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TRIM
Total Risk Integrated Methodology

TRIM.FaTE
Technical Support Document
Volume I: Description of Module

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
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PREFACE

This document, the *TRIM.FaTE Technical Support Document*, is part of a series of documentation for the overall Total Risk Integrated Methodology (TRIM) modeling system. The detailed documentation of TRIM's logic, assumptions, algorithms, equations, and input parameters is provided in comprehensive Technical Support Documents (TSDs) and/or user's guidance for each of the TRIM modules. This report, which supersedes earlier versions (U.S. EPA 1998a, U.S. EPA 1999g,h), documents the Environmental Fate, Transport, and Ecological Exposure module of TRIM (TRIM.FaTE) and is divided into two volumes. The first volume provides a description of terminology, model framework, and functionality of TRIM.FaTE, and the second volume presents a detailed description of the algorithms used in the module.

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ACRONYMS

B(a)P	Benzo(a)pyrene
CAA	Clean Air Act
CalTOX	California Department of Toxic Substance Control's Risk Computerized Model
CART	Classification and regression tree
CDF	Cumulative distribution function
CRARM	Presidential/Congressional Commission on Risk Assessment and Risk Management
DOE	United States Department of Energy
EPA	United States Environmental Protection Agency
GIS	Geographic Information System
HAP	Hazardous air pollutant
IEM	Indirect Exposure Methodology
I/O API	Environmental Decision Support System/Models 3 Input/Output Applications Programming Interface
ISMCM	Integrated Spatial Multimedia Compartment Model
LHS	Latin Hypercube Sampling
LSODE	Livermore Solver for Ordinary Differential Equations
MC	Monte Carlo
MCM	Multimedia Compartment Model
MEPAS	Multimedia Environmental Pollutant Assessment System
MIMS	Multimedia Integrated Modeling System
MMSP	Multimedia, multipathway, and multireceptor simulation process
MPE	Multiple Pathways of Exposure
NAAQS	National ambient air quality standard
NAS	National Academy of Sciences
NATA	National Air Toxics Assessments
OAQPS	EPA Office of Air Quality Planning and Standards
OSWER	EPA Office of Solid Waste and Emergency Response
PAH	Polycyclic aromatic hydrocarbon
PDF	Probability distribution function
RIA	Regulatory impact analysis
SAB	Science Advisory Board
SMCM	Spatial Multimedia Compartment Model
TRIM	Total Risk Integrated Methodology
TRIM.Expo	TRIM Exposure-Event module
TRIM.FaTE	TRIM Environmental Fate, Transport, and Ecological Exposure module
TRIM.Risk	TRIM Risk Characterization module
TSD	Technical Support Document
USGS	United States Geological Survey
WASP	Water Quality Analysis Simulation Program

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