

PACKAGE ID - 001109IBMPC00 DASMWOCW

KWIC TITLE - Development of an Aquatic Spill Model for the
White Oak Creek Watershed

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LIMITATION CODE -UNL **AUDIENCE CODE** - UNL

COMPLETION DATE - 05/01/1996 **PUBLICATION DATE** - 05/01/1996

DESCRIPTION - This study develops an aquatic spill model applicable to the White Oak Creek watershed draining the Oak Ridge National Laboratory, Oak Ridge, Tennessee. Hazardous, toxic, and radioactive chemicals are handled and stored on the laboratory reservation. An accidental spill into the White Oak Creek watershed could contaminate downstream water supplies if insufficient dilution did not occur.

SOURCE CODE INCLUDED? - No

MEDIA QUANTITY - Media Directory; Software Abstract; ORNL/TM-13181;/ 1
5.25 Diskette

METHOD OF SOLUTION - The aquatic spill model considers four distinct hydrologic regimes: (1) the White Oak Creek headwaters and tributaries; (2) White Oak Lake formed by White Oak Dam; (3) the White Oak Creek Embayment, whose water level is partially controlled by a sediment retention structure formed by porous rock-filled gabions; and (4) the Clinch River. Discharge statistics published for gaging stations located throughout the White Oak Creek headwaters and tributaries are used as a basis from which to formulate flow and mass balances for conditions ranging from drought to flood. After the accidental spill, the dilution is calculated at each gage located sequentially downstream from the site of the spill.

COMPUTER - IBM PC

OPERATING SYSTEMS - Machine dependent

PROGRAMMING LANGUAGES - Fortran

SOURCE CODE AVAILABLE (Y/N) - N

REFERENCES - R.O. Johnson, The Development of an Aquatic Spill Model for the White Oak Creek Watershed, Oak Ridge National Laboratory, oak Ridge, Tennessee, ORNL/TM-13181, May 1996.

ABSTRACT STATUS - Submitted 9/1/96. Released AS-IS 9/9/96.

SUBJECT CLASS CODE - R

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EDB SUBJECT CATEGORIES -

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