

* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS NAPS "CHRONC" INPUT FILE
* BASE CASE Using revise Economic data CHEVACST =40, CHRELCST = 40
* CHDBCST = 42000, CHPOPCST = 7300, CHVALWF = 6979, CHVALWNF = 141206
* LAST MODIFIED by MGM 01/05/00

CHCHNAME001 'NAPS NCHRONC.INP, Sample Problem, "New" COMIDA2-Based Food Model'

* EMERGENCY RESPONSE COST DATA BLOCK

*

* DAILY COST FOR A PERSON WHO IS EVACUATED (DOLLARS/PERSON-DAY)

*

CHEVACST001 40.00 (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)

*

* DAILY COST FOR A PERSON WHO IS RELOCATED (DOLLARS/PERSON-DAY)

*

CHRELCST001 40.00 (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)

* LONG TERM PROTECTIVE ACTION DATA BLOCK

*

* Duration of the intermediate phase period--at version 1.11c TMIPND is no longer processed. The new input variable DUR_INTPHAS is the period's duration, not the time after plume arrival at which the period ends.

*

DUR_INTPHAS 0.0 (in seconds) (no intermediate phase)

*

* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)

*

CHTMPACT001 1.58E8 (5 YEARS)

*

* DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv)

*

CHDSCRTI001 1.0E5 (NO INTERMEDIATE PHASE RELOCATION)

*

* DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv)

*

CHDSCRLT001 0.04

*

* CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS

*

CHCRTOCR001 'L-EDEWBODY'

*

* Long Term Exposure Period Previously permanently set to:

* one million years = 3.15 E13 seconds

* MACCS2 allowable range is 3.15E7 to 1.E10

*

CHEXPTIM001 1.E10

* DECONTAMINATION PLAN DATA BLOCK

*

* NUMBER OF LEVELS OF DECONTAMINATION

*

CHLVLDEC001 2

*

* DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION

* (SECONDS)

*

CHTIMDEC001 5.184E6 1.0368E7 (60, 120 DAYS)

*

* DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION

*

CHDSRFCT001 3. 15.

*

* COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)

* FOR THE VARIOUS LEVELS OF DECONTAMINATION

*

CHCDFRM0001 658.1 1463.

*

* COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)

* FOR THE VARIOUS LEVELS OF DECONTAMINATION

*

CHCDNFRM001 3510. 9360.

*

* FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR

* FOR THE VARIOUS DECONTAMINATION LEVELS

*

CHFRFDL0001 .3 .35

*

* FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR

* FOR THE VARIOUS DECONTAMINATION LEVELS

*

CHFRNFDL001 .7 .5

*

* FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS

* FOR THE VARIOUS DECONTAMINATION LEVELS

*

CHTFWKF0001 .10 .33

*

* FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS

* FOR THE VARIOUS DECONTAMINATION LEVELS

*

CHTFWKNF001 .33 .33

*

* AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)

*

CHDLBCST001 42000.

* INTERDICTION COST DATA BLOCK

*

* DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)

*

CHDPRATE001 .20 (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)

*

* INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER YEAR)

* THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION

*

CHDSRATE001 .12 (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)

*

* POPULATION RELOCATION COST (DOLLARS/PERSON):

* ALTERNATIVE HOUSING, MOVING COSTS, AND LOST INCOME FOR PEOPLE IN

* AREAS WHICH REQUIRE DECONTAMINATION, INTERDICTION, OR CONDEMNATION

*

CHPOPCST001 7300.

* GROUNDSHINE WEATHERING DEFINITION DATA BLOCK

*

* NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)

*

CHNGWTRM001 2

*

* GROUNDSHINE WEATHERING COEFFICIENTS

*

CHGWCOEF001 0.5 0.5 (JON HELTON)

*

* HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)

*

CHTGWHLF001 1.6E7 2.8E9 (JON HELTON)

* RESUSPENSION WEATHERING DEFINITION DATA BLOCK

*

* NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP

*

CHNRWTRM001 3

*

* RESUSPENSION CONCENTRATION COEFFICIENTS (/ METER)

* RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.

*

CHRWCOEF001 1.0E-5 1.0E-7 1.0E-9 (VALUES HERE SELECTED BY JON HELTON)

*
 * HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION
 COEFFICIENTS (S)
 *
 CHTRWHLF001 1.6E7 1.6E8 1.6E9 (6 MONTHS, 5 YEARS, 50 YEARS)

