



Westinghouse
Electric Corporation

Energy Systems

Box 355
Pittsburgh Pennsylvania 15230-0355

AW-95-884

September 21, 1995

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTENTION: MR. T. R. QUAY

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE

SUBJECT: **MACCS INPUT FILE FOR AP600 CI RELEASE CATEGORY**

Dear Mr. Quay:

The application for withholding is submitted by Westinghouse Electric Corporation ("Westinghouse") pursuant to the provisions of paragraph (b)(1) of Section 2.790 of the Commission's regulations. It contains commercial strategic information proprietary to Westinghouse and customarily held in confidence.

The proprietary material for which withholding is being requested is identified in the proprietary version of the subject report. In conformance with 10CFR Section 2.790, Affidavit AW-95-884 accompanies this application for withholding setting forth the basis on which the identified proprietary information may be withheld from public disclosure.

Accordingly, it is respectfully requested that the subject information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10CFR Section 2.790 of the Commission's regulations.

Correspondence with respect to this application for withholding or the accompanying affidavit should reference AW-95-884 and should be addressed to the undersigned.

Very truly yours,

Brian A. McIntyre, Manager
Advanced Plant Safety and Licensing

/nja

cc: Kevin Bohrer NRC 12H5

2584A

9509260124 950921
PDR MDOCK 05200003
A PDR

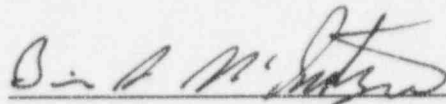
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

SS

COUNTY OF ALLEGHENY:

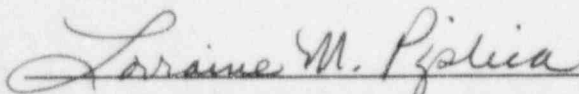
Before me, the undersigned authority, personally appeared Brian A. McIntyre, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Corporation ("Westinghouse") and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:



Brian A. McIntyre, Manager

Advanced Plant Safety and Licensing

Sworn to and subscribed
before me this 21st day
of September, 1995



Notary Public

2585A

Notarial Seal
Lorraine M. Piplica, Notary Public
Monroeville Boro, Allegheny County
My Commission Expires Dec 14, 1995
Member, Pennsylvania Association of Notaries



- (1) I am Manager, Advanced Plant Safety And Licensing, in the Advanced Technology Business Area, of the Westinghouse Electric Corporation and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing and rulemaking proceedings, and am authorized to apply for its withholding on behalf of the Westinghouse Energy Systems Business Unit.
- (2) I am making this Affidavit in conformance with the provisions of 10CFR Section 2.790 of the Commission's regulations and in conjunction with the Westinghouse application for withholding accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by the Westinghouse Energy Systems Business Unit in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.790 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.
 - (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

- (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.
- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.
- (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.
- (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
- (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
- (f) It contains patentable ideas, for which patent protection may be desirable.

There are sound policy reasons behind the Westinghouse system which include the following:

- (a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.
- (b) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to

sell products and services involving the use of the information.

- (c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.
 - (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.
 - (e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition of those countries.
 - (f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.
- (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10CFR Section 2.790, it is to be received in confidence by the Commission.
- (iv) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.
- (v) Enclosed is Letter NTD-NRC-95-4562, September 21, 1995 being transmitted by Westinghouse Electric Corporation (W) letter and Application for Withholding Proprietary Information from Public Disclosure, Brian A. McIntyre (W), to Mr. T. R. Quay, Office of NRR. The proprietary information as submitted for use by Westinghouse Electric Corporation is in response to questions concerning the AP600 plant and the associated design certification application and is expected to be

applicable in other licensee submittals in response to certain NRC requirements for justification of licensing advanced nuclear power plant designs.

This information is part of that which will enable Westinghouse to:

- (a) Demonstrate the design and safety of the AP600 Passive Safety Systems.
- (b) Establish applicable verification testing methods.
- (c) Design Advanced Nuclear Power Plants that meet NRC requirements.
- (d) Establish technical and licensing approaches for the AP600 that will ultimately result in a certified design.
- (e) Assist customers in obtaining NRC approval for future plants.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the use of similar information to its customers for purposes of meeting NRC requirements for advanced plant licenses.
- (b) Westinghouse can sell support and defense of the technology to its customers in the licensing process.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar advanced nuclear power designs and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar technical programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended for developing analytical methods and receiving NRC approval for those methods.

Further the deponent sayeth not.

