

RADTRAD Change Log: Version 5.1.1

Released August 2025

- A bug with how the DF calculated in phase one of the Regulatory Guide 1.183 Rev. 1 FHA model was implemented was found. The DF was still being used as an overall DF instead of only applying to elemental iodine. The DF was corrected and now only applies to the fraction of iodine that is elemental. The DF for aerosol iodine (CsI) is infinite (meaning all CsI is dissolved into the pool), and the DF for organic iodine is set to 1 (meaning no organic iodine is dissolved into the pool).
- The amount of ingrowth of a daughter nuclide from the decay of the parent nuclide during a set period of time now includes the decay of the daughter during that time. Previously, everything that decayed from the parent nuclide was added to the inventory of the daughter(s).
- A limit on the size of the dose used in the L infinite error check was added. The default is set to a 1E-6 rem dose but can be changed with the command line option `-minL`.
- The regression testing for the RADTRAD AC now includes a comparison of the worst two-hour doses printed in the output rather than strictly relying on the plot files to provide comparisons between the two codes.
- Fixed an issue where dose summaries were unintentionally removed for the NRC output file.
- Changed the value that limits the output of nuclide activity from 1E-4 to 0.0. Now, only the nuclides that are not changing the doses are excluded from the output.