EPA Appendix F - Risk Assessment # 14

Comment:

Section 5.5.1: In its justification on page 11 for the use of RESRAD, the SFS describes the similarities between the results obtained using EPA's methodology and RESRAD when the exposure parameters used "were consistent with the exposure parameters on the EPA website." Yet the text on page 19 notes that, with the exception of the parameters in Table 5-2, "all other RESRAD input variables were left at their default values." The SFS would benefit from some discussion of how EPA's exposure parameters were taken into account in the RESRAD evaluation.

Discussion:

A discussion of the general approach used to calculated risks and doses from covered RIM was provided in Section 4.3.4.3 of Appendix F (in this new version, the section has been changed to Section 4.2.4.3). The use of RESRAD in the draft SFS was limited to the evaluation of risks from buried RIM via the direct radiation and radon-222 pathways. RESRAD was used for no other risk assessment calculation in the Appendix. (It is used for calculation of TEDE in the short-term risk assessments.)

Parameters that were used in calculating risks and doses from irradiation and radon emanation were changed to match similar EPA exposure parameter values for its outdoor worker scenario. Parameters describing other forms of environmental transport or other exposure mechanisms were left at their default values for all RESRAD simulations. Because these values were not used during the simulations, they would not impact the calculated risks results.

The last paragraphs of Section 4.2.4.3 and Section 5.5.1 have been changed in an effort to clarify the use and impact of default parameter values used to calculate risk and dose from covered RIM.

Proposed Text Change:

The last paragraph of Section 4.2.4.3 now reads:

"As stated in previous sections, radiocarcinogenic risks involving exposures to surface soils were calculated using results obtained from the EPA's web-based PRG calculator. Risks from covered materials are not addressed by the EPA PRG calculator, and the ROD-Selected Remedy and the proposed "Complete Rad Removal" alternatives would leave covered materials on the Site. RESRAD was used to calculate risks only from radiation exposures from covered materials and to radon emanating from covered materials."

The last paragraph of Section 5.5.1 now reads:

"Because the only potential exposure routes are exposure to direct radiation penetrating the cap and emanation of radon through the cover, RESRAD was used to quantify carcinogenic risks from these two pathways. The RIM concentrations used to represent the sources of potential exposures are listed in Table 5-1. The exposure factors listed in Table 5-3 describe the reasonably maximally-exposed (RME) individual receptor considered. Table 5-4 lists the scenario specific physical information used in this simulation. Parameters describing other forms of environmental transport or other exposure mechanisms were left at their default values. These parameters were not used during the risk calculation and changing their values would not impact calculated risks or doses."

EPA FEEDBACK:

EPA accepts this response.