 * SITE REGION DESCRIPTION DATA BLOCK
 *
 * FRACTION OF AREA THAT IS LAND IN THE REGION
 *
 CHFRACLD001 0.95 (ROUGH GUESS VALUE, SITE FILE OVERRIDES THIS VALUE)
 *
 * FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
 *
 CHFRCFRM001 0.382 (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
 *
 * AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION
 (DOLLARS/HECTARE)
 * (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION)/(LAND IN
 FARMS)
 *
 CHFRMPRD001 371.0 (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
 *
 * FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE
 REGION
 * (VALUE OF MILK PRODUCED)/(CASH RECEIPTS FROM FARMING PLUS HOME
 CONSUMPTION)
 *
 CHDPPFRCT001 0.198 (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
 *
 * VALUE OF FARM WEALTH (DOLLARS/HECTARE)
 * (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 100 MILES)
 *
 CHVALWF0001 6979. * NAPS
 *
 * FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
 *
 CHFRFIM0001 0.25 * SURRY/NAPS
 *
 * NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION
 (DOLLARS/PERSON)
 * THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD
 BE
 * LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE
 AREA
 *
 CHVALWNF001 141206. * NAPS
 *
 * FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
 *

CHFRNFIM001 0.8

CHFDPATH001 'NEW'

*

* name of the COMIDA2 binary output file

*

BIN_FILE001 'SAMP_A.BIN' (revised data file of 8/12/95)

*

* Dose limits triggering first year crop disposal of the separate
* milk and non-milk components of the diet, corresponding in purpose,
* more or less, to the MACCS 1.5 input variables PSCMLK and PSCOTH

*

* For NUREG-1150 calculations, the maximum allowable ground concentrations for
* production of milk and non-milk crops contaminated by an accident occurring
* in the growing season were derived based on an assumed maximum allowable
* dose of 5 rem effective or 15 rem thyroid, per the 1982 FDA guidance that's
* reprinted in the 1992 EPA PAG Manual. For purposes of comparison against
* the prior results, it is being assumed, for simplicity, that milk and
* non-milk crops contribute equally to the first year dose. Thus, the 5 rem
* effective dose limit used in NUREG-1150 is equally split between milk and
* non-milk crops, with 2.5 rem allowed for each. Similarly, the 15 rem
* thyroid limit is split into 7.5 and 7.5 rem for the milk and non-milk
* portions of the diet.

*

* effective thyroid (doses in sieverts)

DOSEMILK001 0.025 0.075

DOSEOTHR001 0.025 0.075

*

* Annual dose limits for the subsequent year's (i.e., after the first year)
* interdiction of BOTH the milk and non-milk (combined) components of the diet

*

* Note: the long-term food criteria, GCMAXR, used for NUREG-1150 were based on
* an ingestion dose integrated from zero to infinity. It is not possible to
* translate those parameter values into corresponding annual dose limits, as is
* required by the COMIDA2-based food model. The "total" dose limits used in
* NUREG-1150 for "root uptake", 0.5 rem effective and 1.5 rem thyroid, are used
* here as annual dose limits for interdiction of food production in years the
* years subsequent to the accident.

*

* effective thyroid (doses in sieverts)

DOSELONG001 0.005 0.015

*

* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL

*

CHNUMWPI001 4

*

* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL

*

* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
* FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE

*
 * INITIAL ANNUAL INGESTION FACTOR
 * WATER WASHOFF WASHOFF ((Bq INGESTED)/
 * NUCLIDE FRACTION RATE (Bq IN WATER))
 *

	NAMWPI	WSHFRI	WSHRTA	WINGF
CHWTRISO001	Sr-89	0.01	0.004	5.0E-6
CHWTRISO002	Sr-90	0.01	0.004	5.0E-6
CHWTRISO003	Cs-134	0.005	0.001	5.0E-6
CHWTRISO004	Cs-137	0.005	0.001	5.0E-6

* SPECIAL OPTIONS DATA BLOCK

*
 * DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE
 TURNING ON!!

* KSWDSC

*
 CHKSWTCH001 0

* DEFINE THE TYPE 9 RESULTS

*
 * LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12
 PATHWAYS

*
 * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
 * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12

*
 TYPE9NUMBER 1 (UP TO 10 ALLOWED)

*
 * ORGNAM INNER OUTER

*
 TYPE9OUT001 'L-EDEWBODY' 1 11 (0-50 MILES)

* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS

*
 * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
 * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12

*
 TYP10NUMBER 1 (UP TO 10 ALLOWED)

*
 * INNER OUTER

*
 TYP10OUT001 1 11 (0-50 MILES)

* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE
 RESULTS

*
 * SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE
 RESULTS,

* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.

*

TYP11FLAG11 .FALSE.

* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS

*

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8

*

TYP12NUMBER 1 (UP TO 10 ALLOWED)

*

* INNER OUTER

*

TYP12OUT001 1 11 (0-50 MILES)

* Maximal annual food ingestion dose to an individual, requested by IXOT13

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* This result is calculated after accounting for temporary or permanent interdiction. It is only available for the "new" food model.

*

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

*

TYP13NUMBER 0 (UP TO 10 ALLOWED)

*

* IRAD13 is the radial spatial interval at which results are requested

*

* ORGN13 is the name of the organ for which results are requested
* (allowable values for ORGN13 are 'EFFECTIVE' or 'THYROID')

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