Inventory of Data Bases Models and Graphics Packages at the Pacific Northwest Laboratory

**P. J. Dionne
D. I. Mathisen**

October 1978

**Prepared for the U.S. Department of Energy
under Contract EY-76-C-06-1830**

**Pacific Northwest Laboratory
Operated for the U.S. Department of Energy
by Battelle Memorial Institute**

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Pacific Northwest Laboratory
Richland, Washington 99352

ABSTRACT

The Information Coordination Focal Point (ICFP) was initiated in FY77 because DOE had a need for improved access to information at the Lawrence Berkeley Laboratory, the Savannah River Laboratory, and the six DOE national laboratories. The task for FY77 was to establish guidelines and procedures for this activity with plans of implementing the procedures in FY78 and FY79. The purpose of this report is to document the progress that has been made during FY78 for this project.

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INVENTORY OF DATA BASES, MODELS,
AND GRAPHICS PACKAGES AT THE
PACIFIC NORTHWEST LABORATORY

1.0 BACKGROUND

The Information Coordination Focal Point (ICFP) project stems from several identified needs.

- The Office of Environmental Information Systems (EOIN) sponsored a project with Victor Hampel at Lawrence Livermore Laboratory (LLL) to conduct a survey of energy- and environment-related data bases and models in use or under development at the various national laboratories. Very few of the questionnaires were returned, and most of those that were returned were quite incomplete. It appears that documentation of data bases and models at the national laboratories is, in most cases, nonexistent. As a result, LLL recommended that EOIN ask that one person at each laboratory be fully responsible to aggregate and document the available data bases and models for subsequent inclusion in the DOE directory.
- Dr. Liverman requested that Ted Albert (now with USGS) assess Administration for Environment and Safety (AES) programs to see what "information activities" were taking place. People from Aerospace Corporation reviewed all funded 189s for 1977, looking for references to "information activities." As a result of this process, Aerospace Corporation recommended that a central person at each laboratory be given responsibility to facilitate data exchange among the laboratories and between the laboratories and DOE Headquarters.
- John Wilson, who worked for Ted Albert, explained that there is an increasing need for management people at Headquarters to have knowledge of what technical projects are funded for budget decisions. It appears that there is currently no one person at Headquarters

who knows exactly which projects deal with a certain subject. This is not surprising because over 1,100 189s were funded for FY77. It seems they get requests for information on how much the AES is spending on a certain subject area and have no way of knowing.

- Because of the size of the DOE, there will be a greater need to know what models, data bases, and graphics packages are being used in different parts of the DOE. Also, results of research should be made known to others both within and without the DOE.
- The DOE included an Energy Information Administration (EIA). The EIA was modeled after the Office of Energy Information and Analysis in the Federal Energy Administration.

2.0 GENERAL DESCRIPTION

This section contains, in outline form, a discussion of the PNL objectives and accomplishments during FY78.

2.1 OBJECTIVES FY78 AT PNL

The objectives specifically for PNL were:

- Establish an information coordination focal point operation with PNL's Environmental and Safety Program.
- Inventory the various data bases, models, and graphics packages used in conducting E&S research and maintain this information in a searchable computer file.
- Facilitate information transfer among PNL E&S researchers, DOE Headquarters, DOE laboratories, and other entities.
- Maximize the usefulness and effectiveness of ICFP to E&S research programs.

2.2 WORK DURING FY78 AT PNL FOR ICFP

2.2.1 Tasks

- Establishment of the ICFP activity at PNL.
- Develop criteria to select data bases, models, and graphics packages for inclusion in the inventory.
- Decide what information should be collected for each item to be included in the inventory.
- Collect the information (surveying), continue updating and revising.
- Establish a computerized file of information and maintain it in a searchable computer file. Send the data to Oak Ridge National Laboratory (ORNL) by July 1, 1978, via tape.
- Establish information transfer with DOE Headquarters and the other laboratories.
- Begin design phase for retrieval of information from the ICFP data base by a user.

2.2.2 Implementation of Tasks

- Paul Dionne is the ICFP contact point for PNL.
- In selecting which data bases, models, and graphics packages should be included in the survey, we decided they should be readily accessible, to a degree stable, and of importance to the individual contact which suggests them.
- Because we had no previous experience with compiling a file such as this, we decided to use as our questionnaire a slightly modified version of the documentation ORNL used to create the 1977 edition of "Spatial Data on Energy, Environmental, and Socioeconomic Themes at Oak Ridge National Laboratories" (ORNL/TM-5746). As we continued work on the questionnaire, other labs interjected suggestions, and the questionnaire was revised. A final questionnaire, with the set of minimum data elements, was established through ORNL as of March 21, 1978.

- The questionnaire (Appendix A) was computerized using RUNOFF. (RUNOFF is a PDP-11 program which facilitates the preparation of typed or printed manuscripts, such as memos, manuals, etc. The principal benefit of such a program is that files prepared for use with it may be edited and corrected easily.)
- In the process of surveying PNL, we talked individually with contacts in each of our eight departments (Appendix B) and explained the ICFP project and goals to them. Since it does cost money to answer questionnaires, we set \$2K as the figure to be used by each department. We plan to update the information either annually or biannually. Our information gathering progress is shown in Appendix C.
- To create a computerized file of information, we transferred the surveys to coding sheets, had them keypunched, and entered the cards into the computer. The card format is shown in Appendix D.
- As part of the objective to maintain the information in a retrievable manner, keywords were chosen via the Keyword in Context (KWIC) system. This system, which is operational on the PDP 11/70, consists of a small set of batch mode programs implemented in COBOL. The programs essentially isolate words from the input card file which are either from the <TITLE> or the <ABSTRACT> fields. It ignores words shorter than four characters, as well as words found in the drop list (a predetermined list of words to exclude) and writes a record for each word isolated. This record contains the isolated word as a sort key, the sentence in which it appears, and the document reference number, which writes the record to one of three output files: AH-file, IP-file, and QZ-file. From these three files, we chose the ten or less keywords for each entry which best described that entry. We then edited those keywords onto the information file.
- An agreed upon method of transferring information between laboratories was by tape (800 BPI) using the IWGDE format. To write from the ICFP disk file to tape, we created the program WRICFP. It is written in FLECS (a language extension of FORTRAN which has

additional control mechanisms. These mechanisms make it easier to write FORTRAN by eliminating much of the clerical detail associated with constructing FORTRAN programs. FLECS is also easier to read and comprehend than FORTRAN). The format is shown in Appendix E. We sent the first tape on July 10 and the second tape (a revision of the first) on August 1 and received word that ORNL was able to read them.

- Appendix F contains a listing of all present data bases, models, and graphics packages at PNL.
- To aid the user in retrieving information readily from the ICFP data base at PNL, a system known as DOLLARS (DEC OnLine Listing and Retrieval System) is being designed. This system will allow interactive retrieval from the ICFP data base using selected keys germane to that data base.

APPENDIX A

QUESTIONNAIRE

INSTRUCTIONS

- <NAME> Name of data base, model or graphics package. Do not use abbreviations.
- <ACRO> A short name or the abbreviation for the entry in <NAME>.
- <TYPE> Identify whether the documentation, form is being filled out for a data base-numeric, data base-bibliographic, model, graphics package, or an integrated system. (circle one)
- <CONT> Name of person who can be contacted for information concerning the data base, model or graphics package. (last name, first name and middle initial)
- <PHONE> Telephone number of contact person, commercial and FTS if applicable.
- <ADDR> Institutional affiliation, mailing address.
- <LAB> Write the laboratory mnemonic PNL for Pacific Northwest Laboratories, HEDL for Hanford Engineering Development Laboratories, ROCK for Rockwell, UNI for United Nuclear, BCSR for Boeing Computer Services Richland, and so forth.
- <ABST> Brief but complete general description of the data base, model or graphics package.
- <KEY> KWIC will be used to find the keywords in each data base and the ten best keywords from that list will be used.
- <SORTCODE> Category which best describes data base, model or graphics package. (circle one)
- <SOURCE> Name of agency from which data base, model or graphics package was obtained.
- <GEO> Geographic location covered by data base.
- <TIME> Date of data base coverage.
- <DOC> Title of hardcopy or published documentation which expands upon the data base, model or graphics package. List: authors(s), document title, publication number, publication date.
- <STATUS> Information concerning the status of the entry; e.g., under development, in use, planned.
- <ACCESS> Availability of data base, model or graphics package. (circle one)
- <PROGRAM> Name of programs or software systems available for use with the data base, model or graphics package.
- <COMP> Identify the computer the data base, model or graphics package uses. (circle one)
- <MEDIA> Physical media of data base, model or graphics package. (circle one)
- <LANG> Software language(s) used. (circle)
- <SIZE> Identify the number of characters or kilobytes or words the data base, model or graphics package require.
- <CHAR> Identify the character set in which the data base, model or graphics package is written. (circle one)
- <COM> Additional comments or information about the data base, model or graphics package.
- <UPDATE> YYYYDD (year-month-day), date of update or original entry of item. Month and day are two digits, e.g., 04.

PNL DATA BASE, MODEL AND GRAPHICS PACKAGE DOCUMENTATION FORM

<NAME>

<ACRO>

<TYPE>

Data Base-Numeric

Data Base-Bibliographic

Model

Graphics Package

Integrated System

<CONT>

<PHONE>

<ADDR>

<LAB>

<CITY>

<STATE>

<ZIP>

<ABST>

APPENDIX B
CONTACT PERSONS

APPENDIX C

SURVEY PROGRESS

Original records in ICFP Database 24

<u>PNL Department</u>	<u>Candidates Submitted</u>	<u>Questionnaires Completed</u>	Keypunched
Atmospheric Sciences	86	0	0
Biology	3	3	3
Ecosystems	10	0	0
Energy Systems	113	34	29
Engineering Physics	21	4	3
Occ & Env Safety	27	0	0
Physical Sciences	0	0	0
Water & Land Resources	55	3	3
	<hr/>	<hr/>	<hr/>
Totals	315	44	38

DEPARTMENT	OWNER	DATA BASES	MODELS	GRAPHICS PACKAGES
Atmospheric Sciences Jim Droppo			SMICK SUNNY-TURBIDITY SIZ DIST HANFORD SUNPHOTOMETRY DATA MIE EXTINCTION SALT DEPOSITION IMSL Program for Power Spectra SPATIAL CORRELATION AUTO CORRELATIONS GUST MAGNITUDES Data: Wind Flow through vertical plane SOVEL JOLAV PARTDEN FLOW SET JANOVA Precipitation Chemistry MAP3S Data No Listing Program MAP3S Precipitation Chemistry Data ALE CLIMATOLOGY MESODIFF I MESODIFF II POWER PWADE MANDR Ultimate Heat sink Data WPPSS #2 Data ADIAC PROTEUS UPLOT STRAC GOLDEN ANDRUS SALT DEP Pollutant Dispersion Program	

DEPARTMENT	OWNER	DATA BASES	MODELS	GRAPHICS PACKAGES
Atmospheric Sciences Jim Droppo			Global Tritium Transport Flow of Gas Through Small Piping HANMET1 HANMET2 SFCOBS PHYSHO EDITPSY EDIT741 HMTDE HMDTST HANTWR WINCHEK DATCHEK AERO GILLEX GILL SAGMON DATA YELM DATA WIND DALLES BATMAN PLUME POWER XOQ DOQ ACCIDENT MODEL CDM REGIONAL STUDY REGIONAL VERTR MAP3S Regional Long Term Assessment Model MAP3S SHORT TERM BACK TRAJECTORY MAP3S DATA PROCESSING PROGRAM (5 versions) MAP3S 1973-1974 Partial SO ₂ Emissions Inventory Data	

DEPARTMENT	OWNER	DATA BASES	MODELS	GRAPHICS PACKAGES
Atmospheric Sciences Jim Droppo			MAP3S Summary of Emissions Data; EPA 1973, 1974 MAP3S Summary of Emissions Data; Canada 1970 MAP3S Summary of Emissions Data; FPC, 1971, 1973 MAP3S Great Lake Meteorological Data MAP3S Hourly Station and Synoptic file ppt data MAP3S AVE-TI Radiosonde Data LNG Dispersion Model GTT WIFE	
Energy Systems Ray Abraham	Tom Foley		EXPLOR EXPLOR-MULTITRADE SHOPPER	
	Marv Lenallen		ORIGEN CINDER ENFORM SPADE UNICOST	

DEPARTMENT	OWNER	DATA BASES	MODELS	GRAPHICS PACKAGES
Energy Systems	Len Purcell	BML-C	EGGINIT II	
		ENDFB/IV	KENO IV A	
		STORM/ISRAEL	MONK	
		HPICE/LIB	HFN	
		VITAMIN-C	BMC-MG	
		CLEAR	BRT	
		CSRL	AMPEX	
		MACK/LIB	GRANIT	
			SMUG	
			EDIT/23	
			LAPMGAS	
			QUAD-PSA	
			ETOG	
			FLANGE	
			MACK	
			ANISM/LP	
	Craig Timmerman		MISTY	
			ISOCOR	
	Pete Pelto		ACORN	
			MFAULT	
			RAFT	
			TREE	
	Clem Bloomster		PACTOLUS	
			FEFC	
			GEOCOST	
			GEOCITY	
	Jay Jacobsen		LIMA	
			ELSA	
	Bruce Napier	ORGLIB	ARRG	
		RMDLIB	FOOD	
		FTRANSLIB	DACRIN	
		GISLIBS	DACFRD	
		GRDFLIB	DACBDN	

DEPARTMENT	OWNER	DATA BASES	MODELS	GRAPHICS PACKAGES
Energy Systems			KRONIC SUBDOSA SUBPOPA LONGTM INPOP PABLM MAXI CWMS INPREP (Several Versions) PREDO (SITMET & WCLIM) CRAC GASPAR LADTAP REDIQ	
	Dave Fraley		A Decision Model Incorporating Utility Theory and Measurement of Social Values U.S. ELECTRICAL ECONOMY NUCOST PRB-2 PBS1 PBS2 BIOLOGY MODELS ELECT BOOM1 PTSPWR GEOCOST, STEAM CYCLE VERSION GEOCOST, BINARY CYCLE VERSION ECONOMETRIC SIMULATION MODEL OF U.S. AGRICULTURE ELECTRIC1 DEMOGRAPHIC MODEL REGIONAL TRANSPORT TRANSFORMATION & REMOVAL MODEL	

DEPARTMENT	OWNER	DATA BASES	MODELS	GRAPHICS PACKAGES
Energy Systems			POWDER RIVER AGRICULTURAL PRODUCTION & SO ₂ EFFECTS COAL CONCEPT NERA BECHTEL ENERGY SUPPLY PLANNING MODEL	
	Judy Mahaffey	FJC CASE FILINGS FJC INDICATOR VARIABLES HANFORD MORTALITY STUDY SNOOPY SNOP RIB NAEG TRANSURANICS	OMNITAB MINITAB SORT TIDY	SURFACE II PLT DRFACES DISSPLA CROSS VUE SPSS BMD,BMDP IMSL ROUTINES DATATRIEVE
Engineering Physics Larry Addison		EMA	NUCOST NUPLANT	QUIKPLOT EYES FRANKFORD ARSENAL CONO-GRAPHICS MOBILE GRAPHICS DIGS ISITE SIEX PTOLEMY
Bob Burnett		D&D	ELSA ELDA GLOBE6 ALASKA COAL	QUIKPLOT DTP BNW2D BNW3D
Occupational & Environmental Safety Dept Glenn Boenes		DFING, DCFING DFINH, DCFINH DFEXTI PDFING, PDFINH	VITTLS (FOOD) PABLM LIKOR (ARRRG) MAXI GRONK	

DEPARTMENT	OWNER	DATA BASES	MODELS	GRAPHICS PACKAGES
Occupational & Environmental Safety Dept Glenn Hoenes		FOOIN BIOACI, BIOACH TAUS	GAUCHE PU NUEUT LWB TEPC PUSHLD AMSHLD	
Jim Houston		EMA SYSTEM EXP SYSTEM BIO SYSTEM IVR SYSTEM		
Water & Land Resources Landis Kannberg		COLUMBIA RIVER TEMPERATURE DATA BASE	PIONEER EXPLORE ARM OR NPS HYD-II COLHEAT LLWM2D RMA-I RMA-II DREGSYM LIMN05 EUTROP TOWER3 RBJ3 HETRAN SYMJET VECTRA PDS HTTRANS FLOWXY HIRST AIRMOD H2OMOD FETRA SERATRA HEC I HEC II	

DEPARTMENT	OWNER	DATA BASES	MODELS	GRAPHICS PACKAGES
Water & Land Resources Landis Kannberg			HEC VI DPRWCR DPRWOS DPRWST STORM BSM SWMM CFSP UCUR CINTHIA SWRLT DIFFMOD	
Steve Ahlstrom		CIRMIS BTIPS WDBII PETROS QUAKES	DPRWCR DPRWGW GETOUT BDFEGW UNSAT PERCOL VTT VTSST	
Jim Schroeder (Filled Out)				CNT VS60 DIG

APPENDIX D

CARD FORMAT

Document Identification (Positions 1-10)

Position 1-3	Document Prefix (PNL)
Position 4-7	Document number (numeric) Start at 0001 and increase monotonically for each new document
Position 8-10	Card number within document (numeric)

Text (Positions 11-80)

Position 11-80	Free form text. Paragraph categories are delimited by TAG words enclosed in angle brackets.
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APPENDIX E

IWDGE FORMAT

WRICFP uses the IWGDE subroutines to write a tape in this Standard IWGDE tape format.

