{In Archive} Comments on DRAFT for Review: Radiation Outdoor Surfaces PRG (SPRG) risk calculator
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to:
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07/25/2007 07:18 PM
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1. User's Guide, Disclaimer, third paragraph. The discussion points the user to the PRG calculator for contaminated soils and the BPRG calculator for contaminated buildings. There should be some plain guidance to the user on the integration of the PRG, BPRG, and SPRG calculators as many sites will have contaminated soils, outdoor surfaces, AND indoor building surfaces. Several of the exposure pathways in the various calculators overlap and it should be clear to the user if/how they can/should adjust one or more of the calculated PRGs to account for that. Section 2.3, SPRG in Context of Superfund Modeling Framework, would be a good place for the added discussion. (Much of the discussion currently in Section 2.3 and links to Part 3 of the Technical Basis Document does not seem appropriate for the SPRG calculator. Part 3 is a comparison of water fate and transport models which do not play a role in SPRG conceptual site model.)

2. User's Guide, Disclaimer, third paragraph. For uranium toxicity calculations, the SPRG guide points the user to the SSG for Chemicals calculator. However, it is not clear that that calculator's inputs and pathways are appropriate for uranium on outdoor hard surfaces. The only input for uranium is for soluble salts and when default SSL's for ingestion and inhalation are requested, only an ingestion value is provided. That value of 46.9 mg/kg is not directly comparable to the ingestion/inhalation SPRGs that are provided in surface activity units.

3. User's Guide, Introduction, tenth paragraph. The parenthetical "(soil and water)" is not appropriate as the SPRGs are for contaminated hard surfaces.

4. User's Guide, Conceptual Site Model. Because it makes such a large difference in calculated PRGs, the CSM diagram should show both the wind and mechanical release mechanisms.

5. User's Guide, Technical Support Documentation, Section 4. In the description of the exposure scenarios on the figures for the 3-D Direct External Exposure to Contaminated Building Materials, the assumption is that the buildings were constructed with contaminated materials. This PRG will also be very useful for contamination that infiltrates into porous materials and is either purposefully or unintentionally fixed in place. The description should be modified to describe the applicability of these SPRGs for the situations.

6. User's Guide, Technical Support Documentation, Section 4.1, last paragraph. The discussion points out that the resulting units of the SPRG

are pCi/cm². Discussion should be added to show that for the four volumetric SPRGs, the units are pCi/g. (The appropriate units are shown in the equations, however, the volumetric values are not discussed as are the surface values.)

7. Comment #6 above also applies to the last paragraphs of Sections 4.2.1 (Outdoor Worker) and 4.2.1 (Indoor Worker). The Indoor Worker section should be renumbered 4.2.2.

8. 6. User's Guide, Technical Support Documentation, Section 4.3.10, last paragraph. The statement "The default of 0.015 (g/m2) was chosen, with California interstate ADTV, for this calculator as a conservative value suitable for producing default SPRGs. However, selecting another state and roadway class will provide a more accurate SLF and ADTV." Use of state specific needs to be emphasized even more. By choosing the values for Nebraska local roads, the mechanical SPRG for Cs-137 was reduced from 3E-7 to 4E-2 pCi/cm². The choice of CA as a default (its traffic is almost double as much as the next state) may be too conservative.

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Subject
DRAFT for Review: Radiation
Outdoor Surfaces PRG (SPRG) risk
calculator

Attached for your review is a draft of the draft Radionuclide Outside Surfaces Preliminary Remediation Goals (SPRG) electronic calculator. This calculator is designed to develop cancer risk-based (1 x 10-6) PRGs for hard surfaces such as building slabs, outside walls, sidewalks and roads at radioactively contaminated sites. Please send me your written comments by COB Friday June 22.

The URL is [redacted]
When prompted, by a "Security Alert" box asking "Do you want to proceed" click on Yes"
The site is password protected,
User ID = [redacted]
Password = [redacted]

An earlier draft of the SPRG calculator was distributed on March 13, 2006.
Presentations have been made on the SPRG calculator at the 2006 and 2007 National Superfund Radiation Meetings.

Planned Changes to Calculator
We are planning to expand the SPRG calculator by adding scenarios to address settled dust and fixed external contamination on only one plane (e.g., foundation slab without other buildings nearby). This will be very similar to the soil scenarios in the PRG calculator, but will include a new positioning factor adjustment scheme for external exposure slope factors to replace the Area Correction Factor in the PRG calculator and SSG documents.

Conference Call
I have set up a conference call to discuss the draft SPRG calculator to help facilitate your review and written comments. The conference call is on Thursday June 7, from 1:00 to 2:00 pm EST. The call in number is (866) 299-3188, with a conference code of [redacted].