

April 17, 2000

Dear Colleague,

I would greatly appreciate your assistance in testing the enclosed Beta version of RASCAL 3.0. RASCAL 3.0 is intended to replace the currently-used RASCAL 2.2 for determining appropriate protective actions for accidents involving a release of radioactivity. The code estimates a predicted source term based on what is known about accident conditions, estimates meteorological dispersion for the time at which the release is predicted to occur, calculates radiological doses, and relates those doses to protective action guides.

The final RASCAL 3.0 is scheduled to be released in August 2000. This Beta version should not be used at this time for anything other than testing because we cannot yet assure that its results are correct. RASCAL 3.0 is a substantial improvement over RASCAL 2.2 in the following areas:

1. It is Windows-based rather than DOS-based, improving the flexibility and ease-of-use of the code.
2. A time-dependent source-term can be used.
3. There is greater flexibility to specify the effectiveness of engineered safety features.
4. An improved meteorological module can account for time-dependent meteorology and terrain-dependent effects.
5. More output options allow the user to obtain more information than was previously available.
6. The code has added capability for calculations involving uranium hexafluoride, other fuel cycle, material, and transportation releases.

Some draft "work-in-progress" documentation for RASCAL 3.0 is also enclosed to assist your review. The documentation is still being prepared and is not yet complete at this time. However, I thought that it would still be useful to have all that is now available to help you better understand the code.

From your review, I would especially like your comments in the following areas:

1. Do the calculated results appear reasonable?
2. Are the input screens easy to understand and use?
3. Are the output screens and printouts clear and easy to understand?

4. Is any essential information omitted?
5. Do you have any suggestion or comments on the documentation?

I would like to receive your comments by **June 5, 2000**. I recommend that you send your comments to me by e-mail at sam2@nrc.gov. If you have any questions, please call me at 301-415-6204.

Sincerely,

(/RA by S. A. McGuire)

Stephen A. McGuire
Incident Response Operations

Enclosures: Beta Version of RASCAL 3.0
RASCAL 3.0: User's Guide, Draft 4/14/00
RASCAL 3.0: Technical Reference Manual, Draft 4/14/00

3. Are the output screens and printouts clear and easy to understand?
4. Is any essential information omitted?
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