Basically, the Standard requires the user to write two files on tape for every set of data or information to be exchanged, as shown in the figure below. The first file is the Data Descriptive File (DDF) and describes the data to be transmitted. The second file is the Data File (DF) described by the DDF.

800 BPI
ASCII
Standard Labels

Labels

VOL1
HDR1
HDR2

EOF

File 1

Data
Descriptive
File - DDF

EOF

Labels

EOF1, EOF2

EOF

Labels

HDR1, HDR2

EOF

File 2

Data
File - DF

EOF

Labels

EOF1, EOF2

EOF
EOF

E1

APPENDIX F

PNL DATA BASES

DATA BASES-NUMERIC

Environmental

<u>Title</u>	<u>Author</u>	<u>Page No.</u>
Beta Spectrum Library	DL Streng	F7
Bioaccumulation Factor Libraries	GR Hoenes	F8
Environmental Monitoring Analyses (EMA)	PE Bramson	F9
External Dose Factor Library	BA Napier	F10
Food Transfer Factor Library	BA Napier	F11
Gamma Probability and Energy Library	DL Streng	F12
MAP3S Precipitation Chemistry Network	MT Dana	F13
Organ Data Library	BA Napier	F14
Radionuclide Master Data Library	BA Napier	F15
Regulatory Meteorological Data	RK Hadlock	F16

PNL0033

DATABASE NAME: BETA SPECTRUM LIBRARY
ACRONYM: BISLIB
TYPE: DATA BASE-NUMERIC
CONTACT PERSON: STRENCE, DENNIS L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL: (509) 942-4323
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THE DATA IN BISLIB INCLUDE THE MAXIMUM ENERGY AND RELATIVE
ABUNDANCE OF EACH BETA PEAK IN THE DECAY OF RADIONUCLIDES. INCLUDED
ARE REFERENCES FOR EACH ENTRY.
KEYWORDS: BETA, DECAY, RADIONUCLIDES
SURTCODE: ENVIRONMENTAL
TECHNICAL DOCUMENTATION: STRENCE, D.L., WATSON, E.C., AND HOUSTON, J.R., "SUBDOS-
A COMPUTER PROGRAM FOR CALCULATING EXTERNAL DOSES FROM ACCIDENTAL
ATMOSPHERIC RELEASES OF RADIONUCLIDES", BNWL-B-351, JUNE 1975.
STATE: ON-LINE
ACCESS: UNLIMITED
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
SIZE: 14K
CHARACTER SET: ASCII
UPDATE: 78-05-31

PNL0037

DATABASE NAME: BIOACCUMULATION FACTOR LIBRARIES
ACRONYM: BIOAC1, BIOACH
TYPE: DATA BASE-NUMERIC
CONTACT PERSON: HOENES, GLENN R.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3754 COMMERCIAL:(509)942-3754
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: TWO BIOACCUMULATION FACTOR LIBRARIES ARE PRESENTLY (3/29/78)
USED FOR ARRRG. BIOACH IS USED FOR HANFORD DOSE CALCULATIONS, BIOAC1
IS USED FOR ALL OTHERS. THESE LIBRARIES DIFFER IN ONLY TWO NUMBERS
OUT OF 576. IT WOULD BE POSSIBLE TO COMBINE THESE TWO LIBRARIES IN
THE FUTURE. THE BIOACCUMULATION FACTORS RELATE THE CONCENTRATION OF
NUCLIDES IN AQUATIC BIOTA TO THE CONCENTRATION OF THE NUCLIDES IN
WATER. THE LIBRARY CONTAINS ENTRIES FOR 63 ELEMENTS.
KEYWORDS: AQUATIC, BIOACCUMULATION, BIOTA, CONCENTRATION, DOSE,
HANFORD, LIBRARY, NUCLIDES, WATER
SORTCODE: ENVIRONMENTAL
STATE: IN USE
PROGRAM: ARRRG
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
SIZE: 1.5K
CHARACTER SET: ASCII
UPDATE: 78-05-30

PNL0004

DATABASE NAME: ENVIRONMENTAL MONITORING ANALYSES(EMA)
TYPE: DATA BASE
CONTACT PERSON: BRAMSON, P.E.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2475 COMMERCIAL:(509) 946-2475
ADDRESS OF CONTACT: BATTELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: ENVIRONMENTAL RADIOLOGICAL DATA FOR THE HANFORD ENVIRONS IS
STORED ON MAGNETIC TAPE FOR RETRIEVAL. DATA COLLECTED SINCE 1967 ARE
AVAILABLE. EVALUATES ENVIRONMENTAL LEVELS OF RADIOACTIVITY IN THE
HANFORD ENVIRONS AND DETERMINE THE RESPECTIVE CONTRIBUTION OF NATURAL,
FALLOUT, OR HANFORD RADIOACTIVITY.
KEYWORDS: ENVIRONMENTAL, FALLOUT, HANFORD, NATURAL,
RADIOACTIVITY
SORTCODE: ENVIRONMENTAL
GEOGRAPHIC COVERAGE: HANFORD ENVIRONS IN WASHINGTON STATE
TECHNICAL DOCUMENTATION: BLUMER, P. J., FIX, J. J., "EMA,S - USER,S MANUAL",
BNWL-C-76 REV., (FEBRUARY, 1977).
ACCESS: LIMITED
COMMENTS: CONCENTRATION OF RADIONUCLIDES IN A VARIETY OF
ENVIRONMENTAL MEDI FROM THE HANFORD ENVIRONS IN WASHINGTON STATE.
NUMERIC- ENVIRONMENTAL AND ECOLOGICAL SYSTEMS; ENVIRONMENTAL
MONITORING OF THE ATMOSPHERE; ENVIRONMENTAL MONITORING OF WATERSHEDS;
RADIONUCLIDES IN AIR, WATER, FOODSTUFFS, ETC;

PNL0040

DATABASE NAME:	EXTERNAL DOSE FACTOR LIBRARY
ACRONYM:	GRDFLIB
TYPE:	DATA BASE-NUMERIC
CONTACT PERSON:	NAPIER, BRUCE A.
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-4217 COMMERCIAL:(509)946-4217
ADDRESS OF CONTACT:	BAITELLE NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WASHINGTON
ZIP CODE:	99352
GENERAL DESCRIPTION:	THE GRDFLIB CONTAINS THE EXTERNAL DOSE FACTORS USED IN FOOD TO CALCULATE THE DOSE FROM GROUND DEPOSITION OF RADIONUCLIDES. THERE ARE ENTRIES FOR 186 ISOTOPES, ARRANGED IN THE ORDER OF RMDLIB. ONLY THE GROUND DOSE FACTORS ARE USED IN FOOD.
KEYWORDS:	DEPOSITION, DOSE, FOOD, GROUND, ISOTOPES, RADIONUCLIDES
SORTCODE:	ENVIRONMENTAL
STATE:	IN USE
ACCESS:	UNLIMITED
PROGRAM:	FOOD, ARRRG
SIZE:	4K
CHARACTER SET:	ASCII
UPDATE:	78-05-30

PNL0039

DATABASE NAME:	FOOD TRANSFER FACTOR LIBRARY
ACRUNYM:	FTRANSLIB
TYPE:	DATA BASE-NUMERIC
CONTACT PERSON:	NAPIER, BRUCE A.
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-4217 COMMERCIAL:(509)946-4217
ADDRESS OF CONTACT:	BAITELLE NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WASHINGTON
ZIP CODE:	99352
GENERAL DESCRIPTION:	THE FTRANSLIB CONTAINS THE FACTORS, USED IN FOOD, RELATING CONCENTRATIONS OF ELEMENTS IN SOIL OR WATER TO CONCENTRATIONS IN FOOD PRODUCED USING THAT SOIL OR WATER. THE LIBRARY HAS ENTRIES FOR 63 ELEMENTS ARRANGED BY INCREASING ATOMIC NUMBER, WHICH ARE COMPATIBLE WITH THE ORDER OF RMDLIB.
KEYWORDS:	CONCENTRATIONS, ELEMENTS, FOOD, LIBRARY, SOIL, WATER
SORICODE:	ENVIRONMENTAL
STATE:	ALMOST IN USE
ACCESS:	UNLIMITED
PROGRAM:	FOOD
COMPUTER:	UNIVAC
DATABASE MEDIA:	DISC
SIZE:	1.5K
CHARACTER SET:	ASCII
UPDATE:	78-05-30

PNL0038

DATABASE NAME: GAMMA PROBABILITY AND ENERGY LIBRARY
ACRUNYM: GISLIBS
TYPE: DATA BASE-NUMERIC
CONTACT PERSON: STRENGE, DENNIS L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL:(509)942-4323
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: GISLIBS CONTAINS DATA USED BY SUBDOSA AND SUBPOPA FOR
CALCULATING THE CLOUD GAMMA DOSE. THE FIRST CARD GIVES THE NUMBER OF
ENERGY GROUPS FOR WHICH DATA ARE GIVEN. THE SECOND CARD GIVES THE
UPPER ENERGY BOUND FOR EACH GROUP. NEXT ARE DOSE CONVERSION FACTORS
IN UNITS OF (RAD * CM2)/(CI * SEC). THE PHOTON PROBABILITY AND GAMMA
ENERGY CARDS FOLLOW THE DOSE CONVERSION FACTOR CARDS. THE NUCLIDES
FOLLOW THE ORDER OF RNOBET.
KEYWORDS: CLOUD, DOSE, ENERGY, GAMMA, GROUPS,
NUCLIDES, PHOTON, PROBABILITY
SORICODE: ENVIRONMENTAL
TECHNICAL DOCUMENTATION: STRENGE, WATSON, AND HOUSTON, "SUBDOSA - A COMPUTER PROGRAM FOR
CALCULATING EXTERNAL DOSES FROM ACCIDENTAL ATMOSPHERIC RELEASES OF
RADIOISOTOPES", BNWL-B-351, JUNE 1975.
STATE: ON LINE
ACCESS: UNLIMITED
PROGRAM: SUBDOSA, SUBPOPA
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
SIZE: 23K
CHARACTER SET: ASCII
UPDATE: 78-05-30

PNL0005

DATABASE NAME: MAP3S PRECIPITATION CHEMISTRY NETWORK
TYPE: DATA BASE
CONTACT PERSON: DANA, M. TERRY
TELEPHONE: FTS:444-7511 AND ASK FOR 942-2861 COMMERCIAL:(509) 942-2861
ADDRESS OF CONTACT: BATTELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: A LISTING OF POLLUTION CONCENTRATIONS MEASURED IN SAMPLES
COLLECTED ON A FOUR-SITE NETWORK IN THE NORTHEASTERN U.S. ORGANIZED
ACCORDING TO THE PRECIPITATION EVENT DATA, SITE, AND POLLUTANT SPECIE.
DETECTS TRENDS IN PRECIPITATION QUALITY IN THE REGION, AND IS USED BY
MAP3S TRANSPORT AND DEPOSITION MODELS.
KEYWORDS: DEPOSITION, MAP3S, NORTHEAST, POLLUTANT, PRECIPITATION,
REGION, SITE, TRANSPORT
SORTCODE: ENVIRONMENTAL
GEOGRAPHIC COVERAGE: NORTHEASTERN UNITED STATES
ACCESS: UNLIMITED
COMMENTS: NUMERIC - POLLUTANTS AND EFFLUENTS OF ENERGY PROCESSES;
ENVIRONMENTAL MONITORING OF THE ATMOSPHERE;

PNL0042

DATABASE NAME:	ORGAN DATA LIBRARY
ACRONYM:	ORGLIB
TYPE:	DATA BASE-NUMERIC
CONTACT PERSON:	NAPIER, BRUCE A.
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-4217 COMMERCIAL:(509)946-4217
ADDRESS OF CONTACT:	BATTELLE NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WASHINGTON
ZIP CODE:	99352
GENERAL DESCRIPTION:	ORGLIB SUPPLIES DATA USED BY THE CODES ARRRG AND FOOD FOR DOSE CALCULATIONS FROM INGESTED NUCLIDES.
KEYWORDS:	DOSE, INGESTED, NUCLIDES
SORTCODE:	ENVIRONMENTAL
STATE:	UNDER DEVELOPMENT
ACCESS:	UNLIMITED
PROGRAM:	ARRRG, FOOD
COMPUTER:	UNIVAC
DATABASE MEDIA:	DISC
SIZE:	40K
CHARACTER SET:	ASCII
UPDATE:	78-05-30

PNL0041

DATABASE NAME:	RADIONUCLIDE MASTER DATA LIBRARY
ACRONYM:	RMDLIB
TYPE:	DATA BASE-NUMERIC
CONTACT PERSON:	NAPIER, BRUCE A.
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-4217 COMMERCIAL:(509)946-4217
ADDRESS OF CONTACT:	BATTELLE NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WASHINGTON
ZIP CODE:	99352
GENERAL DESCRIPTION:	THE RMDLIB CONTAINS ALL RADIOLOGICAL DECAY DATA USED BY FOOD, ARRRG, AND OTHER PROGRAMS. IT CONTAINS ABOUT 280 ENTRIES, COMPRISING A SOMEWHAT SMALLER NUMBER OF NUCLIDES SINCE SOME ARE ENTERED BOTH AS SEPARATE ISOTOPES AND ALSO AS ISOTOPE PLUS DAUGHTERS (+D) FOR GENERALITY. THE LIBRARY IS ORGANIZED INTO ROUGHLY TWO HALVES. THE FIRST HALF CONTAINS ISOTOPES WHICH ARE NOT MEMBERS OF IMPORTANT DECAY CHAINS, ARRANGED IN ORDER OF INCREASING ATOMIC NUMBER.
KEYWORDS:	CHAINS, DAUGHTERS, DECAY, HALF LIVES, ISOTOPES, LIBRARY, NUCLIDES
SORTCODE:	ENVIRONMENTAL
STATE:	UNDERGOING Q.A.
ACCESS:	UNLIMITED
COMPUTER:	UNIVAC
DATABASE MEDIA:	DISC
SIZE:	5.6K
CHARACTER SET:	ASCII
UPDATE:	78-05-30

PNL0076

DATABASE NAME: REGULATORY METEOROLOGICAL DATA
ACRONYM: WPPSS
TYPE: DATA BASE-NUMERIC
CONTACT PERSON: MADLOCK, RON K.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2961 COMMERCIAL:(509) 946-2961
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: TWO COMPLETE CYCLES OF METEOROLOGICAL DATA AT WNP-2 AND
RESPONSIVE TO NUCLEAR REGULATORY COMMISSION REGULATORY GUIDE 1.23.
KEYWORDS: REGULATORY
SOURCE: ENVIRONMENTAL
ORIGINAL SOURCE: PNL PROJECT
GEOGRAPHIC COVERAGE: WNP-2 NEAR RICHLAND, WA
TIME COVERAGE: APRIL 1975-APRIL 1977
STATE: IN USE
ACCESS: PRIVATE
COMPUTER: DEC
DATABASE MEDIA: TAPE
LANGUAGE: FORTRAN
CHARACTER SET: BCD
COMMENTS: DATA ON MAGNETIC TAPE IS PRIVATE PROPERTY OF WASHINGTON PUBLIC
POWER SUPPLY SYSTEM
UPDATE: 78-07-11

Energy

<u>Title</u>	<u>Author</u>	<u>Page No.</u>
Hanford Sunphotometry and Turbidity Data	NS Laulainen	F19
Interactive Reactor Siting Evaluation	LE Addison	F20
Isotope Safeguards Techniques Databank Library	CL Timmerman	F21
PNL Fossil Information File	DE Deonigi	F22
PNL Reactor Information File	DE Deonigi	F23
Turbulence Data from Seattle	JV Ramsdell	F24
Ultimate Heat Sink	RK Hadlock	F25

PNL0071

DATABASE NAME: HANFORD SUNPHOTOMETRY AND TURBIDITY DATA
ACRONYM: TURBID
TYPE: DATA BASE-NUMERIC
CONTACT PERSON: LAULAINEN, NELS S.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-2861 COMMERCIAL:(509) 942-2861
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: DATA BASE: RAW DATA- SOLAR RADIATION INTENSITIES FOR VARIOUS
WAVELENGTH BANDS (6 BANDS- JULY 1974 TO OCT 1976, 7 BANDS - SEPT 1976
TO DEC 1976, 10 BANDS - APR 1977 TO PRESENT, CONTINUING) FOR MOSTLY
CLOUD FREE DAYS DURING VARIOUS HOURS OF THE DAY.

