

PACKAGE ID - 001198IBMPC00 VENTSAR XL

KWIC TITLE - Dose Calculation Spreadsheet

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LIMITATION CODE -COPY **AUDIENCE CODE** - LIM

COMPLETION DATE - 03/01/1997 **PUBLICATION DATE** - 03/01/1997

DESCRIPTION - VENTSAR XL is an EXCEL Spreadsheet that can be used to calculate downwind doses as a result of a hypothetical atmospheric release. Both building effects and plume rise may be considered. VENTSAR XL will run using any version of Microsoft EXCEL version 4.0 or later. Macros (the programming language of EXCEL) was used to automate the calculations. The user enters a minimal amount of input and the code calculates the resulting concentrations and doses at various downwind distances as specified by the user.

PACKAGE CONTENTS - Media Directory; Software Abstract; WSRC-RP-97-37; Media Includes Source Code, User's Guide;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 2 3.5 Diskettes

METHOD OF SOLUTION - Macros is used to automate the calculations.

COMPUTER - IBM PC

OPERATING SYSTEMS - Machine dependent

PROGRAMMING LANGUAGES - Macros by Microsoft Excel

SOFTWARE LIMITATIONS - Doses do not include contribution from progeny which may be in secular equilibrium with the parents. Only inhalation and plume shine pathways are considered.

SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - Since the spreadsheet was developed using Microsoft Excel, the spread sheet can be executed on either an IBM or Macintosh computer. Building effects can be modeled for a simple building or with a penthouse on top of the building. Plume rise due to momentum and/or buoyancy can be considered. Output is specified at user-defined increments.

HARDWARE REQS - Any IBM or Macintosh capable of supporting Microsoft EXCEL 4.0 or higher. Software will run faster on machines with greater random access memory.

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TIME REQUIREMENTS - Dependent on number of increments and radionuclides, but runs are typically completed in minutes.

REFERENCES - A.A. Simpkins, VENTSAR XL A Spreadsheet for Analyzing Building Effects and Plume Rise, WSRC-RP-97-37, March 1997.

ABSTRACT STATUS - Submitted 12/24/97. Released AS-IS 3/25/98

SUBJECT CLASS CODE - LM

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
V CODES
RADIATION DOSE DISTRIBUTIONS
RADIATION MONITORING
PLUMES

EDB SUBJECT CATEGORIES -

990200 070500 540130

SPONSOR - DOE/RW

PACKAGE TYPE - AS - IS