

WHO WE ARE

Sandia's Transportation Risk & Packaging Department develops innovative solutions that address technical issues associated with the packaging and transport of radioactive and other hazardous materials. These solutions cover a broad spectrum of activities ranging from new package design and analysis to package testing and from regulatory standard development to transportation risk/safety assessments. Our goal is to provide the technology to achieve safe, secure, efficient, and economical packaging and transportation of nuclear and other hazardous materials.

RISK ASSESSMENT

Our capability includes conducting risk assessments of transportation of radioactive and other hazardous materials, development of risk assessment tools, data development, and applications of tools and data. The Risk Assessment program supports transportation environmental assessments (EA) and transportation environmental impact statements (EIS). Our areas of expertise include but are not limited to:

- Geographical Information Systems (GIS)
- RADTRAN 5 / RADCAT 1.0
- Transportation Risk Assessments
- Probabilistic Risk Assessments
- HAZMAT Risk Assessments



Sandia National Laboratories

RADTRAN 5 / RADCAT 1.0 TRANSPORTATION RISK ASSESSMENT COMPUTER CODE



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WHAT IS RADTRAN 5

RADTRAN[®] is the national and international (INTERTRAN) standard for transportation risk assessment computer codes. It combines user-determined meteorological, packaging, demographic, transportation, and material data with health physics data to calculate the expected radiological consequences and accident risk of transporting radioactive material.

WHAT IS RADCAT 1.0

RADCAT[®] is a graphical user interface (GUI). It provides a downloadable PC version of RADTRAN 5 and acts as the input file generator.

RADTRAN HISTORY

RADTRAN was initially developed for the EIS for the Transportation of Radioactive Materials by Air and Other Means (NUREG-0170) in 1977. RADTRAN III was made available in 1986 to users outside Sandia National Laboratories and ran on a server via the TRANSNET gateway with remote access by telnet, dial-up. RADTRAN IV allowed a great increase in user-defined input and route-specific development. RADTRAN 5 allows complete user input and contains several improved utilities.

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THE FUTURE OF RADTRAN

RADTRAN 5.5, which is to be launched in the last quarter of 2004, will have a fully functional user-defined atmospheric dispersion model. The radionuclide library will be expanded from 60 nuclides presently available to 148 nuclides.

RADTRAN 6.0, which is to be launched in September 2005, will have all of those features listed in prior versions and a loss of shielding model, an economic model, and an alternate ingestion dose calculation method. The emphasis will move toward maximally exposed individuals (MEI) and critical group risks.

HOW TO APPLY

Since RADTRAN is supported by the U.S. Department of Energy (DOE), this program comes at no cost to users. You may submit an online application at the RADCAT website listed below. Upon approval you will have access to RADTRAN 5 / RADCAT 1.0 via Java[™] Web Start. You will also be emailed the RADTRAN 5 / RADCAT 1.0 user guide to assist you in the downloading process as well as a detailed description on how to use RADCAT 1.0 input file generator.

<http://www.evolutionnext.com/radcat/index.jsp>



QUESTIONS

For questions regarding RADTRAN 5, RADCAT 1.0, or Transportation Risk Assessment you may contact the following people at Sandia National Laboratories:

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RADTRAN is a sponsored by the U.S. DOE's National Transportation Program.

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WEBSITE

Visit our website for further information, literature, technical manuals, or user guides at the following:

<http://ttd.sandia.gov/risk/radtran.htm>

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