REDUCED DATA - ATMOSPHERIC TURBIDITY, INFERRED FROM TOTAL ATMOSPHERIC
OPTICAL DEPTH SUMMARIZED ON COMPUTER LISTINGS AND DAILY AVERAGES
PUNCHED ON CARDS FOR VARIOUS WAVELENGTH BANDS.
KEYWORDS: ATMOSPHERIC, CLOUD, TURBIDITY, WAVELENGTH
SORTCODE: ENERGY
GEOGRAPHIC COVERAGE: HANFORD
TIME COVERAGE: JULY 1974 TO PRESENT
TECHNICAL DOCUMENTATION: LAULAINEN, N.S., TURBIDITY VARIATIONS AT HANFORD SINCE JULY 1974
PNL ANNUAL REPORT/ATMOSPHERIC SCIENCES, PNL-2500 PT3, FEB 1978.
STATE: IN USE
ACCESS: UNLIMITED
PROGRAM: SUNNY, SEASON
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 50K
CHARACTER SET: BCD
UPDATE: 78-07-10

DATABASE NAME: INTERACTIVE REACTOR SITING EVALUATION
TYPE: DATA BASE
CONTACT PERSON: ADDISON, LARRY E.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2310 COMMERCIAL:(509) 946-2310
ADDRESS OF CONTACT: BATTELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: THE DATA BASE CONTAINS ANY TYPE OF INFORMATION WHICH MIGHT
IMPACT ON THE CHOICE OF A REACTOR LOCATION. THIS DATA IS MAINTAINED
IN CELL FORM ON A 100 X 100 CELL GRID. THE RESOLUTION OF THE DATA
DEPENDS ON THE AREA BEING STUDIED. EACH DATA MAP REPRESENTS ONE
CLASS OF INFORMATION. THE RESULTANT MAP WHICH CONTAINS THE PREFERRED
SITE LOCATIONS IS A COMPOSITE OF ALL ASSOCIATED DATA MAPS. THE DATA
MAPS ARE COMBINED BY OVERLAYING THE MAPS IN A TRANSFORMED
DIMENSIONLESS FORM. THE PROCESS OF ACCESSING THE DATA AND DISPLAYING
THE RESULTS IS DONE IN A REAL-TIME INTERACTIVE MODE UTILIZING COMPUTER
GRAPHICS.
KEYWORDS: DISPLAY, GRAPHICS, INTERACTIVE, MAPS, REACTOR
REAL-TIME, SITE
SORTCODE: ENERGY, ENVIRONMENTAL, SOCIOECONOMIC
GEOGRAPHIC COVERAGE: PACIFIC NORTHWEST (OREGON, WASHINGTON, IDAHO, MONTANA)
TECHNICAL DOCUMENTATION: ADDISON, LARRY E., "ISITE: AN INTERACTIVE REACTOR SITE
EVALUATION", ROUTH DRAFT - INTERNAL DISTRIBUTION
LIMITED
ACCESS: ISITE
PROGRAM: DEC
COMPUTER: DISC
DATABASE MEDIA: 48K BYTES (OVERLAYED)
SIZE: ASCII
CHARACTER SET: BIBLIOGRAPHIC - NUMERIC - ADMINISTRATIVE (INFORMATION OF
ANY TYPE WHICH MIGHT HAVE AN IMPACT ON REACTOR SITING IS QUANTIZED AND
UTILIZED) POLLUTANTS AND EFFLUENTS OF ENERGY PROCESSES;
ENVIRONMENTAL AND ECOLOGICAL SYSTEMS;
ENVIRONMENTAL MONITORING OF WATER SHEDS;
ENVIRONMENTAL MONITORING OF COASTAL REGIONS;
SOCIETAL AND ECONOMIC;
NATURAL RESOURCES INVENTORY (EG, WATER, MINERAL, OIL, COAL);
LAND USE APPRAISAL (EG, AGRICULTURAL, URBAN, INDUSTRIAL, ETC);
NATURE AND WILDERNESS RESERVES; ENERGY PRODUCTION (EG, WATER, MINERAL,
OIL, COAL, GAS PRODUCTION);
ELECTRIC POWER GENERATION;
ENERGY TRANSMISSION (EG, ELECTRICITY, OIL, GAS, ETC);
POPULATION, LAND COST, TRANSPORTATION;

PNL0062

DATABASE NAME: ISOTOPIC SAFEQUARDS TECHNIQUES DATABANK LIBRARY
ACRONYM: ISILIB
TYPE: DATA BASE-NUMERIC
CONTACT PERSON: TIMMERMAN, CRAIG L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4658 COMMERCIAL:(509) 942-4658
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS IS AN ISOTOPIC DATABASE CONTAINING INITIAL AND EXPOSURE
HEAVY METAL ISOTOPIC CONCENTRATIONS USED IN ASSOCIATION WITH ISOTOPIC
SAFEQUARDS TECHNIQUES. THE DATA SETS CONTAIN MEASURED AND REMEASURED
REPROCESSING BATCHES, SMALL SAMPLE POST IRRADIATED SAMPLES, CALCULATED
DATA POINTS, AND CORRESPONDING INITIAL FABRICATOR'S DATA TO EACH OF
THESE SAMPLES. THE EXPOSURE IN MWD/MT AND IDENTIFICATION NUMBER ARE
PROVIDED WHERE APPLICABLE. THIS DATABANK IS SET UP TO BE OPERATED
WITH THE PROGRAM MISTY. THE DATA SETS ARE FROM 35 DIFFERENT REACTORS.
KEYWORDS: CONCENTRATIONS, DATABANK, EXPOSURE, ISOTOPIC, METAL,
MWD/MT, REACTORS, REPROCESSING, SAFEQUARDS
SORTCODE: ENERGY
ORIGINAL SOURCE: PNL
TECHNICAL DOCUMENTATION: CHRISTENSEN, D.E., STEWART, K.B., AND TIMMERMAN, C.L.,
"CONTINUATION OF THE DEVELOPMENT AND APPLICATION OF ISOTOPIC
SAFEQUARDS TECHNIQUES TO CHEMICAL REPROCESSING PLANTS", AC6AC714,
US ARMS CONTROL AND DISARMAMENT AGENCY, AUGUST 29, 1977.
STATE: COMPLETE (WHEN AVAILABLE DATA WILL BE ADDED)
ACCESS: LIMITED
PROGRAM: MISTY, CALCOMP
COMPUTER: UNIVAC
DATABASE MEDIA: TAPE, CARDS
LANGUAGE: FORTRAN
SIZE: 275K
CHARACTER SET: ASCII
UPDATE: 78-06-12

PNL0003

DATABASE NAME: PNL FOSSIL INFORMATION FILE
TYPE: DATA BASE
CONTACT PERSON: DEUNIGI, DUANE E.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2475 COMMERCIAL:(509) 946-2475
ADDRESS OF CONTACT: BAITELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: FOSSIL INFORMATION FILE INCLUDES DATA ON ALL FOSSIL FUELED
AND HYDRO POWER PLANTS IN THE US. THIS FILE SUPPLIES DATA ON THE
HISTORICAL USE OF THE FOSSIL FUELS AT EACH PLANT SITE AND IN EACH
REGION OF THE COUNTRY.

THESE DATA ARE HIGHLY USEFUL IN PROJECTS CONCERNED WITH ENERGY USE AND
PROJECTIONS OF FUTURE DEMAND.
KEYWORDS: ENERGY, FOSSIL, FUELS, HISTORICAL, HYDRO
POWER PLANTS, REGION, SITE
SURTCODE: ENERGY
GEOGRAPHIC COVERAGE: UNITED STATES: CITY, STATE FEDERAL POWER COMMISSION SUPPLY
AREAS, NATIONAL ELECTRIC RELIABILITY COUNCIL AREAS.
TIME COVERAGE: 1960 - 1973
ACCESS: UNLIMITED
PROGRAM: FOSSIL DATA (MARS)
COMPUTER: CDC
DATABASE MEDIA: TAPE
SIZE: 50,000 CHARACTERS
CHARACTER SET: ASCII
COMMENTS: BIBLIOGRAPHIC - NUMERIC - ENERGY PRODUCTION (EG, WATER,
MINERAL, OIL, COAL, GAS PRODUCTION); ELECTRIC POWER GENERATION;

PNL0001

DATABASE NAME: PNL REACTOR INFORMATION FILE
TYPE: DATA BASE
CONTACT PERSON: DEUNIGI, DUANE E.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2475 COMMERCIAL:(509) 946-2475
ADDRESS OF CONTACT: BAITELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: REACTOR INFORMATION FILE INCLUDES DATA ON ALL NUCLEAR POWER
PLANTS IN THE US. THIS FILE SUPPLIES DATA ON THE HISTORICAL AND
PROJECTED USE OF NUCLEAR FUELS AT EACH PLANT SITE AND IN EACH REGION
OF THE COUNTRY.

THESE DATA ARE HIGHLY USEFUL IN PROJECTS CONCERNED WITH ENERGY USE AND
PROJECTIONS OF FUTURE DEMAND.
KEYWORDS: ENERGY, FUELS, HISTORICAL, NUCLEAR, PROJECTION,
REGION, POWER PLANTS
ENERGY
SORTCODE:
GEOGRAPHIC COVERAGE: UNITED STATES: CITY, STATE, FEDERAL POWER COMMISSION
SUPPLY AREAS, NATIONAL ELECTRIC RELIABILITY COUNCIL COORDINATION
AREAS.
TIME COVERAGE: 1960 - PRESENT
ACCESS: UNLIMITED
PROGRAM: SURF (SYSTEM 2000)
COMPUTER: CDC
DATABASE MEDIA: TAPE
SIZE: 500K CHARACTERS
CHARACTER SET: OTHER
COMMENTS: BIBLIOGRAPHIC - NUMERIC - ENERGY PRODUCTION (EG, WATER,
MINERAL, OIL, COAL, GAS PRODUCTION); ELECTRIC POWER GENERATION;

PNL0077

DATABASE NAME: TURBULENCE DATA FROM SEATTLE
ACRONYM: FAP DATA
TYPE: DATA BASE-NUMERIC
CONTACT PERSON: RAMSDALL, JAMES V.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2749 COMMERCIAL: (509) 946-2749
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: DATA BASE WAS ASSEMBLED IN A YEAR LONG MEASUREMENT PROGRAM
CONDUCTED AT 3 LOCATIONS IN AND NEAR SEATTLE, WA. MEASUREMENTS INCLUDE
U, V, W WIND COMPONENTS AT SEVERAL HEIGHTS USING GILL ANEMOMETERS.
SAMPLING RATE WAS ABOUT 2 HZ. DATA BASE CONSISTS OF RAW DATA, DATA
CORRECTED FOR ANEMOMETER RESPONSE AND EDITED TO REMOVE NOISE SPIKES,
AND ANALYZED DATA.
KEYWORDS: NOISE, WIND
SORTCODE: ENVIRONMENTAL
ORIGINAL SOURCE: PNL
GEOGRAPHIC COVERAGE: SEATTLE, WA
TIME COVERAGE: SPRING 1973 THROUGH WINTER 1973-1974
TECHNICAL DOCUMENTATION: J.V. RAMSDALL, WIND AND TURBULENCE INFORMATION FOR VERTICAL AND
SHORT TAKE-OFF AND LANDING (V/STOL) OPERATIONS IN BUILT-UP URBAN AREAS
- RESULTS OF METEOROLOGICAL SURVEY, FAA-RD-75-94, AD-A019216/161,
JUNE 1975.
STATE: IN USE
ACCESS: UNLIMITED
COMPUTER: UNIVAC
DATABASE MEDIA: TAPE, CARDS
SIZE: 90 TAPES(7 TRACK)
COMMENTS: THE DOCUMENTATION CONTAINS A DESCRIPTION OF THE DATA COLLECTION
SYSTEM AND A SUMMARY OF ANALYZED DATA.
UPDATE: 78-07-12

PNL0075

DATABASE NAME: ULTIMATE HEAT SINK
ACRONYM: UHS
TYPE: DATA BASE-NUMERIC
CONTACT PERSON: HADLOCK, RON K.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2961 COMMERCIAL:(509) 946-2961
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: MICROMETEOROLOGICAL AND IN-WATER DATA REPRESENTATIVE OF THE
THERMAL EXCHANGE PERFORMANCE OF A HOT COOLING POND FOR LATE SPRING
WEATHER IN SOUTHERN IDAHO. THE GEOTHERMAL RETENTION BASIN IS
CONSIDERED TO BE AN ANALOG TO AN ULTIMATE HEAT SINK, A COMPONENT OF A
NUCLEAR REACTOR EMERGENCY CORE COOLING SYSTEM. THE DATA ARE ACQUIRED
AT ONE-SECOND INTERVALS OVER PERIODS OF 48 AND 72 HOURS. THE DATABASE
WILL BE EXTENDED IN FY1978 AND FY1979 TO COVER OTHER METEOROLOGICAL
INFLUENCE AND ALSO TO EXHIBIT THE THERMAL PERFORMANCE OF AN INSTALLED
SPRAY SYSTEM.
KEYWORDS: METEOROLOGICAL, POND, THERMAL, WEATHER
SORTCODE: ENERGY
ORIGINAL SOURCE: PNL RESEARCH
GEOGRAPHIC COVERAGE: POINT IN SOUTHERN IDAHO
TIME COVERAGE: APRIL 1977
TECHNICAL DOCUMENTATION: R.K. HADLOCK AND O.B. ABBEY - THERMAL PERFORMANCE MEASUREMENTS
ON ULTIMATE HEAT SINKS - COOLING PONDS (PNL-2463), FEBRUARY 1978.
STATE: UNDER DEVELOPMENT
ACCESS: LIMITED
COMPUTER: CDC
DATABASE MEDIA: TAPE
LANGUAGE: FORTRAN
CHARACTER SET: BCD
COMMENTS: DATA EXIST ON MAGNETIC TAPE; NO COMPUTER PROGRAMS OF GENERAL
APPLICABILITY EXIST; DATA ARE HANDLED AD HOC DEPENDING ON ANALYSIS
REQUIREMENTS
UPDATE: 78-07-11

MODELS

Environmental

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Aqueous Release of Radionuclides Report Generator	GR Hoenes	F32
BATMAN	JV Ramsdell	F33
Commercial Waste Management Report Generator	DL Strenge	F34
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Discrete-Parcel-Random Walk Transport Model (Coastal Region Version)	SE Wise	F37
Ecosystem Level Model	RH Sauer	F38
Fall Out on Diet (Doses from Radionuclide Deposition on Food Crops)	IC Nelson	F39
Gas Release of Nuclides	IC Nelson	F40
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SNOOPY - PNL Animal Colony Data Storage and Retrieval System	CR Watson	F52
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Trajectories of Saltwater Droplets	TJ Bander	F57
1-D, Regional Temperature Simulation Model	DW Dragnich	F58

PNL0016

DATABASE NAME:	AQUEOUS REACTOR RELEASE RESULT GENERATOR
ACRONYM:	ARRRG
TYPE:	MODEL
CONTACT PERSON:	NELSON, IRAL C.
TELEPHONE:	FTS:444-7511 AND ASK FOR 942-5695 COMMERCIAL:(509) 942-5695
ADDRESS OF CONTACT:	BAITELLE-PACIFIC NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WA
ZIP CODE:	99352

PNL0036

DATABASE NAME: AQUEOUS RELEASE OF RADIONUCLIDES REPORT GENERATOR
ACRONYM: ARRRG
TYPE: MODEL
CONTACT PERSON: HOENES, GLENN R.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3754 COMMERCIAL:(509)942-3754
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: ARRRG CALCULATES INTERNAL AND EXTERNAL RADIATION DOSES FROM
THE WATER RELEASE PATHWAYS; AQUATIC FOOD, SWIMMING, BOATING, AND
DRINKING WATER. CHRONIC OR ACUTE RELEASES ALLOWED THREE
RECONCENTRATION MODELS OFFERED.
KEYWORDS: ACUTE, AQUATIC, BOATING, CHRONIC, DRINKING,
FOOD, PATHWAYS, RECONCENTRATION, WATER
SOURCE: ENVIRONMENTAL
STATE: NOT YET OPERATIONAL
ACCESS: UNLIMITED
PROGRAM: RMDLIB, ORGLIB, GRDFLIB, BIOAC1, BIOACH
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
SIZE: 25K
CHARACTER SET: ASCII
UPDATE: 78-05-30

