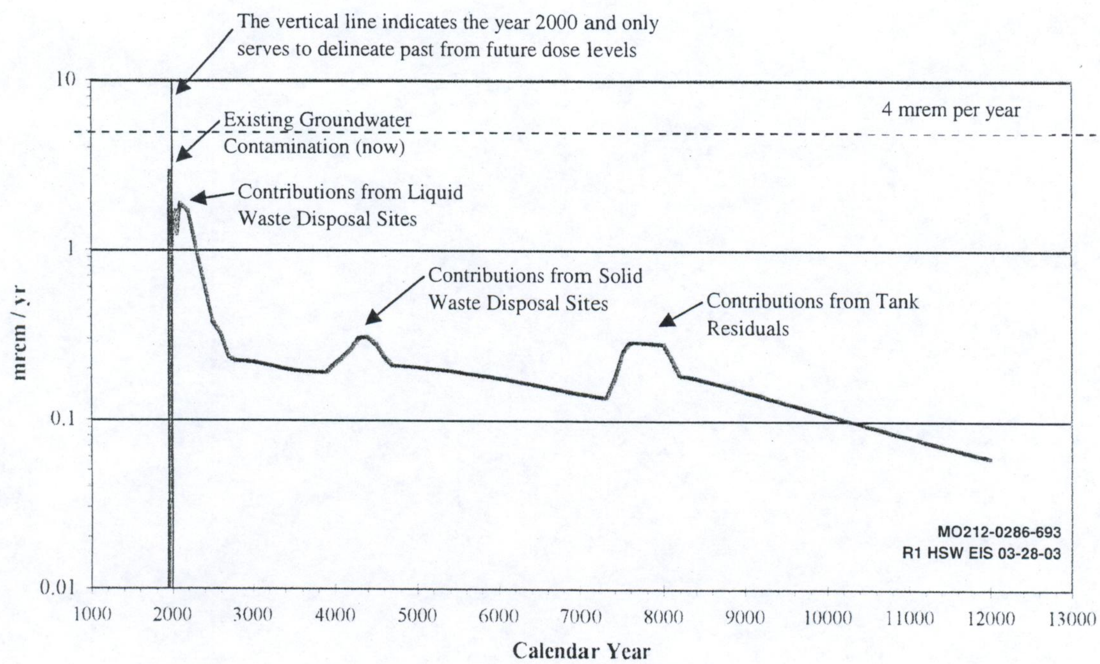


Figure S.19. Annual Drinking Water Dose from Technetium-99 in Groundwater Southeast of the 200 East Area from All Hanford Sources Including ILAW

Uncertainties

Even with the knowledge gained over the past decade in addressing our environmental cleanup challenges, there still are a great many unknowns. Waste site inventories, both in terms of chemical and radioactive contaminants, are not precisely known for many of the solid and liquid wastes sites present on the Central Plateau. Although the overall quantities of radionuclides generated at the Hanford Site are relatively well known, the actual amount in specific waste sites is uncertain. In addition, the long-term performance of our in-place waste site remedies and closure techniques is largely unproven. The analysis conducted within the HSW EIS employed a range of models and techniques, each with its own set of

TOTAL RAD DOSE (H^3, Tc-99, I-129)

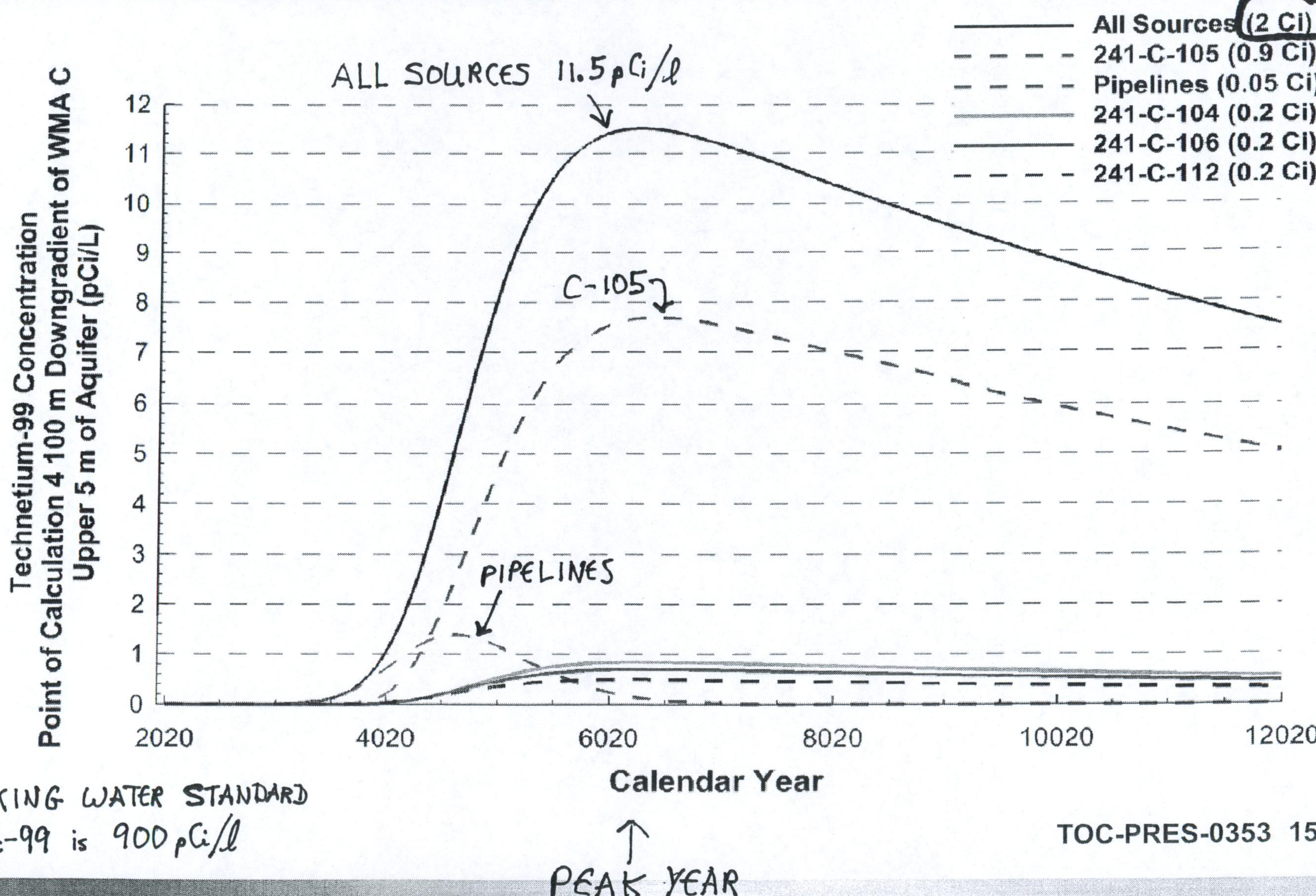
	DRINKING-WATER WELL USER	RESIDENT FARMER	AMERICAN INDIAN RESIDENT FARMER
CORE ZONE BOUNDARY	54 mrem/yr	127 mrem/yr	250 mrem/yr
	PEAK OCCURS IN 2050		
A BARRIER BOUNDARY	3.27	7.37	14.3
	PEAK OCCURS IN 2058		
COLUMBIA RIVER	0.4	1	2
	PEAK OCCURS IN 2541		

from 2009 Draft EIS

JANUARY 2015

washington river protection solutions

Technetium-99 Concentration in Groundwater from Specific WMA C Tank and Pipeline Residual Sources



DRINKING WATER STANDARD FOR Tc-99 is 900 pCi/l