LSNReviews

From: Roland Benke
Sent: Monday, July 11, 2005 4:48 PM
To: Timothy McCartin; Donald Hooper; Christopher Grossman; Richard Codell
Cc: Andy Campbell; James Winterle
Subject: RE: ashremob calculations
Attachments: InitialDepOnly_r256.xls; parameter_values.txt

In order to highlight the contribution from the initial deposit, I set the weighting factors for fluvial and eolian remobilization to zero. Several short-duration spikes from individual realizations are noticeable in the curve for inhalation dose averaged over all realizations (see plot in the attached spreadsheet). Please note that the plotted results are raw data from the rgssa.tpa output file and have not been probability weighted. The second attachment lists changes made to the TPA input parameter values from their default settings.

Roland

-----Original Message-----
From: Timothy McCartin [mailto:TJM3@nrc.gov]
Sent: Monday, June 27, 2005 6:11 AM
To: dhooper@cnwra.swri.edu; rbenke@cnwra.swri.edu; Christopher Grossman; Richard Codell
Cc: Andy Campbell
Subject: Re: ashremob calculations

Based on Dick's description I have the same problem - when we did the probability right on the direct release the mean dose dropped by about a factor of seven.

>>> Richard Codell 06/24/05 05:31PM >>>
I ran tpa501betac with the ashremob turned on and 400 vectors. I plot the mean of the 400 vectors and the first 10 vectors on the attached jpg file.
It looks good, but I am concerned that these calculations with ashremob don't pick up the spiky part of the dose caused by the direct deposition at the RMEI by airborne transport. If you run same case without ashremob, it uses the old ashplume model with wind directed toward the RMEI, and leads to relatively large, but short-duration spikes. For that case we need to use the convolution procedure, but not apparently with the ashremob calculations since they are spread out in time. My question is "does the new procedure properly take into account the part of the dose due to the direct deposition of airborne ash at the RMEI?"
Dick

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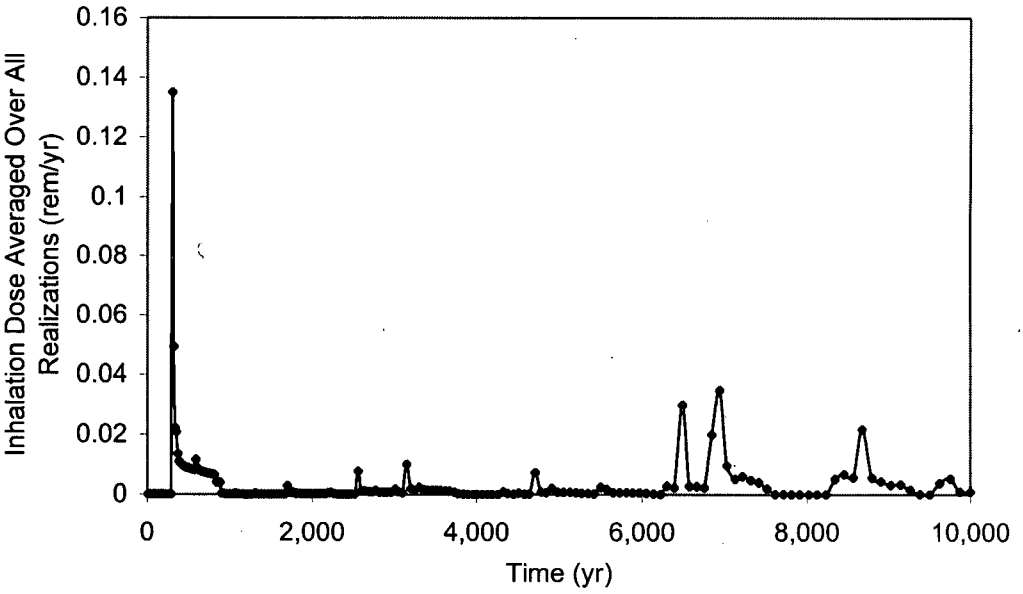
Properties Page