PNL0078

DATABASE NAME: BAIMAN
TYPE: MODEL
CONTACT PERSON: RAMSDELL, JAMES V.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2749 COMMERCIAL: (509) 946-2749
ADDRESS OF CONTACT: BAIMAN IS A MULTIPLE SOURCE DISPERSION MODEL THAT COMPUTES
CONCENTRATIONS AT RECEPTOR POINTS LOCATED IN A 3 DIMENSIONAL GRID
USING SUPERPOSITION OF INDIVIDUAL PLUMES. THE MODEL IS BASED ON A
SECTOR-AVERAGED GAUSSIAN PLUME MODEL. IT INCLUDES PLUME RISE,
REFLECTION AT UPPER AND LOWER BOUNDARIES AND DEPOSITION AS OPTIONS.
SOURCES MAY BE ELEVATED OR AT GROUND LEVEL, POINTS OR AREAS, ON OR OFF
THE GRID. RECEPTOR GRID SPACING IS VARIABLE IN ALL DIMENSIONS.
CLIMATOLOGICAL DATA INPUT REQUIRED FOR MODEL OPERATIONS IS WIND SPEED,
WIND DIRECTION, TEMPERATURE, AND ATMOSPHERIC STABILITY. SOURCE
SPECIFICATION REQUIRED INCLUDES: POSITION IN GRID COORDINATES, HEIGHT,
CHARACTERISTIC HORIZONTAL DIMENSION, AND RELEASE RATE.
SORTCODE: ENVIRONMENTAL
ORIGINAL SOURCE: PNL
TECHNICAL DOCUMENTATION: J.V. RAMSDELL, IMPACT OF A HANFORD NUCLEAR ENERGY ON GROUND
LEVEL FOG AND HUMIDITY, BNWL-2058, MARCH 1972.
STATE: IN USE
ACCESS: UNLIMITED
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 24K WORDS
CHARACTER SET: ASCII
COMMENTS: DOCUMENTATION DOES NOT COVER LATEST REVISIONS INCLUDING THE
ADDITION OF THE DEPOSITION SUBROUTINES.
UPDATE: 78-07-12

PNL0058

DATABASE NAME: COMMERCIAL WASTE MANAGEMENT REPORT GENERATOR
ACRONYM: CWMS/INPREP
TYPE: MODEL
CONTACT PERSON: STRENCE, DENNIS L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL:(509)942-4323
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THE PROGRAM CWMS GENERATES RESULT TABLES FOR DOSES FROM
RELEASES OF RADIONUCLIDES FROM NUCLEAR FUEL CYCLE FACILITIES. INPUT
INCLUDES SOURCE INVENTORY, RELEASE FRACTIONS AND DISPERSION
PARAMETERS. THE PROGRAM INPREP IS AN INTERACTIVE PROGRAM TO GENERATE
INPUT FOR CWMS.
KEYWORDS: DISPERSION, FRACTIONS, FUEL, GENERATE, INTERACTIVE,
INVENTORY, NUCLEAR, RADIONUCLIDES
SORTCODE: ENVIRONMENTAL
STATE: IN USE
ACCESS: LIMITED
COMPUTER: UNIVAC
DATABASE MEDIA: DISC, CARDS
LANGUAGE: FORTRAN
SIZE: 150K FOR CWMS/ 30K FOR INPREP
CHARACTER SET: BINARY, ASCII
UPDATE: 78-06-07

PNL0017

DATABASE NAME:	CRITR
TYPE:	MODEL
CONTACT PERSON:	NELSON, IRAL C.
TELEPHONE:	FTS:444-7511 AND ASK FOR 942-5695 COMMERCIAL:(509) 946-5695
ADDRESS OF CONTACT:	BAITELLE-PACIFIC NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WA
ZIP CODE:	99352
GENERAL DESCRIPTION:	THIS PROGRAM CALCULATES THE ANNUAL INTERNAL TOTAL-BODY RADIATION DOSES TO WATER RELATED ORGANISMS.
KEYWORDS:	DOSE, ORGANISMS, RADIATION, WATER
SORTCODE:	ENVIRONMENTAL

PNL0035

DATABASE NAME: DACRIN
TYPE: MODEL
CONTACT PERSON: STRENGE, DENNIS L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL:(509)942-4323
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: DACRIN CALCULATES EFFECTIVE RADIATION DOSE TO THE HUMAN
RESPIRATORY TRACT AND OTHER ORGANS RESULTING FROM THE INHALATION OF
RADIOACTIVE AEROSOLS, USING THE ICRP TASK GROUP LUNG MODEL. DISPERSION
MODELS FOR CHRONIC OR ACUTE ATMOSPHERIC RELEASE ARE INCLUDED.
KEYWORDS: ACUTE, AEROSOLS, ATMOSPHERIC, CHRONIC, DISPERSION,
ICRP, INHALATION, LUNG MODEL, RADIOACTIVE, RESPIRATORY
SORTCODE: ENVIRONMENTAL
TECHNICAL DOCUMENTATION: HOUSTON, J.R., STRENGE, D.L., AND WATSON, E.C., "DACRIN -
A COMPUTER PROGRAM FOR CALCULATING ORGAN DOSE FROM ACUTE OR CHRONIC
RADIONUCLIDE INHALATION", BNWL-B-389, APRIL 1976. STRENGE, D.L., "A
COMPUTER PROGRAM FOR CALCULATING ORGAN DOSE FROM ACUTE OR CHRONIC
RADIONUCLIDE INHALATION; MODIFICATION FOR G.I. TRACT DOSE,"
BNWL-B-389, SUPP, (FEBRUARY, 1975).
STATE: OPERATIONAL
ACCESS: UNLIMITED
PROGRAM: URGLIB, THERMA
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
CHARACTER SET: ASCII
UPDATE: 78-05-30

PNL0079

DATABASE NAME: DISCRETE-PARCEL-RANDOM WALK TRANSPORT MODEL(COASTAL REGION
VERSION)
ACRONYM: DPRWCR
TYPE: MODEL
CONTACT PERSON: WISE, STACEY E.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2925 COMMERCIAL:(509) 946-2925
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: THE BAITELLE COASTAL REGIONS TRANSPORT MODEL WAS DEVELOPED TO
PREDICT THE TRANSPORT OF HEAT AND MASS IN THE VICINITY OF EFFLUENT
STREAMS RESULTING FROM ENERGY DEVELOPMENT AND PRODUCTION RELATED
ACTIVITIES. IT ALSO SIMULATES THE MOVEMENT OF NUTRIENTS AND SUSPENDED
PARTICULATES. THE MODEL IS ESSENTIALLY A FULLY THREE-DIMENSIONAL CODE
THAT USES THE DIRECT APPROACH OF SIMULATION KNOWN AS THE DISCRETE-
PARCEL-RANDOM WALK METHOD. THE ONLY NON 3-D ASPECT IS THE LACK OF
GENERAL 3-D FLOW VECTORS. HOWEVER, SPECIFIC VERTICAL PARTICULATE
SETTLING VELOCITIES HAVE BEEN INCORPORATED. A SUB-MODEL IS AVAILABLE
FOR POST-PROCESSING OF THE BASIC DATA OUTPUT BY THE MODEL. THE
SUB-MODEL CAN COMPUTE BOTTOM FLUX RATES, IRRADIANCE AT LAYER DEPTHS,
OCEAN FLOOR PARTICLE SIZE DISTRIBUTION, TIME HISTORIES AND AVERAGES,
EXPOSURE RATES OF A GIVEN PARAMETER AND MINIMUM/MAXIMUM MATRICES.
PLOTING ROUTINES ARE ALSO AVAILABLE TO TRANSFORM THE MODEL RESULTS
INTO GRAPHICAL FORMS.
KEYWORDS: IRRADIANCE, NUTRIENTS, OCEAN, SIMULATION, STREAMS,
TRANSPORT, VELOCITIES
SORTCODE: ENVIRONMENTAL
ORIGINAL SOURCE: PNL
STATE: IN USE
ACCESS: LIMITED
COMPUTER: DEC
DATABASE MEDIA: TAPE
LANGUAGE: FLECS
SIZE: 32K BYTES (OVERLAYED)
CHARACTER SET: ASCII
UPDATE: 78-07-18

PNL0022

DATABASE NAME: ECOSYSTEM LEVEL MODEL
ACRONYM: ELM
TYPE: MODEL
CONTACT PERSON: SAUER, RONALD H.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-6828 COMMERCIAL:(509) 942-6828
ADDRESS OF CONTACT: BATTELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
SOURCE: ENVIRONMENTAL
ORIGINAL SOURCE: HUNT, W. H.
COLORADO STATE UNIVERSITY
FT. COLLINS, COLORADO 80251
TELEPHONE- (303) 491-5642
GEOGRAPHIC COVERAGE: GRASSLANDS OF THE U. S.
COMPUTER: CDC
SIZE: 135K OCTAL
COMMENTS: PART OF THE IBP-GRASSLANDS BIOME NATIONAL PROGRAM.
CATEGORIZED AS: ENVIRONMENTAL AND ECOLOGICAL SYSTEMS.

PNL0019

DATABASE NAME: FALL OUT ON DIET (DOSES FROM RADIONUCLIDE DEPOSITION ON
FOOD DROPS)
ACRONYM: FOOD
TYPE: MODEL
CONTACT PERSON: NELSON, IRAL C.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-5695 COMMERCIAL:(509) 942-5695
ADDRESS OF CONTACT: BAITELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: FOOD CALCULATES ANNUAL INDIVIDUAL DOSES FROM THE
CONSUMPTION OF GARDEN PRODUCE AND ANIMAL PRODUCTS (MILK, EGGS, MEAT)
THAT ARE CONTAMINATED WITH RADIONUCLIDES DEPOSITED FROM AIR (FALLOUT)
OR WATER (SPRINKLER IRRIGATED). PRESENTLY 14 FOOD TYPES, 7 ORGANS
AND 190 RADIONUCLIDES MAY BE SELECTED TO STUDY.
KEYWORDS: ANIMAL, FALLOUT, FOOD, IRRIGATED, MEAT,
MILK, RADIONUCLIDES, WATER
SORTCODE: ENERGY, ENVIRONMENTAL
TIME COVERAGE: 1972 TO PRESENT
TECHNICAL DOCUMENTATION: "ENVIRONMENTAL STATEMENT, WASTE MANAGEMENT OPERATIONS,
HANFORD RESERVATION, RICHLAND WASHINGTON," WASH-1538, VOL-2,
APPENDIX III-A, PART 2, (SEPTEMBER, 1974). SOLDAT, JOSEPH K.,
"ENVIRONMENTAL BEHAVIOR AND RADIATION DOSES FROM IODINE-129,"
BNWL-SA-4879, (JUNE, 1974).
ACCESS: UNLIMITED
COMPUTER: UNIVAC
COMMENTS: CATEGORIZED AS: POLLUTANTS AND EFFLUENTS OF ENERGY
PROCESSES ENVIRONMENTAL AND ECOLOGICAL SYSTEMS, ENVIRONMENTAL
MONITORING OF THE ATMOSPHERE AND WATER SHEDS. DEPENDENT UPON THE
DATABASES: REL, FOON, AND ARGON. AVAILABLE ON A NATIONAL COMPUTER
NETWORK-CSTS INFONET.

F40

PNL0018

DATABASE NAME:	GAS RELEASE OF NUKLIDES
ACRUNYM:	GRUNK
TYPE:	MODEL
CONTACT PERSON:	NELSON IRAL C.
TELEPHONE:	FTS:444-7511 AND ASK FOR 942-5695 COMMERCIAL:(509) 942-5695
ADDRESS OF CONTACT:	BAITELLE-PACIFIC NORTHWEST LABORATORIES POST OFFICE BOX 999
DUE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WA
ZIP CODE:	99352

NL0067

DATABASE NAME: GLOBAL TRITIUM TRANSPORT
CRUNYM: TRIGLO
TYPE: MODEL
CONTACT PERSON: BANDER, THOMAS J.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-5061 COMMERCIAL:(509) 942-5061
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: THE TECHNIQUE FOR ESTIMATING THE GLOBAL DISTRIBUTION OF TRITIUM
CONCENTRATIONS IN THE ATMOSPHERE AND SURFACE WATER FROM SOME SOURCE
IN ANY SPECIFIED LATITUDE BELT IS ESSENTIALLY A BOX MODEL APPROACH
WHICH ASSUMES THAT THE TRITIUM FOLLOWS THE HYDROLOGIC CYCLE. THE
SIMULTANEOUS SOLUTION OF THE SET OF FIRST ORDER DIFFERENTIAL EQUATIONS
GIVES CONCENTRATIONS WHICH REPRESENT A 10 DEGREE LATITUDE BELT
AVERAGE.
KEYWORDS: ATMOSPHERE, LATITUDE, TRITIUM, WATER
ORTCODE: ENVIRONMENTAL
ECHNICAL DOCUMENTATION: BANDER, T.J. AND RENNE,D.S., "A MODEL FOR ANALYZING THE GLOBAL
CONCENTRATIONS OF TRITIUM RELEASED FROM A CTR", PROCEEDINGS OF THE
SECOND TOPICAL MEETING ON THE TECHNOLOGY OF CONTROLLED NUCLEAR FUSION,
VOL IV, 1976.
STATE: INACTIVE
ACCESS: LIMITED
ROGRAM: IMSL LIBRARY
OMPUTER: CDC
ATABASE MEDIA: CARDS
ANGUAGE: FORTRAN
IZE: 52700B
HARACTER SET: ASCII
OMMENTS: REQUIRES SUBROUTINES FROM IMSL LIBRARY
PDATE: 78-07-11

PNL0057

DATABASE NAME:	INPOP-REPORT GENERATOR
TYPE:	MODEL
CONTACT PERSON:	STRENGE, DENNIS L.
TELEPHONE:	FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL=(509) 942-4323
ADDRESS OF CONTACT:	BAITELLE NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WASHINGTON
ZIP CODE:	99352
GENERAL DESCRIPTION:	THIS PROGRAM USES PRECALCULATED FACTORS TO GENERATE OUTPUT REPORTS OF INDIVIDUAL AND/OR POPULATION DOSES.
KEYWORDS:	DOSE, INDIVIDUAL, POPULATION
SOURCE:	ENVIRONMENTAL
ORIGINAL SOURCE:	GENERATED AT PNL
STATE:	IN USE
ACCESS:	LIMITED
COMPUTER:	UNIVAC
DATABASE MEDIA:	CARDS
LANGUAGE:	FORTRAN
SIZE:	30K
CHARACTER SET:	ASCII
UPDATE:	78-06-07

PNLU034

DATABASE NAME: KRONIC
TYPE: MODEL
CONTACT PERSON: STRENCE, DENNIS L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL:(509)942-4323
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: KRONIC IS A PROGRAM FOR CALCULATION OF ANNUAL AVERAGE BETA
AND GAMMA RADIATION DOSES RESULTING FROM CHRONIC RELEASE OF
RADIONUCLIDES TO THE ATMOSPHERE. DOSE CALCULATIONS ARE PERFORMED FOR
EACH SECTOR ABOUT THE RELEASE POINT AND USE JOINT FREQUENCY DATA FOR
ATMOSPHERIC STABILITY AND WIND SPEED FROM A SEPARATE FILE.
KEYWORDS: ATMOSPHERIC, CHRONIC, DOSE, GAMMA, RADIATION,
SECTOR, WIND
SORTCODE: ENVIRONMENTAL
TECHNICAL DOCUMENTATION: STRENCE, D.L. AND WATSON, E.C., "KRONIC - A COMPUTER PROGRAM FOR
CALCULATING ANNUAL AVERAGE EXTERNAL DOSES FROM CHRONIC ATMOSPHERIC
RELEASES OF RADIONUCLIDES", BNWL-B-264, JUNE 1973.
STATE: OPERATIONAL
ACCESS: UNLIMITED
PROGRAM: KNOBET, RNDLIB, DRFLIB
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
CHARACTER SET: ASCII
UPDATE: 78-05-30

PNL0014

DATABASE NAME:	LIMNUS
TYPE:	MODEL
CONTACT PERSON:	BACA, ROBERT G.
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-2301 COMMERCIAL:(509) 946-2301
ADDRESS OF CONTACT:	BAITELLE-PACIFIC NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WA
ZIP CODE:	99352
GENERAL DESCRIPTION:	A GENERALIZED WATER QUALITY MODEL FOR EUTROPHIC LAKES AND RESERVOIRS.
KEYWORDS:	RESERVOIRS, LAKES, WATER QUALITY
SORTCODE:	ENVIRONMENTAL

