

* 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 04/02/04

CHCHNAME001 'NAPS ABWR CHRONC.INP, "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)

*

CHDPRFCT001 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

*

* 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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