RE: [EXTERNAL] Re: Rad Toolbox Bug

From: Schwahn, Scott O. (schwahnso@ornl.gov)

To: eckermank@bellsouth.net; eckermankf@ornl.gov

Cc: leggettrw@ornl.gov

Date: Thursday, September 10, 2020, 11:18 AM EDT

Fair enough – thanks. Felt like I needed to report it. Should I report it to the NRC somehow?

From: KEITH F ECKERMAN <eckermank@bellsouth.net>
Sent: Thursday, September 10, 2020 9:39 AM
To: Eckerman, Keith F. <eckermankf@ornl.gov>; Schwahn, Scott O. <schwahnso@ornl.gov>
Cc: Leggett, Richard Wayne <leggettrw@ornl.gov>
Subject: [EXTERNAL] Re: Rad Toolbox Bug

Scott-

Yes it appear you have one shot at getting the correct answer. One can not repeatedly change the desired units. It may even be necessary to exit and restart the program to clear it's memory of the the initial units when using the calculation feature.

I was not aware of this issue; first time reported to me. I don't believe it has been reported to NRC but I've not checked their web-site. NRC does not alert software authors of user reported difficulties or suggestions.

I am not in a position to fix the problem and my retired co-author has indicated she has no interest.

Take care in these times,

Keith

On Thursday, September 10, 2020, 07:24:02 AM EDT, Schwahn, Scott O. <schwahnso@ornl.gov> wrote:

Keith, I found a repeatable bug (meaning, I get different answers than I should, repeatedly). I'll send some screenshots below. I'm using the Dose Calculations module, FGR12 tab. I want to calculate dose rate from immersion in an N-13 cloud. Input is microCi/m3.

When I click Display, I initially get 5.53E-6 Sv/s. When I change units to rem, I get 3.62 rem/s (but the title at the top stays the same as Sv/s).

When I click OK and then again click Display, it comes back to give me 5.53E-4 rem/s. So that is consistent with the initial Sv/s display. When I change units again to Sv, it shows me 3.62E-2 Sv/s (again, with the conflicting title at the top). Repeating these steps gives me the repeated cycle.

If I stay in the display page and repeatedly change units back and forth between rem and Sv, I get a huge variety of wrong answers.

I hope you're doing well!

Scott

Radiological Toolbox   —   □   ✕

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Biological Data		Nuclide	Activity		Select exposure mode:
		N-13	3.27E+03		⦿ Air Submersion
Decay Data					○ Water Submersion
					○ Ground Surface
Dose Coefficients					○ 1 cm Soil
					○ 5 cm Soil
Dose Calculations					○ 15 cm Soil
					○ Infinite Soil
Early Inhalation					
					Paste Decay Results
Element Data					
					Select Units Clear Grid
Material Data					
					µCi / m^3
Public Exposure Data					
					Display
Radiation Field Data					
					Help
Risk Coefficients					
					Refs
Supplemental Data					

Public External Coefficients (FGR 12)

Worker Coefficients (ICRP 30)   Worker Coefficients (ICRP 68)

Public Ingestion Coefficients   Public Inhalation Coefficients