PNL0056

DATABASE NAME: LONG TERM ATMOSPHERIC DISPERSION CALCULATION
ACRONYM: LONGTM
TYPE: MODEL
CONTACT PERSON: STRENGE, DENNIS L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL:(509) 942-4323
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS PROGRAM CALCULATES NORMALIZED AIR CONCENTRATIONS AS A
FUNCTION OF DISTANCE AND DIRECTION FROM A RELEASE POINT. INPUT DATA
INCLUDE THE JOINT FREQUENCY METEOROLOGICAL DATA FOR THE SITE.
KEYWORDS: METEOROLOGICAL, SITE
SORTCODE: ENVIRONMENTAL
TECHNICAL DOCUMENTATION: STRENGE, D.L. AND WATSON, E.C., "KRONIC-A COMPUTER PROGRAM FOR
CALCULATING ANNUAL AVERAGES...", BNWL-B-264, JUNE 1973.
STATE: IN USE
ACCESS: LIMITED
COMPUTER: UNIVAC
DATABASE MEDIA: DISC, CARDS
LANGUAGE: FORTRAN
SIZE: 150K OCTAL
CHARACTER SET: ASCII
UPDATE: 78-05-01

PNL0047

DATABASE NAME: MAXI
TYPE: MODEL
CONTACT PERSON: HOENES, GLENN R.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3754 COMMERCIAL:(509)942-3754
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: MAXI CALCULATES THE MAXIMUM ANNUAL RADIATION DOSE TO TOTAL
BODY AND ORGANS OF INTEREST FOR FOOD INGESTION AND EXTERNAL EXPOSURE
PATHWAYS. THE CALCULATION IS A TIME ITERATION ON THE MODELS USED
IN THE CODE FOOD.
KEYWORDS: BODY, EXPOSURE, EXTERNAL, FOOD, INGESTION,
MODELS, PATHWAYS
SORICODE: ENVIRONMENTAL
STATE: UNDERGOING MODIFICATION
PROGRAM: RMDLIB, ORGLIB, GRDLIB, FTRANSLIB
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
CHARACTER SET: ASCII
UPDATE: 78-05-31

PNL0065

DATABASE NAME: ORIGEN
ACRONYM: ETM
TYPE: MODEL
CONTACT PERSON: E.T. MERRILL
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2610 COMMERCIAL:(509) 946-2610
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: ORIGEN IS A VERSATILE POINT DEPLETION CODE WHICH SOLVES THE EQUATIONS OF RADIOACTIVE GROWTH AND DECAY FOR LARGE NUMBERS OF ISOTOPES WITH ARBITRARY COUPLING. THE CODE USES THE MATRIX EXPONENTIAL METHOD TO SOLVE A LARGE SYSTEM OF COUPLED, LINEAR, FIRST-ORDER ORDINARY DIFFERENTIAL EQUATIONS WITH CONSTANT COEFFICIENTS. THE GENERAL NATURE OF THE MATRIX EXPONENTIAL METHOD PERMITS THE TREATMENT OF COMPLEX DECAY AND TRANSMUTATION SCHEMES. AN EXTENSIVE LIBRARY OF NUCLEAR DATA HAS BEEN COMPILED, INCLUDING HALF-LIVES AND DECAY SCHEMES, NEUTRON ABSORPTION CROSS SECTIONS, FISSION YIELDS, DISINTEGRATION ENERGIES, AND MULTIGROUP PHOTON RELEASE DATA. ORIGEN HAS BEEN USED TO COMPUTE THE COMPOSITIONS AND RADIOACTIVITY OF FISSION PRODUCTS, CLADDING MATERIALS, AND FUEL MATERIALS IN LWRS, LMFBRs, MSBRS, AND HTGRs. THE APPLICATIONS ARE ILLUSTRATED WITH CALCULATED INVENTORIES AND RADIATION LEVELS FOR SPENT FUEL IRRADIATED TO A BURNUP OF 33,000 MWD/METRIC TON IN A PWR SPECTRUM.
KEYWORDS: BURNUP, CLADDING, CROSS-SECTION, HTGRs, INVENTORIES, LMFBRs, LWRS, MSBRS, SPECTRUM, TRANSMUTATION
SOURCE: ENVIRONMENTAL
TIME COVERAGE: 1973
TECHNICAL DOCUMENTATION: ORNL 4628-MAY 1973
STATE: IN USE
ACCESS: UNLIMITED
COMPUTER: CDC, UNIVAC, IBM
DATABASE MEDIA: TAPE, CARDS
LANGUAGE: FORTRAN
SIZE: 142 TO 300K WORDS
UPDATE: 78-06-14

PNL0048

DATABASE NAME: PABLM
TYPE: MODEL
CONTACT PERSON: HOENES, GLENN R.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3754 COMMERCIAL:(509)942-3754
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: PABLM CALCULATES INTERNAL DOSES AND DOSE COMMITMENTS TO MAN FOR
EITHER ACUTE OR CHRONIC INGESTION OF RADIONUCLIDES FOR POPULATION
OR MAXIMUM INDIVIDUAL FOR THE AIR PATHWAY.
KEYWORDS: ACUTE, CHRONIC, INGESTION, POPULATION, RADIONUCLIDES
SORTCODE: ENVIRONMENTAL
STATE: UNDERGOING MODIFICATION
ACCESS: UNLIMITED
PROGRAM: RMOLIB, ORGLIB
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
CHARACTER SET: ASCII
UPDATE: 78-05-31

PNL0045

DATABASE NAME:	PREDG
TYPE:	MODEL
CONTACT PERSON:	STRENGE, DENNIS L.
TELEPHONE:	FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL:(509)942-4323
ADDRESS OF CONTACT:	BAITELLE NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WASHINGTON
ZIP CODE:	99352
GENERAL DESCRIPTION:	PREDG IS A COMBINATION OF THE CODES SITMET AND WCLIM. SITMET USES HOURLY, ON-SITE METEOROLOGICAL DATA TO GENERATE TOTAL BODY AND/OR SKIN DOSES FOR SPECIFIED RELEASE INVENTORIES, RELEASE HEIGHTS, AND DOWNWIND DISTANCES. WCLIM GENERATES A STATISTICAL DISTRIBUTION OF DOSES WITH MAGNITUDE AND DIRECTION.
KEYWORDS:	BODY, DOSES, DOWNWIND, METEOROLOGICAL, ON-SITE, SKIN
SORTCODE:	ENVIRONMENTAL
STATE:	ON LINE
ACCESS:	UNLIMITED
COMPUTER:	UNIVAC
DATABASE MEDIA:	DISC
LANGUAGE:	FORTRAN
SIZE:	180K
CHARACTER SET:	ASCII
UPDATE:	78-05-31

PNL0044

DATABASE NAME: REDIQ
TYPE: MODEL
CONTACT PERSON: STRENCE, DENNIS L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL:(509)942-4323
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: REDIQ CALCULATES THE RISK EQUIVALENCE OF DOSAGE FROM INTERNALLY
DEPOSITED RADIONUCLIDES TO DOSAGE FROM EXTERNAL WHOLE-BODY
IRRADIATION. THE CODE USES THE ICRP TASK GROUP AS LUNG DYNAMICS MODEL
FOR INHALATION, THE ICRP GASTROINTESTINAL TRACT MODEL, AND AN
EXPONENTIAL ORGAN RETENTION MODEL.
KEYWORDS: DOSAGE, GASTROINTESTINAL, ICRP, INHALATION, IRRADIATION,
LUNG, MODEL, RADIONUCLIDE, WHOLE-BODY
SORTCODE: ENVIRONMENTAL
TECHNICAL DOCUMENTATION: STRENCE, WATSON, AND KENNEDY, "REDIQ - A COMPUTER PROGRAM FOR
ESTIMATING HEALTH EFFECTS FROM INHALATION AND INGESTION OF
RADIONUCLIDES", BNWL-2110, DEC 1976.
STATE: UNDERGOING CONVERSION
ACCESS: UNLIMITED
PROGRAM: RNDLIB, ORGLIB
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
CHARACTER SET: ASCII
UPDATE: 78-05-31

PNL0012

DATABASE NAME:	SCAVENGING MODEL INCORPORATING CHEMICAL KINETICS
TYPE:	MODEL
CONTACT PERSON:	DANA, M. TERRY
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-2836 COMMERCIAL:(509) 946-2836
ADDRESS OF CONTACT:	BATTELLE-PACIFIC NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WA
ZIP CODE:	99352
SORTCODE:	ENVIRONMENTAL
COMPUTER:	OTHER CDL CYBER 73
SIZE:	40K UCIAL
COMMENTS:	GRAPHICS DISPLAY ROUTINE - SIMPLE PRINTER PLOT SHOWS RELATIVE MAGNITUDE OF GROUND LEVEL POLLUTANT CONCENTRATIONS FOR EACH DROP SIZE CLASS.

PNL0015

DATABASE NAME:	SNOOPY-PNL ANIMAL COLONY DATA STORAGE AND RETRIEVAL SYSTEM
TYPE:	MODEL
CONTACT PERSON:	WATSON, CHARLES R.
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-3251 COMMERCIAL:(509) 946-3251
ADDRESS OF CONTACT:	BATTELLE-PACIFIC NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WA
ZIP CODE:	99352

PNL0011

DATABASE NAME: SNUP
TYPE: MODEL
CONTACT PERSON: WATSON, CHUCK R.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3251 COMMERCIAL:(509)942-3251
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: A SERIES OF FORTRAN COMPUTER PROGRAMS, RUNNING ON A CDC-CYBER
COMPUTER, AID INVESTIGATORS IN ANALYSIS OF HISTOPATHOLOGY OBSERVATIONS
OF RESEARCH ANIMALS. CLINICAL AND PATHOLOGIC OBSERVATIONS ARE CODED
UTILIZING THE SYSTEMATIZED NOMENCLATURE OF PATHOLOGY (COLLEGE OF
AMERICAN PATHOLOGISTS, CHICAGO, IL, 1965).
KEYWORDS: ANIMALS, CLINICAL, HISTOPATHOLOGY, PATHOLOGY
ACCESS: UNLIMITED
COMPUTER: CDC
LANGUAGE: FORTRAN
UPDATE: 78-06-06

PNL0013

DATABASE NAME: SQUALL
TYPE: MODEL
CONTACT PERSON: SIMPSON, CHARLES L.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2892 COMMERCIAL:(509) 946-2892
ADDRESS OF CONTACT: BATTELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: A TWO-DIMENSIONAL TIME DEPENDENT SQUALL LINE THUNDERSTORM
MODEL.
KEYWORDS: THUNDERSTORM, SQUALL
SORTCODE: ENVIRONMENTAL

PNL0043

DATABASE NAME: SUBDUSA
TYPE: MODEL
CONTACT PERSON: STRENGE, DENNIS L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4323 COMMERCIAL:(509)942-4323
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: SUBDUSA CALCULATES THE EXTERNAL DOSE TO HUMANS FOR SKIN, EYE,
GONADS, AND TOTAL BODY RESULTING FROM ACCIDENTAL RELEASE OF
RADIONUCLIDES TO THE ATMOSPHERE. DOSES ARE CALCULATED AS A FUNCTION
OF QUANTITY RELEASED, DURATION OF RELEASE, ATMOSPHERIC CONDITIONS AT
THE POINT OF RELEASE, AND HORIZONTAL DISTANCE FROM THE RELEASE POINT.
BOTH GAMMA AND BETA DOSES ARE CALCULATED.
KEYWORDS: ACCIDENTAL, ATMOSPHERIC, BETA, BODY, DOSE,
GAMMA, GONADS, RADIONUCLIDES
SORTCODE: ENVIRONMENTAL
TECHNICAL DOCUMENTATION: STRENGE, WATSON AND HOUSTON, "SUBDUSA - A COMPUTER PROGRAM FOR
CALCULATING EXTERNAL DOSES FROM ACCIDENTAL ATMOSPHERIC RELEASES OF
RADIONUCLIDES", BNWL-8-351, JUNE 1975.
STATE: UNDERGOING CONVERSION
ACCESS: UNLIMITED
COMPUTER: UNIVAC
LANGUAGE: FORTRAN
CHARACTER SET: ASCII
UPDATE: 78-05-30

PNL0046

DATABASE NAME: SUBPOPA
TYPE: MODEL
CONTACT PERSON: STRENCE, DENNIS L.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-4323 COMMERCIAL:(509)946-4323
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: SUBPOPA COMPUTES EXTERNAL RADIATION DOSES TO POPULATIONS
DISTRIBUTED AROUND THE POINT OF AN ACUTE ACCIDENTAL RELEASE OF
RADIONUCLIDES. DOSES ARE CALCULATED AS A FUNCTION OF QUANTITY
RELEASED, DURATION OF RELEASE ATMOSPHERIC CONDITIONS, AND DISTANCE
FROM THE RELEASE POINT. BOTH GAMMA AND BETA DOSES ARE CALCULATED.
KEYWORDS: ACCIDENTAL, ACUTE, ATMOSPHERIC, BETA, DISTRIBUTED,
DOSE, GAMMA, RADIONUCLIDES
SORTCODE: ENVIRONMENTAL
STATE: UNDERGOING CONVERSION
ACCESS: UNLIMITED
PROGRAM: THERMS, GISLIBS, BAVELIBS, DRFLIB
COMPUTER: UNIVAC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
CHARACTER SET: ASCII
UPDATE: 78-05-31

PNL0069

DATABASE NAME:	TRAJECTORIES OF SALTWATER DROPLETS
ACRONYM:	SALTU
TYPE:	MODEL
CONTACT PERSON:	BANDER, THOMAS J.
TELEPHONE:	FTS:444-7511 AND ASK FOR 942-5061 COMMERCIAL:(509) 942-5061
ADDRESS OF CONTACT:	BATTELLE NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WA
ZIP CODE:	99352
GENERAL DESCRIPTION:	THIS MODEL CALCULATES THE TRAJECTRIES OF SALTWATER DROPLETS. THE DROPLETS START WITH AN INITIAL SIZE, VELOCITY AND SALINITY. THE ATMOSPHERE HAS A FIXED HUMIDITY, TEMPERATURE AND A POWER LAW WIND PROFILE. THE MODEL TAKES INTO ACCOUNT EVAPORATION AND THE EFFECT OF SALINITY ON EVAPORATION.
KEYWORDS:	ATMOSPHERE, EVAPORATION, HUMIDITY, SALINITY, TEMPERATURE, VELOCITY, WIND
SORTCODE:	ENVIRONMENTAL
STATE:	INACTIVE
ACCESS:	LIMITED
COMPUTER:	UNIVAC
DATABASE MEDIA:	CARDS
LANGUAGE:	FORTRAN
SIZE:	114548
CHARACTER SET:	ASCII
UPDATE:	78-07-16

PNL0021

DATABASE NAME: I-D, REGIONAL TEMPERATURE SIMULATION MODEL
ACRONYM: COLHEAT
TYPE: MODEL
CONTACT PERSON: DRAGNICH, DAVID W.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2491 COMMERCIAL:(509) 946-2491
ADDRESS OF CONTACT: BAITELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: THE COLHEAT SIMULATION MODEL HAS BEEN USED PRIMARILY TO
SIMULATE WATER TEMPERATURES IN A FLOWING STREAM. HOWEVER, THE
MATHEMATICAL MODEL, ORIGINALLY DEVELOPED TO ESTIMATE THE EFFECT ON THE
COLUMBIA OF THE HANFORD PRODUCTION REACTORS, HAS BEEN FORMULATED AND
STRUCTURED IN SUCH A MANNER THAT IT CAN BE USED TO SIMULATE THE
BEHAVIOR OF POLLUTANTS OTHER THAN WASTE HEAT. TESTING AND APPLICATION
OF THE MODEL TO "REAL WORLD" SITUATIONS HAS PROMPTED DEVELOPMENT OF
SPECIALIZED ROUTINES TO INCLUDE PROVISIONS FOR HANDLING TRANSIENT
FLOW, REVERSE FLOW, DIFFUSIONAL TRANSPORT AND DENSITY CURRENTS. IT HAS
BEEN TESTED AND HAS GIVEN EXCELLANT RESULTS.
KEYWORDS: COLUMBIA RIVER, DENSITY, DIFFUSIONAL, FLOW, HANFORD,
HEAT, POLLUTANTS, REACTORS, STREAM TEMPERATURES, WASTE
ENVIRONNMENTAL
SORTCODE: RIVER MILE
GEOGRAPHIC COVERAGE: HEDL ENVIRONMENTAL ENGINEERING STAFF,"THE COLHEAT RIVER
SIMULATION MODEL", HEDL-TME (8/72), 72-103.
TECHNICAL DOCUMENTATION: LIMITED
ACCESS: CDC, UNIVAC, IBM
COMPUTER: 160K
SIZE: PART OF THE COLUMBIA DENVER STUDY. CATEGORIZED AS:
COMMENTS: POLLUTANTS AND EFFLUENTS OF ENERGY PROCESSES, ENVIRONMENTAL AND
ECOLOGICAL SYSTEMS, NATURAL RESOURCES INVENTORY(E.G., WATER, MINERAL,
OIL, COAL) AND ELECTRIC POWER GENERATION. AVAILABLE ON ERDA-RL
COMPUTER NETWORK. GRAPHICAL DISPLAY ROUTINE-CAL COMP PLOTS.

