

General Characteristics		
1	Abstract of Model Capabilities	The possibility of worker exposure to radioactive materials during accidents at nuclear facilities is a principal concern of the DOE. The KBERT software has been developed to address the issue by assisting in the estimation of risks posed by accidents at chemical and nuclear facilities. The current prototype version of KBERT focuses on calculation of doses and consequences to in-facility workers resulting from accidental releases of radioactivity.
2	Sponsor and/or Developing Organization	Department of Energy (DOE)
3	Last Custodian/ Point of Contact	Mr. K.E. Washington MS-0722 Organization 6913 Sandia National Laboratories Albuquerque, NM 87185-0722
4	Life-Cycle	KBERT was developed specifically for DOE for the analysis of Worker Safety Risks. Version 1.0 was released in 1995.
5	Model Description Summary	See abstract.
6	Application Limitation	See weaknesses.
7	Strengths/ Limitations	Strengths: Fast running; Easy to use and provides dose consequence directly; Includes built-in Mishima data base for sources; and, Objective-oriented language used for development, which implies the resulting coding should be easy to add new models and/or capability. Limitations: All flow rates must be known for all times for the accident, but other codes can be used to supply flows; and, No turbulence and diffusion modeling within a control volume.
8	Model References	! User's Manual: D.S. Browitt et al, "User's Guide for the KBERT 1.0 Code", SAND95-1324, July, 1995.
9	Input Data/Parameter Requirements	Rooms, workers, facility, etc. Includes a graphical screen view of the facility.
10	Output Summary	Rooms, workers, facility, etc. Includes a graphical screen view of the facility.
11	Applications	Applicable to any facility as long as flow rates and flow paths are specified.
12	User-Friendliness	User-friendly due to Graphical User Interface (GUI).
13	Hardware-Software Interface Constraints/ Requirements	IBM-compatible PC with 80386 processor or higher, although an 80486 or higher is recommended. Microsoft 3.1 or higher. VGA graphics display. Hard disk with at least 10 megabytes of free space.
15	Surety Considerations	Quality Assurance: Software Development Plan and Requirements; Validation Reference; Benchmark Reference; User's Manual: D.S. Browitt et al, "User's Guide for the KBERT 1.0 Code", SAND95-1324, July, 1995. Error Handling/Reporting On screen via the GUI. Validation: Uses extensively validated Mishima release data base.
16	Runtime Characteristics	KBERT is currently very fast but does not solve for the flow field.

Specific Characteristics		
Part A: Source Term Submodel Type		
A1	Source Term Algorithm?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Part B: Dispersion Submodel Type (Not Applicable)		
Part C: Transport Submodel Type (Not Applicable)		
Part D: Fire Submodel Type (Not Applicable)		
Part E: Energetic Events Submodel Type (Not Applicable)		
Part F: Health Consequence Submodel Type (No Information Provided.)		
Part G: Effects and Countermeasures Submodel Type (No Information Provided.)		
Part H: Physical Features of Model (No Information Provided.)		
Part I: Model Input Requirements (See Item 9.)		
Part J: Model Output Capabilities		
J2	Graphic Contours and Resolution	Via the GUI.
Part K: Model Usage Considerations (See Items 5 - 7.)		