**Enclosure 2 to Westinghouse
Letter NTD-NRC-95-4531**

August 17, 1995

* MELCOR ACCIDENT CONSEQUENCE CODE SYSTEM (MACCS) VER 1.5.11 *

* CASE DESCRIPTION: SAMPLE CASE FROM SNL, SURRY MODEL *

* UNIT FILE DESCRIPTION *

* -- Input: *

* 25	EARLY User Input File
* 26	CHRONC User Input File
* 27	DOSE Factors Input Data File
* 28	Meteorological Input Data File
* 29	Site Input Data File

* -- Output: *

* 6	STANDARD PRINTER OUTPUT
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* INPUT: ATMOS User Input File (UNIT 24) *

* INPUTS:

FILE25='seida2', STATUS='OLD', ACTION='READ'
FILE26='seida3', STATUS='OLD', ACTION='READ'
FILE27='dosdat8', STATUS='OLD', ACTION='READ'
FILE28='alwimet1', STATUS='OLD', ACTION='READ'
FILE29='alwrsit1', STATUS='OLD', ACTION='READ'

* OUTPUTS:

FILE06='AP60002.OUT', STATUS='UNKNOWN', CARRIAGE CONTROL='FORTRAN'
/*

* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT

RIATNAM1001 'AP600 ATMOS INPUT APRIL 1992'

* GEOMETRY DATA BLOCK, LOADED BY INPGEO, STORED IN /GEOM/

* NUMBER OF RADIAL SPATIAL ELEMENTS

GENUMRAD001 25

* ALWR REF. SITE

GESPAEND001	.40	1.21	1.61	3.22	4.83
GESPAEND002	6.44	8.05	9.66	11.26	12.87
GESPAEND003	14.48	16.09	17.70	19.31	20.92
GESPAEND004	22.53	24.14	25.75	27.36	28.97
GESPAEND005	30.58	32.19	48.28	64.37	80.47