Energy

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PNL0006

DATABASE NAME:	A COMPUTER PROGRAM FOR GEOTHERMAL COST ANALYSIS (GEOCOST)
TYPE:	MODEL
CONTACT PERSON:	BLOOMSTER, CLARENCE H.
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-2442 COMMERCIAL:(509) 946-2442
ADDRESS OF CONTACT:	BATTELLE-PACIFIC NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WA
ZIP CODE:	99352
ORIGINAL SOURCE:	WERNER, L. B. ERDA WASHINGTON, D. C. 20545 TELEPHONE- (202) 634-1614

PNL0008

DATABASE NAME: A REGIONAL COAL COST MODEL FOR THE U.S.
TYPE: MODEL
CONTACT PERSON: DEONIGI, DUANE E.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2475 COMMERCIAL:(509) 946-2475
ADDRESS OF CONTACT: BAITELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS COMPUTER PROGRAM CONTAINS THREE MINING COST MODELS AND
ACCEPTS AS INPUT THE PROPERTIES OF THE COAL SEAM (THICKNESS, DEPTH,
ETC.) AND A DISCOUNT RATE. THE COST PER TON OF COAL IS COMPUTED.
OTHER FEATURES INCLUDE THE USE OF A TRANSPORTATION COST FUNCTION AND
GEOGRAPHICAL COORDINATES TO COMPUTE THE DELIVERY COST TO ANY GIVEN
LOCATION.
KEYWORDS: COAL, COST, DELIVERY, GEOGRAPHICAL, TRANSPORTATION
SORTCODE: ENERGY
GEOGRAPHIC COVERAGE: U.S.

PNL0066

DATABASE NAME: ELECTRIC POWER SUPPLY ANALYSIS MODEL FOR THE PACIFIC NORTHWEST
ACRONYM: ELSA
TYPE: MODEL
CONTACT PERSON: JACOBSEN, J. JAY
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2187 COMMERCIAL:(509) 946-2187
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: ELSA IS A SIMULATION MODEL OF THE ELECTRIC SUPPLY SYSTEM IN THE
PACIFIC NORTHWEST. IT WAS ADAPTED FROM A SERIES OF SIMULATION MODELS
CONSTRUCTED BY ANDREW FORD AT DARTMOUTH COLLEGE. ELSA IS DIVIDED INTO
THREE MAJOR SECTORS: PRODUCTION, REGULATORY, AND CONSTRUCTION. THE
PRODUCTION SECTOR USES THE INSTALLED GENERATING CAPACITY OF FIVE TYPES
OF FACILITIES (HYDROELECTRIC, NUCLEAR, COAL-FIRED, OIL-FIRED, AND
COMBUSTION TURBINE) AND THE REQUIREMENTS FOR ELECTRICITY TO COMPUTE
THE ELECTRICAL RESERVE CAPACITY AND THE SYSTEM LOAD FACTOR. THE
REGULATORY SECTOR USES INFORMATION FROM THE PRODUCTION SECTOR AND A
NUMBER OF EXOGENOUS VARIABLES SUCH AS CAPITAL COSTS, FUEL COSTS, AND
TAX RATES TO DETERMINE THE PRICE OF ELECTRICITY AS WELL AS OTHER
FINANCIAL VARIABLES. THE CONSTRUCTION SECTOR PERFORMS THREE MAJOR
FUNCTION: 1) FORECASTS THE AMOUNT OF NEW CONSTRUCTION NEEDED
2) DETERMINE THE AMOUNT OF NEW CONSTRUCTION THAT CAN BE FINANCED, AND
3) DECIDES THE TYPES OF NEW GENERATING CAPACITY SHOULD BE INITIATED.
KEYWORDS: COAL-FIRED, CONSTRUCTION, FORECASTING, HYDRO-ELECTRIC,
PACIFIC NORTHWEST, OIL-FIRED, REGULATORY, SIMULATION, TURBINE
ENERGY
SORTCODE: PACIFIC NORTHWEST
GEOGRAPHIC COVERAGE: PACIFIC NORTHWEST
TECHNICAL DOCUMENTATION: I.P. HARRINGTON, J.J. JACOBSEN, ELSA: AN ELECTRIC POWER SUPPLY
ANALYSIS MODEL FOR THE PACIFIC NORTHWEST, BNWL 2084-RAP 8, NOVEMBER
1976.
STATE: EXISTING
ACCESS: UNLIMITED
COMPUTER: CDC
LANGUAGE: FORTRAN
UPDATE: 78-06-30

PNL0068

DATABASE NAME: FLOW OF GAS THROUGH SMALL PIPING
ACRONYM: CAPIL
TYPE: MODEL
CONTACT PERSON: BANDER, THOMAS J.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-5061 COMMERCIAL:(509) 942-5061
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: AN ITERATION SCHEME IS USED TO OBTAIN FLOW IN SMALL PIPING
BASED ON CURVES IN THE MOODY DIAGRAM. IT CALCULATES FLOW FOR DIFFERENT
ROUGHNESSES AND REYNOLDS NUMBERS. THE FLOW CAN BE LAMINAR, TURBULENT,
OR CHOKED AND USES A THEORETICAL RELATION BETWEEN FRICTION FACTOR
AND MACH NUMBER FOR TURBULENT CHOKED FLOW.
KEYWORDS: HYDROLOGIC, LAMINAR, MACH, MOODY, TURBULANT
SORTCODE: ENERGY
STATE: IN USE
ACCESS: LIMITED
COMPUTER: CDC
LANGUAGE: FORTRAN
SIZE: 363008
CHARACTER SET: ASCII
UPDATE: 78-07-12

PNL0007

DATABASE NAME: INPUT/OUTPUT OF ENERGY USE CHANGES IN THE U.S. FROM
1947-1958 AND 1958-1963

TYPE: MODEL

CONTACT PERSON: DEONIGI, DUANE E.

TELEPHONE: FTS:444-7511 AND ASK FOR 946-2475 COMMERCIAL:(509) 946-2475

ADDRESS OF CONTACT: BATTELLE-PACIFIC NORTHWEST LABORATORIES
POST OFFICE BOX 999

DOE LABORATORY: PNL

CITY: RICHLAND

STATE: WA

ZIP CODE: 99352

GENERAL DESCRIPTION: THIS MODEL USES SOME STRAIGHT FORWARD MATRIX MANIPULATION
PROGRAMS TO DETERMINE THE EFFECT OF CHANGES IN TECHNOLOGY AND THE
CHANGES IN FINAL DEMAND ON THE ENERGY USE IN THE U.S.

KEYWORDS: ENERGY, DEMAND

SORTCODE: ENERGY

GEOGRAPHIC COVERAGE: U.S.

PNL0063

DATABASE NAME: ISOTOPIC CORRELATION DEVELOPMENT
ACRONYM: ISUCOR
TYPE: MODEL
CONTACT PERSON: TIMMERMAN, CRAIG L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4658 COMMERCIAL:(509) 942-4658
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS PROGRAM DEVELOPS ISOTOPIC CORRELATIONS FROM AN INPUT OF ANY FOUR ISOTOPIC VARIABLES. THE INPUT VARIABLES FROM MULTIPLICATIVE VARIABLES LIMITED TO A MAXIMUM CUMMULATIVE EXPONENT OF FOUR (THAT IS ONE VARIABLE COULD BE RAISED TO THE FIRST-FOURTH POWER, TWO VARIABLES COULD HAVE ONE RAISED TO THE FIRST AND THE OTHER UP TO THE THIRD OR BOTH VARIABLES SQUARED, ETC.)
KEYWORDS: CUMMULATIVE, EXPONENT, ISOTOPIC, POWER, CORRELATIONS
SORTCODE: ENERGY
ORIGINAL SOURCE: PNL
TECHNICAL DOCUMENTATION: NAPIER, B.A. AND TIMMERMAN, C.L., "DEVELOPING ISOTOPIC FUNCTIONS," PNL-SA-6594, PRESENTED AT THE SYMPOSIUM ON THE ISOTOPIC CORRELATION AND ITS APPLICATION TO THE NUCLEAR FUEL CYCLE, STRESA, ITALY, MAY 9-11, 1978.
STATE: COMPLETE AND IN USE
ACCESS: LIMITED
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 54K
CHARACTER SET: ASCII
UPDATE: 78-06-12

PNL0061

DATABASE NAME: ISOTOPIC SAFEGUARDS TECHNIQUES
ACRONYM: MISTY
TYPE: MODEL
CONTACT PERSON: TIMMERMAN, CRAIG L.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-4658 COMMERCIAL:(509) 942-4658
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS PROGRAM MANIPULATES ISOTOPIC DATA TO BE USED IN ISOTOPIC
SAFEGUARDS TECHNIQUES. THE MANIPULATIONS ARE MATHEMATICALLY FORMING
ISOTOPIC VARIABLES AND THEN PAIRING VARIABLES TO FORM LINEAR ISOTOPIC
FUNCTIONS. A GRAPHICAL PACKAGE IS INCLUDED TO PLOT THESE FUNCTIONS.
A STATISTICAL ROUTINE WILL PERFORM A PAIRED COMPARISON ANALYSIS OF
DUPLICATE SAMPLE MEASUREMENTS, AND A REGRESSION ANALYSIS WILL PROVIDE
IMPORTANT LINE FITTING STATISTICS FOR EACH FUNCTION SUCH AS SLOPE,
INTERCEPT, VARIANCES, AND OUTLIERS.
KEYWORDS: GRAPHICAL, ISOTOPIC, OUTLIERS, REGRESSION, SAFEGUARDS,
STATISTICAL
SORTCODE: ENERGY
ORIGINAL SOURCE: PNL
TECHNICAL DOCUMENTATION: CHRISTENSEN, D.E., STEWART, K.B., AND TIMMERMAN, C.L.,
"CONTINUATION OF THE DEVELOPMENT AND APPLICATION OF ISOTOPIC
SAFEGUARDS TECHNIQUES TO CHEMICAL REPROCESSING", AC6AC714, US ARMS
CONTROL AND DISARMAMENT AGENCY, AUGUST 29, 1977.
STATE: NEAR COMPLETION (JULY,1978)
ACCESS: LIMITED
PROGRAM: CALCOMP
COMPUTER: UNIVAC
DATABASE MEDIA: TAPE, CARDS
LANGUAGE: FORTRAN
SIZE: 65K
CHARACTER SET: ASCII
COMMENTS: THIS PROGRAM SHOULD BE COMPLETED AND SENT TO THE INTERNATIONAL
ATOMIC ENERGY AGENCY FOR USE IN THEIR ISOTOPIC SAFEGUARDS PROGRAM
IN JULY,1978.
UPDATE: 78-06-12

PNL0070

DATABASE NAME: ISRAEL-OVERLAMP SALT DRAFT DEPOSITION MODEL
ACRONYM: DRIFT
TYPE: MODEL
CONTACT PERSON: LAULAINEN, NELS S.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-2861 COMMERCIAL:(509) 942-2861
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: PURPOSE OF THIS MODEL IS TO COMPUTE THE SALT DEPOSITION AND
GROUND LEVEL CONCENTRATION OF SALT FOR A NATURAL DRAFT COOLING TOWER
USING SALT WATER. MAJOR ASSUMPTIONS OF THE MODEL ARE:
DRIFT DROPLETS CAN BE DIVIDED INTO DISCRETE SIZE GROUPS,
EFFECTIVE HEIGHT OF EMISSION OCCURS WHEN THE DROPLET SETTLING VELOCITY
EQUALS THE PLUME RISE VELOCITY,
NO DROPLET GROWTH IN MOIST PLUME; DROPLET EVAPORATION BEGINS AT THE
PLUME BREAKAWAY POINT,
NO INTERACTION BETWEEN DROPLET GROUPS,
DRY MODEL IS USED FOR THE PLUME,
INCLUDES THE OVERLAMP MODIFICATIONS TO THE CSANADY DEPOSITION MODEL.
KEYWORDS: DEPOSITION, DRAFT, DROPLET, EVAPORATION, OVERLAMP,
PLUME, SALT, TOWER, VELOCITY, WATER
SORTCODE: ENERGY
ORIGINAL SOURCE: APPLIED PHYSICS LAB/JOHNS HOPKINS UNIVERSITY
STATE: SOME REVISION NECESSARY
ACCESS: UNLIMITED
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 60K
CHARACTER SET: 8CD
UPDATE: 78-07-10

PNL0050

DATABASE NAME: NUCLEAR FUEL CYCLE COST ANALYSIS
ACRONYM: NUCOST
TYPE: MODEL
CONTACT PERSON: ADDISON, LARRY E.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2310 COMMERCIAL:(509)946-2310
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS MODEL UTILIZES DEMAND INPUT FOR THE NUCLEAR FUEL CYCLE
PROCESS AND FROM THAT CALCULATES ASSOCIATED COSTS. THE UNIT COSTS
FOR THE CALCULATIONS CAN EITHER BE INPUT DIRECTLY OR CALCULATED BY
THE MODEL ITSELF. THE COSTS CAN BE EXPRESSED IN CONSTANT DOLLARS OR
CURRENT DOLLARS, INCLUDE ESCALATION, DISCOUNTING, AND TIME SHIFTING.
KEYWORDS: COSTS, CURRENT, DIRECTLY, DISCOUNTING, DOLLARS,
ESCALATION
SORTCODE: ENERGY
STATE: PROGRAMS ARE OPERATIONAL
ACCESS: UNLIMITED
COMPUTER: IBM, DEC
DATABASE MEDIA: TAPE
LANGUAGE: FORTRAN
SIZE: 40K
CHARACTER SET: ASCII
COMMENTS: FEA INCORPORATES THIS MODEL INTO A COMPLETE SYSTEM OF FUEL CYCLE
ANALYSIS PROGRAMS, CONTACT GENE CLARKE FEA, WASHINGTON D.C.
UPDATE: 78-06-05

PNL0051

DATABASE NAME: NUCLEAR FUEL CYCLE PLANT PROJECTIONS
ACRONYM: NUPLANT
TYPE: MODEL
CONTACT PERSON: ADDISON, LARRY E.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2310 COMMERCIAL:(509)946-2310
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS MODEL UTILIZES INPUT DEMAND DATA FOR THE NUCLEAR FUEL CYCLE PROCESS, COMBINES THAT WITH KNOWN PLANT CHARACTERISTICS AND CALCULATES AN OPTIMIZED PLANT CONSTRUCTION SCHEDULE. THE MODEL UTILIZES A LOOK WINDOW, PRE-PROCESSING, AND IMPORT-EXPORT SCHEDULES TO MEET DEMAND. ASSOCIATED COSTS INCLUDE CONSTRUCTION COSTS, MAINTENANCE COSTS AND UNIT COSTS. THEY CAN BE EXPRESSED IN BOTH CONSTANT AND CURRENT DOLLARS. ESCALATION AND DISCOUNTING OPTIONS ARE AVAILABLE.
KEYWORDS: CONSTRUCTION, COSTS, CURRENT, DISCOUNTING, DOLLARS, ESCALATION, IMPORT-EXPORT
SORTCODE: ENERGY
ACCESS: UNLIMITED
COMPUTER: IBM, DEC
DATABASE MEDIA: TAPE
LANGUAGE: FORTRAN
SIZE: LOOK BYTES
CHARACTER SET: ASCII
COMMENTS: FEA INCORPORATES THIS MODEL INTO A COMPLETE SYSTEM OF FUEL CYCLE ANALYSIS PROGRAMS. CONTACT GENE CLARKE, FEA WASHINGTON D.C.
UPDATE: 78-06-05

