



MicroSkyshine[®] 2.10

MicroSkyshine[®] 2.10 calculates the photon dose from sky scattered gamma radiation. MicroSkyshine[®] is used to evaluate conformance with 10CFR50, Appendix I ALARA requirements and 40CFR190 fuel cycle exposure criteria. Typical application include scattering from BWR turbine buildings and radwaste storage facilities.

MicroSkyshine[®]'s analytical method of solution is based on the use of "beam functions" for a point source. This method was developed for NUREG/CR-0781 (May 1979), which resulted from an NRC-sponsored effort. However, MicroSkyshine[®] reflects the efforts of analysts at Kansas State University, who further improved the method.

Here are some of MicroSkyshine[®]'s features:

- A variety of silo and wall geometries. MicroSkyshine[®] accepts dimensional data in meters, centimeters, feet, or inches.
- The scattering medium is air, and the Berger method is used for calculating buildup in an overhead shield. Any one of seven materials can be selected for this purpose.
- Built-in library data (radionuclides, attenuation, buildup).
- Source decay can be calculated and daughters generated.
- As many as twenty energy groups (with an energy range of 100 keV to 10 MeV) may be created; total concentration entries are automatically converted to curies.
- All calculations performed by MicroSkyshine[®] assume that the silo wall or vertical wall is a perfect shield; that is, radiation through the walls will not be calculated.

MicroSkyshine[®] features a number of the enhanced software features such as:

- Microsoft Windows[®] interface
- Fully interactive input processing and input error checking.
- The main menu allows you to create, save, load, erase, and run many cases. You can change one data entry without having to pass through the entire input sequence.
- Batch Processing - Multiple cases can be run in Batch mode.
- Sensitivity Runs - Several parameters can be examined at once.
- Results can be saved in text, HTML, Microsoft Word[®], and Excel[®] formats.

Requirements:

- Microsoft Windows[®] 2000 / XP
- Microsoft[®] .Net Framework Version 1.1
- Microsoft Word[®] 2003 and Excel[®] 2003 (for saving results to these formats)

License Type: Single User