* NUCLIDE DATA BLOCK, LOADED BY INPISO, STORED IN /ISOGRP/, /ISONAM/

* NUMBER OF NUCLIDES

ISNTMISO001 60

* NUMBER OF NUCLIDE GROUPS

ISMAXGRP001 9

* WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP

* WETDEP DRYDEP

```

*
ISDEPFLA001 .FALSE. .FALSE.
ISDEPFLA002 .TRUE. .TRUE.
ISDEPFLA003 .TRUE. .TRUE.
ISDEPFLA004 .TRUE. .TRUE.
ISDEPFLA005 .TRUE. .TRUE.
ISDEPFLA006 .TRUE. .TRUE.
ISDEPFLA007 .TRUE. .TRUE.
ISDEPFLA008 .TRUE. .TRUE.
ISDEPFLA009 .TRUE. .TRUE.

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* NUCLIDE GROUP DATA FOR 9 NUCLIDE GROUPS

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*
*          NUCNAM      PARENT      IGROUP      HAFLIF
*
ISOTPGRP001    CO-58          NONE          6          6.160E+06
ISOTPGRP002    CO-60          NONE          6          1.660E+08
ISOTPGRP003    KR-65          NONE          1          3.386E+08
ISOTPGRP004    KR-85M         NONE          1          1.613E+04
ISOTPGRP005    KR-87          NONE          1          4.560E+03
ISOTPGRP006    KR-88          NONE          1          1.008E+04
ISOTPGRP007    RB-86          NONE          3          1.611E+06
ISOTPGRP008    SR-89          NONE          5          4.493E+06
ISOTPGRP009    SR-90          NONE          5          8.865E+08
ISOTPGRP010    SR-91          NONE          5          3.413E+04
ISOTPGRP011    SR-92          NONE          5          9.756E+03          NEW
ISOTPGRP012    Y-90          SR-90         7          2.307E+05
ISOTPGRP013    Y-91          SR-91         7          5.080E+06
ISOTPGRP014    Y-92          SR-92         7          1.274E+04          NEW
ISOTPGRP015    Y-93          NONE          7          3.636E+04          NEW
ISOTPGRP016    ZR-95          NONE          7          5.659E+06
ISOTPGRP017    ZR-97          NONE          7          6.048E+04
ISOTPGRP018    NB-95          ZR-95         7          3.033E+06
ISOTPGRP019    MO-99          NONE          6          2.377E+05
ISOTPGRP020    TC-99M         MO-99         6          2.167E+04
ISOTPGRP021    RU-103         NONE          6          3.421E+06
ISOTPGRP022    RU-105         NONE          6          1.598E+04
ISOTPGRP023    RU-106         NONE          6          3.188E+07
ISOTPGRP024    RH-105         RU-105        6          1.278E+05
ISOTPGRP025    SB-127         NONE          4          3.283E+05
ISOTPGRP026    SB-129         NONE          4          1.562E+04
ISOTPGRP027    TE-127         SB-127        4          3.366E+04
ISOTPGRP028    TE-127M        NONE          4          9.418E+06
ISOTPGRP029    TE-129         SB-129        4          4.200E+03
ISOTPGRP030    TE-129M        NONE          4          2.886E+06
ISOTPGRP031    TE-131M        NONE          4          1.080E+05
ISOTPGRP032    TE-132         NONE          4          2.808E+05
ISOTPGRP033    I-131          TE-131M       2          6.947E+05
ISOTPGRP034    I-132          TE-132        2          8.226E+03
ISOTPGRP035    I-133          NONE          2          7.488E+04
ISOTPGRP036    I-134          NONE          2          3.156E+03
ISOTPGRP037    I-135          NONE          2          2.371E+04
ISOTPGRP038    XE-133         I-133         1          4.571E+05
ISOTPGRP039    XE-135         I-135         1          3.301E+04
ISOTPGRP040    CS-134         NONE          3          6.501E+07
ISOTPGRP041    CS-136         NONE          3          1.123E+06
ISOTPGRP042    CS-137         NONE          3          9.495E+08
ISOTPGRP043    BA-139         NONE          9          4.986E+03          NEW
ISOTPGRP044    BA-140         NONE          9          1.105E+06

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ISOTPGRP045	LA-140	BA-140	7	1.448E+05	
ISOTPGRP046	LA-141	NONE	7	1.418E+04	NEW
ISOTPGRP047	LA-142	NONE	7	5.724E+03	NEW
ISOTPGRP048	CE-141	LA-141	8	2.811E+06	PARENT ADDED
ISOTPGRP049	CE-143	NONE	8	1.188E+05	
ISOTPGRP050	CE-144	NONE	8	2.457E+07	
ISOTPGRP051	PR-143	CE-143	7	1.173E+06	
ISOTPGRP052	ND-147	NONE	7	9.495E+05	
ISOTPGRP053	NP-239	NONE	8	2.030E+05	
ISOTPGRP054	PU-238	CM-242	8	2.809E+09	
ISOTPGRP055	PU-239	NP-239	8	7.700E+11	
ISOTPGRP056	PU-240	CM-244	8	2.133E+11	
ISOTPGRP057	PU-241	NONE	8	4.608E+08	
ISOTPGRP058	AM-241	PU-241	7	1.366E+10	
ISOTPGRP059	CM-242	NONE	7	1.408E+07	
ISOTPGRP060	CM-244	NONE	7	5.712E+08	

* WET DEPOSITION DATA BLOCK, LOADED BY INPWET, STORED IN /WETCON/

* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR

WDCWASH1001 9.5E-5 (JON HELTON AFTER JONES, 1986)

* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR

WDCWASH2001 0.8 (JON HELTON AFTER JONES, 1986)

* DRY DEPOSITION DATA BLOCK, LOADED BY INPDY, STORED IN /DRYCON/

* NUMBER OF PARTICLE SIZE GROUPS

DDNPSGRP001 3 (THREE GROUPS TO TAKE INTO ACCOUNT THE URD VALUES AND VOLATILE IODINE)

* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)

DDVDEPOS001 0.00 0.01 0.001

* THE FIRST VALUE IS USED TO MODEL THE VOLATILE IODINE (5% OF TOTAL)

* THE SECOND VALUE IS THE URD VALUE FOR PARTICULATE IODINE

* THE THIRD VALUE IS THE URD VALUE FOR ALL EXCEPT PARTICULATE IODINE

* DISPERSION PARAMETER DATA BLOCK, LOADED BY INPDIS, STORED IN /DISPY/, /DISPZ/

* SIGMA = A X ** B WHERE A AND B VALUES ARE FROM TADMOR AND GUR (1969)

* LINEAR TERM OF THE EXPRESSION FOR SIGMA-Y, 6 STABILITY CLASSES

* STABILITY CLASS: A B C D E F

DPCYSIGA001 0.3658 0.2751 0.2089 0.1474 0.1046 0.0722

* EXPONENTIAL TERM OF THE EXPRESSION FOR SIGMA-Y, 6 STABILITY CLASSES

* STABILITY CLASS: A B C D E F

DPCYSIGB001 .9031 .9031 .9031 .9031 .9031 .9031

* LINEAR TERM OF THE EXPRESSION FOR SIGMA-Z, 6 STABILITY CLASSES

*

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* STABILITY CLASS: A          B          C          D          E          F
*
DPCZSIGA001  2.47E-4    0.078    0.144    0.368    0.2517   0.184
*
* EXPONENTIAL TERM OF THE EXPRESSION FOR SIGMA-Z, 6 STABILITY CLASSES
*
* STABILITY CLASS; A          B          C          D          E          F
*
DPCZSIGB001  2.118    1.085    0.911    0.6764   0.6720   0.6546
*
* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
*
DPYSCALE001  1.
*
* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
* NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
* (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27
*
DPZSCALE001  1.27
*****
* EXPANSION FACTOR DATA BLOCK, LOADED BY INEXP, STORED IN /EXPAND/
*
* TIME BASE FOR EXPANSION FACTOR (SECONDS)
*
PMTIMBAS001  180.    (3 MINUTES)
*
* BREAK POINT FOR FORMULA CHANGE (SECONDS)
*
PMBRKPNT001  3600.    (1 HOUR)
*
* EXPONENTIAL EXPANSION FACTOR NUMBER 1
*
PMXPFAC1001  0.2
*
* EXPONENTIAL EXPANSION FACTOR NUMBER 2
*
PMXPFAC2001  0.25
*****
* PLUME RISE DATA BLOCK, LOADED BY INPLRS, STORED IN /PLUMRS/
*
* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME
* (USED BY FUNCTION CAUGHT)
*
PRSCLCRW001  1.
*
* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLDAP001  1.
*
* SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLEFP001  1.
*****
* WAKE EFFECTS DATA BLOCK, LOADED BY INPWAK, STORED IN /BILWAK/
*
* BUILDING WIDTH (METERS)
*