PNL0074

DATABASE NAME: PARTICLE LIGHT EXTINCTION PARAMETERS FROM MIE THEORY
ACRONYM: EXTHEORY
TYPE: MODEL
CONTACT PERSON: LAULAINEN, NELS S.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-2861 COMMERCIAL:(509) 942-2861
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: PROGRAM TO COMPUTE VARIOUS EXTINCTION PARAMETERS FOR LOG-NORMAL
PARTICLE DISTRIBUTIONS USING MIE THEORY. TABULATIONS CAN BE CHOSEN
FOR EITHER TOTAL SCATTERING (EXTINCTION) OR ANGULAR SCATTERING
(EXTINCTION).
KEYWORDS: PARTICLE, SCATTERING
SORTCODE: ENERGY
ORIGINAL SOURCE: UNIVERSITY OF WASHINGTON
TECHNICAL DOCUMENTATION: D. DEIRMENDJIAN, ELECTROMAGNETIC SCATTERING ON SPHERICAL
POLYDISPERSIONS, ELSEVIER, N.Y. (1969)
STATE: IN USE
ACCESS: UNLIMITED
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 50K
CHARACTER SET: BCD
UPDATE: 78-07-10

PNL0072

DATABASE NAME: REDUCE SUNPHOTOMETER DATA TO ATMOSPHERIC TURBIDITY
ACRONYM: SUNNY
TYPE: MODEL
CONTACT PERSON: LAULATINEN, NELS S.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-2861 COMMERCIAL:(509) 942-2861
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: MODEL: REDUCE SUNPHOTOMETER SOLAR INTENSITIES AND TIME OF
DAY TO INSTRUMENT CONSTANTS AND TOTAL ATMOSPHERIC OPTICAL DEPTHS
(LANGLEY METHOD) OR TO TURBIDITIES AND TOTAL ATMOSPHERIC OPTICAL
DEPTHS FOR VARIOUS WAVELENGTH BANDS, TIMES OF DAY, DAYS OF YEAR.
OUTPUT IS IN THE FORM OF TABULAR LISTINGS FOR EACH OBSERVATION,
WAVELENGTH CHANNEL AND DAILY AVERAGES; DAILY AVERAGED TOTAL OPTICAL
DEPTHS ARE PUNCHED OUT ON CARDS.
KEYWORDS: ATMOSPHERIC, LANGLEY, OPTICAL, TURBIDITIES, WAVELENGTH
SOURCE: ENERGY
STATE: IN USE
ACCESS: UNLIMITED
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 55K
CHARACTER SET: BCD
UPDATE: 78-07-10

PNL0020

DATABASE NAME:	REGEN: MULTI REGIONAL ANALYTICAL LP MODEL OF THE U.S. ELECTRIC GENERATING INDUSTRY
TYPE:	MODEL
CONTACT PERSON:	DEONIGI, DUANE E.
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-2475 COMMERCIAL:(509) 946-2475
ADDRESS OF CONTACT:	BATTELLE-PACIFIC NORTHWEST LABORATORIES POST OFFICE BOX 999
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WA
ZIP CODE:	99352

PNL0059

DATABASE NAME: REGIONAL NUCLEAR POWER ECONOMY LINEAR PROGRAM
TYPE: MODEL
CONTACT PERSON: ENGEL, ROGER L.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2318 COMMERCIAL:(509) 946-2318
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: A COMPUTER SIMULATION THAT ESTIMATES THE OPTIMUM PATTERN OF FUTURE ELECTRICAL SUPPLY. THE REGIONALLY DEPENDENT CHARACTERISTICS INCLUDE COAL AND OIL PRICE, AVAILABILITY OF ALTERNATE ELECTRICAL SUPPLY, ENERGY DEMAND AND SYSTEM LOAD. NUCLEAR FUEL CYCLE CHARACTERISTICS ARE ASSUMED REGIONALLY INDEPENDENT. THIS IS A LEAST COST MODEL UTILIZING LINEAR PROGRAMMING METHOD.
KEYWORDS: COAL, COST, ELECTRICAL, ENERGY, FUEL, MODEL, NUCLEAR, PRICE, REGIONAL, SUPPLY
SORTCODE: ENERGY
TECHNICAL DOCUMENTATION: ENGEL, R.L., "THE REGIONAL ANALYSIS OF THE US ELECTRIC POWER INDUSTRY VOLUME 2 LINEAR PROGRAMMING SIMULATION", BNWL-B415-V2.
STATE: IN USE
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 140K-OCTAL
CHARACTER SET: FIELDATA
UPDATE: 78-06-14

PNL0060

DATABASE NAME: SPENT FUEL HANDLING FACILITY VARIABLE SITE MODEL
TYPE: MODEL
CONTACT PERSON: ENGEL, ROGER L.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2318 COMMERCIAL:(509)946-2318
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS MODEL IS USED TO DETERMINE THE EFFECTS OF SPENT FUEL
MANAGEMENT FACILITY LOCATIONS ON SPENT FUEL LOGISTICS. IT IS A LEAST
COST MODEL UTILIZING A PRIMAL NETWORK ALGORITHM, A VERY EFFICIENT
BALANCED NETWORK SOLUTION ALGORITHM. THE MODEL INTERFACES WITH THE PNL
REACTOR FILE, WHICH CONTAINS REACTOR DESCRIPTIONS AND SPENT FUEL
FORECASTS THROUGH 1990. THE MODEL IS GREATLY ENHANCED BY THE
UTILIZATION OF INTERACTIVE GRAPHIC INPUT.
KEYWORDS: FACILITY, FORECAST, FUEL, INTERACTIVE, MANAGEMENT,
MODEL, NETWORK, REACTOR
SORTCODE: ENERGY
COMPUTER: DEC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
SIZE: 32K 16BIT WORDS
CHARACTER SET: ASCII
UPDATE: 78-06-14

Socioeconomic

<u>Title</u>	<u>Author</u>	<u>Page No.</u>
Multiattribute System for Decision Analysis	JW Litchfield	F79

PNL0028

DATABASE NAME: MULTIATTRIBUTE SYSTEM FOR DECISION ANALYSIS
ACRONYM: MASDA
TYPE: MODEL
CONTACT PERSON: LITCHFIELD, JAMES W.
TELEPHONE: FTS: 444-7511 AND ASK FOR 946-2471 COMMERCIAL: (509) 946-2471
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: A MONTI CARLO SIMULATION MODEL FOR MULTIATTRIBUTE DECISION ANALYSIS USING UTILITY THEORY. THE MODEL ALLOWS FOR EXPLICIT INCORPORATION OF UNCERTAINTY INTO THE SELECTION OF THE PREFERRED ALTERNATIVES.
KEYWORDS: SIMULATION, DECISION ANALYSIS, UTILITY THEORY
SORTCODE: ENERGY, ENVIRONMENTAL, SOCIOECONOMIC
ORIGINAL SOURCE: PNL
TECHNICAL DOCUMENTATION: J.W. LITCHFIELD ET AL, "A RESEARCH AND DEVELOPMENT DECISION MODEL INCORPORATING UTILITY THEORY AND MEASUREMENT OF SOCIAL VALUES", IEEE TRANSACTIONS ON SYSTEMS, MAN AND CYBERNETICS, VOL. SCM6, NO.6, JUNE 1976.
STATE: IN USE
ACCESS: UNLIMITED
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 155K OCTAL WORDS
CHARACTER SET: ASCII, CARDS
UPDATE: 78-05-18

GRAPHICS PACKAGES

<u>Title</u>	<u>Author</u>	<u>Page No.</u>
Analyze and Display Aerosol Size Distribution Data	NS Laulainen	F83
BNW Interactive 3-D Object Display Program	RA Burnett	F84
Contour Plotting Program	SW Ahlstrom	F85
Device Independent Graphics Package	JO Schroeder	F86
Display Integrated Software System and Plotting Language	LJ Gannon	F87
QUIKPLOT	RA Burnett	F88
SURFACE II Graphics System	LJ Gannon	F89
VS60 Graphics Package	JO Schroeder	F90

PNL0073

DATABASE NAME: ANALZE AND DISPLAY AEROSOL SIZE DISTRIBUTION DATA
ACRONYM: SIZDISI
TYPE: GRAPHICS PACKAGE
CONTACT PERSON: LAULAINEN, NELS S.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-2861 COMMERCIAL:(509) 942-2861
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: A GRAPHICS PACKAGE TO ANALYZE AND DISPLAY AEROSOL SIZE DISTRIBUTION DATA RECORDED FROM THE ELECTRICAL AEROSOL ANALYZER AND ROYCO OPTICAL PARTICLE COUNTER. OUTPUT IS BOTH TABULAR AND GRAPHICAL. TABULAR DATA ARE PRESENTED AS NUMBER, SURFACE AREA, AND VOLUME SIZE DISTRIBUTIONS, WHICH MAY ALSO BE NORMALIZED. THE GRAPHICAL OUTPUT IS GENERATED BY THE DISSPLA PACKAGE, WHERE AXES ARE APPROPRIATELY LABELED FOR THE TYPE OF DISTRIBUTION BEING PRESENTED. A LEGEND IDENTIFYING THE DATA IS ALSO GIVEN.
KEYWORDS: AEROSOL, COUNTER, DISSPLA, OPTICAL
SORTCODE: ENERGY
TECHNICAL DOCUMENTATION: D.R. DREWES AND N.S. LAULAINEN, AN ALGORITHM FOR ANALYZING AND DISPLAYING AEROSOL DATA, PNL ANNUAL REPORT/ATMOS SCIENCES, BNWL-2100 PT3, AUGUST 1977.
STATE: IN USE
ACCESS: UNLIMITED
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 60K
CHARACTER SET: BCD
UPDATE: 78-07-10

PNL0064

DATABASE NAME: BNA INTERACTIVE 3-D OBJECT DISPLAY PROGRAM
ACRONYM: BNW3D
TYPE: GRAPHICS PACKAGE
CONTACT PERSON: R.A. BURNETT
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WA
ZIP CODE: 99352
GENERAL DESCRIPTION: BNW3D IS AN INTERACTIVE COMPUTER PROGRAM TO DISPLAY THREE-DIMENSIONAL(3-D) PERSPECTIVE VIEWS OF AN OBJECT, FUNCTION SURFACE, OR OTHER 3-D DATA. SINGLE KEYSTROKE COMMANDS ENABLE THE USER TO CHANGE HIS VIEWPOINT WITH RESPECT TO THE OBJECT. HE CAN PERFORM ROTATION, TRANSLATION, ZOOMING, AND INDEPENDENT SCALING CHANGES ON THE THREE COORDINATE AXES. THE OBJECT OR DATA DESCRIPTION IS STORED IN AN ASCII DISK FILE AND CONSISTS OF FREE-FORMAT COORDINATE TRIPLETS (X,Y,Z) WITH "MOVE" FLAGS TO DENOTE BLANK VECTORS.
KEYWORDS: FREE-FORMAT
ORIGINAL SOURCE: PNL(DEVELOPED IN-HOUSE)
STATE: IN USE
ACCESS: UNLIMITED
COMPUTER: DEC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
SIZE: 24K WORDS
CHARACTER SET: ASCII
COMMENTS: RUNS ONLY ON BNW MINERVA SYSTEM(DEC PDP 11/35 WITH VECTOR GENERAL DISPLAY UNIT). SOME RECODING WOULD BE NECESSARY TO CONVERT TO ANOTHER DISPLAY DEVICE (EG, TEKTRONIXS STORAGE SCOPE).
UPDATE: 78-06-28

PNL0025

DATABASE NAME:	CONTOUR PLOTTING PROGRAM
ACRONYM:	CNT
TYPE:	GRAPHICS PACKAGE
CONTACT PERSON:	AHLSTROM, STEVE W.
TELEPHONE:	FTS:444-7511 AND ASK FOR 946-2471 COMMERCIAL:(509) 946-2471
ADDRESS OF CONTACT:	BATTELLE NORTHWEST LABORATORIES POST OFFICE BOX 999
DUE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WASHINGTON
ZIP CODE:	99352
GENERAL DESCRIPTION:	THIS GENERAL PURPOSE PROGRAM IS DESIGNED TO COMPUTE AND DRAW CONTOUR LINES FOR DATA SURFACES OF UP TO 256 * 256 NODES. THE OUTPUT OF CNT IS IN DEVICE INDEPENDENT(DIG) FORMAT AND MAY BE SPOOLED TO A FILE OR PLOTTED ON-LINE. VARIABLE NODE SPACING AND NEGATIVE OR POSITIVE CONTOUR ELEVATION ARE ACCEPTED. CNT HAS PROVISIONS FOR DRAWING BACKGROUND MAPS AND VARIOUS LABELS, REFERENCE MARKS, AND CONTOUR LEVEL LABELS.
KEYWORDS:	CONTOUR, ELEVATION, LABELS, MAPS, ON-LINE, SPACING, SPOOLS, SURFACES
ACCESS:	UNLIMITED
COMPUTER:	DEC
DATABASE MEDIA:	TAPE
CHARACTER SET:	ASCII
COMMENTS:	SOURCE FILES ARE FLECS
UPOATE:	78-04-12

PNL0027

DATABASE NAME: DEVICE INDEPENDENT GRAPHICS PACKAGE
ACRONYM: DIG
TYPE: GRAPHICS PACKAGE
CONTACT PERSON: SCHROEDER, JAMES D.
TELEPHONE: 946-2855
ADDRESS OF CONTACT: BAITELLE NORTHWEST
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS PACKAGE INCLUDES A FORTRAN IV-PLUS CALLABLE LIBRARY
(SIMILAR TO STANDARD CALWRYS LIBRARY) AND DEVICE DRIVERS FOR A
CALCOMP 936 PLOTTER, TEKTRONIX 4000 SERIES TERMINALS, AND TEKTRONIX
611 STORAGE SCOPE. OUTPUT FROM THE LIBRARY CONSISTS OF A DEVICE
INDEPENDENT LINE DESCRIPTOR CONTAINING CONTROL INFORMATION AND X-Y
COORDINATE DATA. OUTPUT CAN BE SPOOLED TO A FILE OR PLOTTED ON-LINE.
DEVICE DRIVERS CONVERT DEVICE INDEPENDENT LINE DESCRIPTORS TO DEVICE
DEPENDENT CONTROL COMMANDS.
KEYWORDS: CALCOMP, ON-LINE, PLOTTER, SPOOLED, TEKTRONIX
ACCESS: UNLIMITED
COMPUTER: DEC
DATABASE MEDIA: TAPE
CHARACTER SET: ASCII
COMMENTS: IMPLEMENTED FOR THE FOLLOWING DEC OPERATING SYSTEMS: JAS,
RSX-11D, RSX-11M, RT-11. SOURCE FILES ARE MACRO-11, FLECS, AND F4P.
UPDATE: 78-04-12

PNL0023

DATABASE NAME: DISPLAY INTEGRATED SOFTWARE SYSTEM AND PLOTTING LANGUAGE
ACRONYM: DISSPLA
TYPE: GRAPICS PACKAGE
CONTACT PERSON: GANNON, LARRY J.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3754 COMMERCIAL:(509) 942-3754
ADDRESS OF CONTACT: BOEING COMPUTER SERVICES RICHLAND
FEDERAL BUILDING
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: DISPLA IS A MACHINE INDEPENDENT, DEVICE INDEPENDENT GRAPHICS
PACKAGE WHICH CAN PRODUCE AXES, CURVES, TRANSFORMATIONS, TESTS, BROKEN
LINE PATTERNS, MAPS, AND GRIDS. IT CAN BE USED FOR INTERPOLATING,
SELF-SCALING, SHADING, WORK INVOLVING 3-DIMENSIONS AND AS A USERS AID.
KEYWORDS: AXES, CURVES, GRIDS, MAPS, SELF-SCALING,
SHADING, TRANSFORMATIONS
COMPUTER: CDC, UNIVAC, IBM, DEC, XDS, PDP
LANGUAGE: FORTRAN
COMMENTS: DISSPLA WORKS ON (A) IBM 360/370 USING OS, OOS, TSO, VS, CMS,
ETC;(B) CDC 6000,7000 OR CYBER 70 SERIES USING SCOPE OR KRONOS;
(C) UNIVAC 1100 SERIES USING EXEC 8; (D) PDP-10 USING DEC-SYSTEM-10;
AND (E) XDS SIGMA 9 USING COMMANDER II, AND HAS BEEN FULLY OPERATIONAL
SINCE 1969. DISSPLA PLOTS ON CALCOMP, FETA, H.I., HEWLETT-PACKARD,
BROOMALL, XYNETICS AND GERBER PLOTTERS; FR80, SC4020, AND SINGER
MICROFILM READERS; TEKTRONIX, VECTOR GENERAL, AND COMPUTER CRTS; AND
OTHERS. DISSPLA INTERFACES EASILY TO ANY VECTOR-MODE GRAPHICS DEVICE.
UPDATE: 78-03-27