Return-path: <rbenke@cnwra.swri.edu>
Received: from PHOENIX ([129.162.200.28])
 by rogain.cnwra.swri.edu (Sun ONE Messaging Server 6.0 (built Oct 29 2003))
 with ESMTP id <0IJH00ICUDR8WD00@rogain.cnwra.swri.edu>; Mon,
 11 Jul 2005 15:47:33 -0500 (CDT)
Date: Mon, 11 Jul 2005 15:48:29 -0500
From: Roland Benke <rbenke@cnwra.swri.edu>
Subject: RE: ashremob calculations
In-reply-to: <s2bfa6ad.094@NRNWMS05.NRC.GOV>
To: 'Timothy McCartin' <TJM3@nrc.gov>, dhooper@cnwra.swri.edu,
 'Christopher Grossman' <CJG2@nrc.gov>, 'Richard Codell' <RBC@nrc.gov>
Cc: 'Andy Campbell' <ACC@nrc.gov>, James Winterle <jwinterle@cnwra.swri.edu>
Reply-to: rbenke@cnwra.swri.edu
Message-id: <007301c58659$e4e9dc30$1cc8a281@PHOENIX>
MIME-version: 1.0
X-MIMEOLE: Produced By Microsoft MimeOLE V6.00.2800.1441
X-Mailer: Microsoft Outlook CWS, Build 9.0.2416 (9.0.2910.0)
Content-type: multipart/mixed;
 boundary="----=_NextPart_000_0074_01C5862F.FC13D430"
Importance: Normal
X-Priority: 3 (Normal)
X-MSMail-priority: Normal

Input file t pa.inp as supplied with TPA Version 5.0.1betaC Code.
Base case.
TPA 5.0.1bet aD, Job started: Mon Jul 11 13:18:59 2005
AEDE[rem/yr] , GroundSurface Pathway
summed over all nuclides, averaged over all realizations

1.28E+01	1.00E-15
2.57E+01	1.00E-15
3.87E+01	1.00E-15
5.20E+01	1.00E-15
6.53E+01	1.00E-15
7.89E+01	1.00E-15
9.25E+01	1.00E-15
1.06E+02	1.08E-05
1.20E+02	4.68E-06
1.35E+02	7.89E-06
1.49E+02	3.73E-06
1.63E+02	2.22E-06
1.78E+02	5.91E-05
1.93E+02	2.62E-05
2.08E+02	1.47E-05
2.23E+02	1.06E-05
2.38E+02	4.71E-05
2.54E+02	2.54E-05
2.70E+02	1.80E-05
2.86E+02	1.52E-05
3.02E+02	1.35E-01
3.18E+02	4.92E-02
3.34E+02	2.21E-02
3.51E+02	2.07E-02
3.68E+02	1.33E-02
3.85E+02	1.09E-02
4.02E+02	1.00E-02
4.20E+02	9.61E-03
4.37E+02	9.34E-03
4.55E+02	9.11E-03
4.73E+02	8.90E-03
4.92E+02	8.70E-03
5.10E+02	8.51E-03
5.29E+02	8.33E-03
5.48E+02	8.22E-03
5.67E+02	8.01E-03
5.86E+02	1.14E-02
6.06E+02	8.73E-03
6.26E+02	7.95E-03
6.46E+02	7.63E-03
6.66E+02	7.44E-03
6.86E+02	7.28E-03
7.07E+02	7.13E-03
7.28E+02	6.99E-03
7.49E+02	6.85E-03
7.71E+02	6.71E-03
7.93E+02	6.58E-03
8.15E+02	6.45E-03
8.37E+02	3.98E-03
8.59E+02	3.90E-03

Preliminary ASHREMOB Results: Initial Deposit Contribution Only, Fluvial and Eolian Weighting Factors Set to Zero, 512 Realizations, Raw rgssa.tpa Output Displayed (Results Have Not Been Probability Weighted)



8.82E+02	3.83E-03
9.05E+02	3.42E-04
9.28E+02	3.33E-04
9.52E+02	1.48E-04
9.76E+02	1.43E-04
1.00E+03	1.38E-04
1.02E+03	1.36E-04
1.05E+03	1.29E-04
1.07E+03	2.73E-04
1.10E+03	1.54E-04
1.12E+03	1.31E-04
1.15E+03	1.24E-04
1.18E+03	2.75E-05
1.20E+03	2.20E-05
1.23E+03	2.11E-05
1.26E+03	1.99E-05
1.28E+03	1.92E-05
1.31E+03	3.80E-04
1.34E+03	1.23E-04
1.37E+03	8.59E-05
1.40E+03	7.85E-05
1.43E+03	7.52E-05
1.46E+03	7.25E-05
1.49E+03	7.00E-05
1.52E+03	6.75E-05
1.55E+03	6.84E-05
1.58E+03	6.43E-05
1.61E+03	5.88E-05
1.64E+03	7.15E-05
1.67E+03	5.46E-05
1.70E+03	2.75E-03
1.74E+03	5.16E-04
1.77E+03	7.47E-04
1.80E+03	3.26E-04
1.84E+03	2.76E-04
1.87E+03	2.52E-04
1.90E+03	2.25E-04
1.94E+03	2.14E-04
1.98E+03	2.19E-04
2.01E+03	2.01E-04
2.05E+03	1.93E-04
2.08E+03	1.86E-04
2.12E+03	2.90E-04
2.16E+03	1.87E-04
2.20E+03	4.95E-04
2.23E+03	6.17E-04
2.27E+03	2.46E-04
2.31E+03	1.35E-04
2.35E+03	1.29E-04
2.39E+03	1.14E-04
2.43E+03	1.10E-04
2.47E+03	1.05E-04
2.52E+03	1.01E-04
2.56E+03	7.54E-03
2.60E+03	1.07E-03