```

```

WEBUILDW001 100.
*
* BUILDING HEIGHT (METERS)
*
WEBUILDH001 30.
*****
* RELEASE DATA BLOCK, LOADED BY INPREL, STORED IN /ATNAM2/, /MULREL/
*
RDATNAM2001 'CI SOURCE TERM'
*
* TIME AFTER ACCIDENT INITIATION WHEN THE ACCIDENT REACHES GENERAL EMERGENCY
* CONDITIONS (AS DEFINED IN NUREG-0654), OR WHEN PLANT PERSONNEL CAN RELIABLY
* PREDICT THAT GENERAL EMERGENCY CONDITIONS WILL BE ATTAINED
*
RDOALARM001 7200.
*
* NUMBER OF PLUME SEGMENTS THAT ARE RELEASED
*
RDNUMREL001 4
*
* SELECTION OF RISK DOMINANT PLUME
*
RDMAXRIS001 1
*
* REFERENCE TIME FOR DISPERSION AND RADIOACTIVE DECAY
*
RDREFTIM001 0.50 0.00 0.50 0.00
*
* HEAT CONTENT OF THE RELEASE SEGMENTS (W)
* A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
*
RDPLHEAT001 0.00 0.00 0.00 0.00
*
* HEIGHT OF THE PLUME SEGMENTS AT RELEASE (M)
* A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
*
RDPLHITE001 0. 0. 0. 0.
*
* DURATION OF THE PLUME SEGMENTS (S)
* A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
*
RDPLUDUR001 16441. 86340. 86400. 70400.
*
* TIME OF RELEASE FOR EACH PLUME (S AFTER SCRAM)
* A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
*
RDPDELAY001 7319. 23760. 110100. 196500.
*
* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
* YOU MUST SPECIFY A COLUMN OF DATA FOR EACH OF THE PARTICLE SIZE GROUPS
*
* DEPOSITION VELOCITY 0.0 0.01 0.001
*
RDPSDIST001 0.0 0.0 1.0
RDPSDIST002 0.05 0.95 0.0 (5% OF TOTAL IODINE IS VOLATILE)
RDPSDIST003 0.0 0.0 1.0
RDPSDIST004 0.0 0.0 1.0
RDPSDIST005 0.0 0.0 1.0
RDPSDIST006 0.0 0.0 1.0

```


RDPSDIST007	0.0	0.0	1.0
RDPSDIST008	0.0	0.0	1.0
RDPSDIST009	0.0	0.0	1.0

*
 * 1971.66 MWT, 3 CYCS, AP600 CORE ORIGEN RUN
 * WESTINGHOUSE - C. MCGINNIS
 * CO58 AND CO60 FROM G. WRIGHTS, 5/5/92
 *