PNL0049

DATABASE NAME: QUIKPLOT
TYPE: GRAPHICS PACKAGE
CONTACT PERSON: BURNETT, ROBERT A.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2313 COMMERCIAL: (509) 946-2313
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: QUIKPLOT IS AN INTERACTIVE DATA-PLOTTING COMPUTER PROGRAM WHICH RUNS ON THE MINERVA COMPUTER SYSTEM (PDP 11/35 - VECTOR GENERAL GRAPHICS SYSTEM). IT IS OPERATED BY ENTERING COMMANDS FROM THE VECTOR GENERAL KEYBOARD. THESE COMMANDS ALLOW THE USER TO PERFORM VARIOUS PLOTTING OPERATIONS ON DATA SEQUENCES READ FROM ALPHANUMERIC DISK FILES. QUIKPLOT FEATURES THE ABILITY TO SPECIFY UP TO FOUR X-Y AXIS PAIRS, AUTOMATIC OR MANUAL SCALING, SPECIFICATION OF TITLE AND AXIS LABELS, SOLID OR DASHED LINE TEXTURE, SYMBOL (CHARACTER) PLOTS, OPTIONAL GRID LINES, GOULD HARD COPY, AND THE ABILITY TO GENERATE MACRO COMMAND FILES EITHER ON-LINE OR OFF-LINE.
KEYWORDS: AXIS, DASHED LINES, GRAPHICS, GRID, HARD COPY, KEYBOARD, LABELS, SCALING, TEXTURE, VECTOR
APPLICATION-INDEPENDENT
SORTCODE:
ORIGINAL SOURCE: PNL
STATE: IN USE
ACCESS: UNLIMITED
COMPUTER: DEC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
SIZE: 48K
CHARACTER SET: ASCII
UPDATE: 78-05-15

PNL0024

DATABASE NAME: SURFACE II GRAPHICS SYSTEM
TYPE: GRAPHICS PACKAGE
CONTACT PERSON: GANNON, LARRY J.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-7568 COMMERCIAL:(509)942-7568
ADDRESS OF CONTACT: BOEING COMPUTER SERVICES RICHLAND
FEDERAL BUILDING
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THE SURFACE II GRAPHICS SYSTEM IS A USER'S MANUAL FOR THE
COMPUTER CONTOURING AND GRAPHICS DISPLAY SYSTEM DEVELOPED BY THE
KANSAS SURVEY. SURFACE II IS A COMPUTER SOFTWARE SYSTEM FOR CREATION
OF DISPLAYS OF SPATIALLY DISTRIBUTED DATA. THE BASIC FORM OF GRAPHIC
DISPLAY PRODUCED BY SURFACE II IS A CONTOUR MAP. A PLOT OF THE TWO
COORDINATES ON WHICH VALUES OF THE THIRD VARIABLE ARE DEFINED BY
LINES OF EQUAL VALUES. IT PRODUCES PERSPECTIVE BLOCK DIAGRAMS
(SOMETIMES CALLED TRANSET OR "FISHNET" PLOTS), A POSTING DIAGRAM
(OR PLOTTING OF SYMBOLS REPRESENTING OBSERVATIONS AT THEIR APPROPRIATE
X AND Y COORDINATES), AND IT WILL GENERATE DISPLAYS OF THE SPATIAL
RELATIONSHIPS BETWEEN OBSERVATIONS.
KEYWORDS: CONTOUR, DISPLAY, FISHNET, GRAPHICS, PERSPECTIVE,
PLOTS, SPATIAL, SURFACE, SYMBOLS
UPDATE: 78-03-27

PNL0026

DATABASE NAME: VS60 GRAPHICS PACKAGE
ACRUNYM: VS60
TYPE: GRAPHICS PACKAGE
CONTACT PERSON: SCHROEDER, JAMES O.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2855 COMMERCIAL:(509) 946-2855
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THIS GRAPHICS PACKAGE INCLUDES A FORTRAN IV-PLUS CALLABLE
LIBRARY AND DEVICE DRIVER FOR THE DIGITAL EQUIPMENT CORPORATION VS60
REFRESH VECTOR DISPLAY. VS60 SOFTWARE AVAILABLE FROM DEC IS NOT USED
FOR ANY PORTION OF THE PACKAGE FEATURES INCLUDE: SUPPORT FOR ALL VS60
HARDWARE OPTIONS (EG, NAME REGISTER, RATECHECK, MENU AREA,
SUBROUTINING, WINDOWING, ETC.), GRAPHICS INTERACTION SUPPORT (LIGHT
PEN, LIGHT PEN SWITCH), LK11 PUSH BUTTON BOX SUPPORT, ETC.
KEYWORDS: BUTTON, DISPLAY, GRAPHICS, INTERACTION, LIGHT PEN,
MENU, REFRESH, VECTOR, WINDOWING
ACCESS: UNLIMITED
COMPUTER: DEC
DATABASE MEDIA: TAPE
CHARACTER SET: ASCII
COMMENTS: IMPLEMENTED FOR THE RSX-11M DEC OPERATING SYSTEM. SOURCE FILES
ARE MACRO-11 AND FLECS.
UPDATE: 78-04-12

INTEGRATED SYSTEMS

<u>Title</u>	<u>Author</u>	<u>Page No.</u>
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RAFT	PJ Pelto	F98
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PNL0029

DATABASE NAME: ACORN
TYPE: MODEL
CONTACT PERSON: PELTO, PETER J.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3619 COMMERCIAL: (509)942-3619
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: ACORN IS A COMPUTER PROGRAM FOR DRAWING FAULT TREES. ACORN ANALYZES THE INPUT LOGICAL STRUCTURE OF A FAULT TREE AND PROVIDES DATA FOR A CALCOMP PLOT OF THE TREE. AND, OR, AND INHIBIT GATES ARE PERMITTED AND BASIC EVENTS ARE DRAWN AS DIAMONDS, CIRCLES, OR HOUSES EACH COMPONENT (GATE OR BASIC EVENT) CAN HAVE A DESCRIPTIVE LABEL WITHIN A RECTANGLE ATTACHED TO THE TOP OF ITS RESPECTIVE SYMBOL.
KEYWORDS: CALCOMP, FAULT TREE, PLOT, RECTANGLE, SYMBOL
TECHNICAL DOCUMENTATION: J.C. CANTEN, ACORN: A COMPUTER PROGRAM FOR PLOTTING FAULT TREES, BNWL-2144, NOV 1977.
STATE: IN USE
ACCESS: LIMITED
PROGRAM: ACORN
COMPUTER: CDC
DATABASE MEDIA: CARDS
SIZE: VARIABLE CORE
UPDATE: 78-05-19

DATABASE NAME: DECISION TREE PROCESSOR
ACRONYM: DTP
TYPE: INTEGRATED SYSTEM
CONTACT PERSON: BURNETT, ROBERT A.
TELEPHONE: FTS:444-7511 AND ASK FOR 946-2313 COMMERCIAL:(509)946-2313
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: THE DECISION TREE PROCESSOR (DTP) IS AN INTERACTIVE COMMAND LANGUAGE WHICH FACILITATES THE DESIGN, CONSTRUCTION, AND IMPLEMENTATION OF PLANNING AND ANALYSIS SYSTEMS INVOLVING MANY ALTERNATIVE PATHS AND MULTIPLE USER DECISION POINTS (COLLECTIVELY CALLED A 'DECISION TREE'). DTP MAY ALSO BE USED TO QUICKLY AND EASILY SET UP A DIALOG FOR INTERACTIVE PROGRAM AND DATA FLOW, OR TO AUTOMATE OR FACILITATE COMMUNICATIONS AMONG SEVERAL NON-CORESIDENT USER PROGRAMS.

"DECISION TREES" WRITTEN IN THE DTP LANGUAGE CAN BE MODIFIED WITH A STANDARD TEXT EDITOR AND THEN EXECUTED DIRECTLY WITHOUT COMPILATION OR LINK-LOADING.

A DECISION TREE WILL NORMALLY CONTAIN MANY DECISION POINTS REQUIRING USER INTERACTION TO DETERMINE THE COURSE OF PROGRAM FLOW. THE DTP COMMAND LANGUAGE PERMITS THE DESIGNER OF A DECISION TREE TO PUT MESSAGES ON THE DISPLAY SCREEN. THESE MESSAGES MAY BE IN THE FORM OF QUESTIONS WHICH REQUIRE A SPECIFIC RESPONSE FROM THE USER (PLANNER OR ANALYST). THE REQUIRED RESPONSE MAY BE A NUMBER TYPED ON THE KEYBOARD, A "YES" OR "NO" RESPONSE, OR THE SELECTION OF ONE OR MORE ITEMS FROM A LIGHT-PEN MENU LIST APPEARING ON THE SCREEN. CONTROL MAY THEN BRANCH TO ANOTHER PART OF THE DECISION TREE BASED ON THE USER'S RESPONSE. DEPENDING ON THE DECISION TREE AND USER PROGRAM DESIGN, THE USER WILL BE ABLE TO SELECT AND EXAMINE VARIOUS SUBSETS OF DATA, PERFORM OPERATIONS ON DATA, CREATE REPORTS, PRODUCE HARD-COPY GRAPHICS, OR REPEAT A PREVIOUS ANALYSIS WITH A MODIFIED SET OF INPUT PARAMETERS.

KEYWORDS: GRAPHICS, HARD-COPY, INTERACTIVE, KEYBOARD, LIGHT-PEN, MENU
ORIGINAL SOURCE: DEVELOPED LOCALLY
TECHNICAL DOCUMENTATION: R.A. BURNETT, T.P. HARRINGTON, E.R. HILL, A.E. MEDFORD, "PRELIMINARY REPORT OF WORK CONDUCTED FOR THE HANFORD D&O PROJECT".
STATE: IN USE
ACCESS: UNLIMITED
PROGRAM: QUIKPLUT; HANFORD DECOMMISSIONING MODEL & DATA BASE
COMPUTER: DEC
DATABASE MEDIA: DISC
LANGUAGE: FORTRAN
SIZE: 24K 16-BIT WORDS
CHARACTER SET: ASCII
UPDATE: 78-06-08

PNL0030

DATABASE NAME: FAULTREE
TYPE: MODEL
CONTACT PERSON: PELTU, PETER J.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3619 COMMERCIAL:(509)942-3619
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: FAULTREE IS A COMPUTER PROGRAM FOR ANALYZING FAULT TREES.
IT IDENTIFIES CUT SETS, CALCULATES THEIR PROBABILITIES AND SCREENS
THE CUT SETS ON THE BASIS OF CUT-OFFS ON PROBABILITY AND/OR CUT SET
LENGTH. THE CUT SET IDENTIFICATION ALGORITHM IS A "TOP DOWN" MOCUS
TYPE.
KEYWORDS: ALGORITHM, CUT-OFFS, MOCUS, PROBABILITY, SCREENS,
SETS
STATE: IN USE
ACCESS: LIMITED
PROGRAM: FAULTREE
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 130K
UPDATE: 78-05-19

PNL0031

DATABASE NAME: MFAULT
TYPE: MODEL
CONTACT PERSON: PELTO, PETER J.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3619 COMMERCIAL:(509)942-3619
ADDRESS OF CONTACT: BAITELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DOE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: MFAULT IS A COMPUTER PROGRAM FOR ANALYZING FAULT TREES. IT IDENTIFIES CUT SETS, CALCULATES THEIR PROBABILITIES AND SCREENS THE CUT SETS ON THE BASIS OF CUT-OFFS ON PROBABILITY AND/OR CUT SET LENGTH. THE CUT SET IDENTIFICATION ALGORITHM IS A "BOTTOM UP" TYPE. FAULT TREE, PROBABILITY CUT SET
KEYWORDS: SEIS
TECHNICAL DOCUMENTATION: P.J. PELTO AND W.L. PURCELL, MFAULT: A COMPUTER PROGRAM FOR ANALYZING FAULT TREES, BNWL-2145, NOV 1977.
STATE: IN USE
ACCESS: LIMITED
PROGRAM: MFAULT
COMPUTER: CDC
DATABASE MEDIA: CARDS
LANGUAGE: FORTRAN
SIZE: 130K
UPDATE: 78-05-19

PNL0054

DATABASE NAME:	RADIOANALYSIS INVENTORY FOR BIOLOGY
ACRONYM:	RIB
TYPE:	INTEGRATED SYSTEM
CONTACT PERSON:	WATSON, CHUCK R.
TELEPHONE:	FTS:444-7511 AND ASK FOR 942-3251 COMMERCIAL:(509)942-3251
ADDRESS OF CONTACT:	BATTELLE NORTHWEST LABORATORIES POST OFFICE BOX 999
DUE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WASHINGTON
ZIP CODE:	99352
GENERAL DESCRIPTION:	RIB IS A COMBINED INVENTORY AND ANALYSIS SYSTEM SPECIFIC TO THE LONGTERM DOG STUDIES AT PNL. RECORD OF OVER 36000 TISSUE, URINE, OR FECES SAMPLES ARE CURRENTLY IN THE SYSTEM. THE LOCATION OF ANY OF THESE IS AVAILABLE VIA A SIMPLE BATCH RUN. THE ANALYSIS PORTION CONCENTRATES ON ONE DOG AT A TIME. IT'S GOAL IS TO ACCOUNT FOR EVERY NANOCURIE OF PLUTONIUM TO WHICH THE DOG WAS EXPOSED.
KEYWORDS:	FECES, LONGTERM, NANOCURIE, PLUTONIUM, SAMPLES, TISSUE, URINE
STATE:	ACTIVE
ACCESS:	UNLIMITED
COMPUTER:	CDC
DATABASE MEDIA:	TAPE
LANGUAGE:	FORTRAN
SIZE:	36K RECORDS
UPDATE:	78-06-05

PNLU032

DATABASE NAME: RAFT
TYPE: MODEL
CONTACT PERSON: PELTO, PETER J.
TELEPHONE: FTS:444-7511 AND ASK FOR 942-3619 COMMERCIAL:(509)942-3619
ADDRESS OF CONTACT: BATTELLE NORTHWEST LABORATORIES
POST OFFICE BOX 999
DUE LABORATORY: PNL
CITY: RICHLAND
STATE: WASHINGTON
ZIP CODE: 99352
GENERAL DESCRIPTION: RAFT IS A COMPUTER PROGRAM FOR CALCULATION OF A RISK MEASURE FOR FAULT TREE-CUT SETS. RAFT CALCULATES RELEASE QUANTITIES AND A RISK MEASURE BASED ON THE PRODUCT OF PROBABILITY AND RELEASE QUANTITY. CUT SETS AND THEIR PROBABILITIES ARE INPUT FROM AN EXTERNAL FAULT TREE ANALYSIS CONE.
KEYWORDS: CONE, FAULT TREE, PROBABILITY, RAFT, RISKS, TREECUT
TECHNICAL DOCUMENTATION: G.D. SEYBOLD, RAFT: A COMPUTER PROGRAM FOR FAULT TREE RISK CALCULATIONS, BNWL-2146, NOV 1977
STATE: IN USE
ACCESS: LIMITED
PROGRAM: RAFT
COMPUTER: CDC
LANGUAGE: FORTRAN
SIZE: VARIABLE
UPDATE: 78-05-19

PNL0052

DATABASE NAME:	SNOOPY
TYPE:	INTEGRATED SYSTEM
CONTACT PERSON:	WALSON, CHUCK R.
TELEPHONE:	FIS:444-7511 AND ASK FOR 942-3251 COMMERCIAL:(509)942-3251
ADDRESS OF CONTACT:	BAITELLE NORTHWEST LABORATORIES
DOE LABORATORY:	PNL
CITY:	RICHLAND
STATE:	WASHINGTON
ZIP CODE:	99352
GENERAL DESCRIPTION:	SNOOPY IS A BIOMEDICAL RECORD STORAGE AND RETRIEVAL SYSTEM USED PRIMARILY FOR LONG TERM STORAGE OF LIFE-SPAN EXPERIMENTS IN BEAGLE DOGS. THE PRIMARY FEATURE OF THE SYSTEM IS EXTENSIVE USE OF FREE FORMAT DATA CONSISTING PRIMARILY OF ENGLISH-LANGUAGE DESCRIPTIONS OF CLINICAL OBSERVATIONS.
KEYWORDS:	BEAGLE, CLINICAL, DOGS, ENGLISH-LANGUAGE, FREE FORMAT, LIFE-SPAN
STATE:	IN USE
ACCESS:	UNLIMITED
COMPUTER:	CDC
DATABASE MEDIA:	TAPE
LANGUAGE:	FORTRAN
CHARACTER SET:	ASCII
UPDATE:	78-05-05

APPENDIX G

CONTACT INDEX

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