2.64E+03	1.16E-03
2.69E+03	9.71E-04
2.73E+03	8.03E-04
2.77E+03	1.28E-03
2.82E+03	7.79E-04
2.87E+03	7.48E-04
2.91E+03	7.38E-04
2.96E+03	7.29E-04
3.01E+03	1.73E-03
3.05E+03	8.36E-04
3.10E+03	5.58E-04
3.15E+03	9.85E-03
3.20E+03	1.88E-03
3.25E+03	1.44E-03
3.30E+03	2.27E-03
3.35E+03	1.55E-03
3.40E+03	1.42E-03
3.46E+03	1.36E-03
3.51E+03	1.33E-03
3.56E+03	1.23E-03
3.62E+03	1.14E-03
3.67E+03	1.09E-03
3.73E+03	7.07E-04
3.78E+03	1.62E-04
3.84E+03	1.51E-04
3.90E+03	4.24E-06
3.96E+03	3.10E-06
4.01E+03	2.76E-06
4.07E+03	1.84E-06
4.13E+03	9.07E-07
4.19E+03	7.13E-07
4.26E+03	4.24E-07
4.32E+03	8.20E-04
4.38E+03	3.33E-04
4.45E+03	9.45E-05
4.51E+03	4.20E-04
4.58E+03	1.11E-04
4.64E+03	1.01E-04
4.71E+03	7.14E-03
4.78E+03	8.37E-04
4.84E+03	6.73E-04
4.91E+03	2.04E-03
4.98E+03	7.77E-04
5.05E+03	7.29E-04
5.13E+03	6.99E-04
5.20E+03	6.68E-04
5.27E+03	4.49E-04
5.35E+03	3.50E-04
5.42E+03	1.65E-04
5.50E+03	2.32E-03
5.57E+03	1.71E-03
5.65E+03	6.56E-04
5.73E+03	6.23E-04
5.81E+03	5.96E-04
5.89E+03	5.75E-04

5.97E+03	5.62E-04
6.05E+03	3.90E-04
6.14E+03	2.62E-04
6.22E+03	4.32E-05
6.30E+03	2.80E-03
6.39E+03	2.19E-03
6.48E+03	2.99E-02
6.57E+03	2.63E-03
6.66E+03	2.64E-03
6.75E+03	2.27E-03
6.84E+03	1.99E-02
6.93E+03	3.48E-02
7.02E+03	9.45E-03
7.12E+03	5.01E-03
7.21E+03	5.84E-03
7.31E+03	4.69E-03
7.41E+03	3.97E-03
7.51E+03	1.95E-03
7.61E+03	5.48E-05
7.71E+03	8.26E-05
7.81E+03	1.20E-05
7.91E+03	1.79E-05
8.02E+03	5.81E-06
8.12E+03	1.15E-05
8.23E+03	6.17E-06
8.34E+03	5.06E-03
8.45E+03	6.57E-03
8.56E+03	5.52E-03
8.67E+03	2.17E-02
8.79E+03	5.46E-03
8.90E+03	4.31E-03
9.02E+03	3.10E-03
9.14E+03	3.34E-03
9.26E+03	1.47E-03
9.38E+03	5.93E-05
9.50E+03	4.57E-05
9.62E+03	3.71E-03
9.75E+03	5.18E-03
9.87E+03	9.58E-04
1.00E+04	9.29E-04

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iflag
DirectReleaseOnlyFlag(yes=1,no=0)
1

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NumberOfRealizations
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constant
RatioOfLastToFirstTimeStepInCompliancePeriod
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constant
WeightingFactorFluvial[]
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constant
WeightingFactorEolian[]
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