	NUCNAM
RDCORINV001	CO-58
RDCORINV002	CO-60
RDCORINV003	KR-85
RDCORINV004	KR-85M
RDCORINV005	KR-87
RDCORINV006	KR-88
RDCORINV007	RB-86
RDCORINV008	SR-89
RDCORINV009	SR-90
RDCORINV010	SR-91
RDCORINV011	SR-92
RDCORINV012	Y-90
RDCORINV013	Y-91
RDCORINV014	Y-92
RDCORINV015	Y-93
RDCORINV016	ZR-95
RDCORINV017	ZR-97
RDCORINV018	NB-95
RDCORINV019	MO-99
RDCORINV020	TC-99#
RDCORINV021	RU-103
RDCORINV022	RU-105
RDCORINV023	RU-106
RDCORINV024	RH-105
RDCORINV025	SB-127
RDCORINV026	SB-129
RDCORINV027	TE-127
RDCORINV028	TE-127M
RDCORINV029	TE-129
RDCORINV030	TE-129M
RDCORINV031	TE-131M
RDCORINV032	TE-132
RDCORINV033	I-131
RDCORINV034	I-132
RDCORINV035	I-133
RDCORINV036	I-134
RDCORINV037	I-135
RDCORINV038	XE-133
RDCORINV039	XE-135
RDCORINV040	CS-134
RDCORINV041	CS-136
RDCORINV042	CS-137
RDCORINV043	BA-139
RDCORINV044	BA-140
RDCORINV045	LA-140
RDCORINV046	LA-141
RDCORINV047	LA-142
RDCORINV048	CE-141
RDCORINV049	CE-143

(u,c)

RDCORINV050	CE-144	[(a,c)]
RDCORINV051	FR-143	
RDCORINV052	ND-147	
RDCORINV053	NP-239	
RDCORINV054	PU-238	
RDCORINV055	PU-239	
RDCORINV056	PU-240	
RDCORINV057	PU-241	
RDCORINV058	AM-241	
RDCORINV059	CM-242	
RDCORINV060	CM-244	

* SCALING FACTOR TO ADJUST THE CORE INVENTORY FOR POWER LEVEL

RDCORSCA001 1.0 * AP600

* RELEASE FRACTIONS FOR ISOTOPE GROUPS IN RELEASE

* ISOTOPE GROUPS:

	BA	XE/KR	I	CS	TE	SR	RU	LA	CE
RDRLEFRC001	4.34E-01	3.76E-02	3.75E-02	2.05E-03	5.30E-03	6.13E-02	1.04E-02	5.56E-05	4.48E-02
RDRLEFRC002	1.28E-01	2.39E-04	7.92E-05	2.26E-04	3.97E-03	1.92E-03	4.64E-03	1.72E-05	4.26E-03
RDRLEFRC003	2.03E-02	2.00E-05	2.24E-06	3.60E-05	2.82E-04	0.00E+00	2.40E-04	1.04E-07	0.00E+00
RDRLEFRC004	7.40E-02	1.10E-04	3.01E-05	1.35E-04	5.81E-04	1.00E-05	2.00E-04	1.04E-07	4.00E-05

 * OUTPUT CONTROL DATA BLOCK, LOADED BY INPOPT, STORED IN /STOPME/, /ATMOPT/
 *

* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN

OCENDAT1001 .FALSE. (SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)

OCIDEBUG001 0

* NAME OF THE NUCLIDE TO BE LISTED ON THE DISPERSION LISTINGS

*OCNUCOUT001 CS-137

 * METEOROLOGICAL SAMPLING DATA BLOCK

* METEOROLOGICAL SAMPLING OPTION CODE:

- * METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
- * 2, WEATHER CATEGORY BIN SAMPLING,
- * 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
- * 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
- * 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.

M1METCOD001 2

* LAST SPATIAL INTERVAL FOR MEASURED WEATHER

M2LIMSPA001 25

```

*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
M2BNDMKH001 1500. (METERS) (1000 FOR 1150 SURRY)
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
M2IBDSTB001 6 (F-STABILITY)
*
* BOUNDARY WEATHER RAIN RATE
*
M2BNDRAN001 0. (MM/HR)
*
* BOUNDARY WEATHER WIND SPEED
*
M2BNDWND001 2. (M/S)
*
*****
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
*
M4NRNINT001 5
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
* SPECIFIED FOR THE ARRAY SPAEND (10 % ERROR IS ALLOWED).
*
M4RNDSTS001 3.22 6.44 11.26 20.92 32.19 KM
*
* NUMBER OF RAIN INTENSITIY BREAKPOINTS
*
M4NRINTN001 3
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
M4RNRATE001 2. 4. 6.
*
* NUMBER OF SAMPLES PER BIN
*
M4NSMPLS001 4 (THIS NUMBER SHOULD BE SET TO 4 FOR RISK ASSESSMENT)
*
* INITIAL SEED FOR RANDOM NUMBER GENERATOR
*
M4IRSEED001 79
*****
* FIXED START TIME FOR METCOD NE 2
* GIULIAN DAY
*M3ISTRDY001 154
* HOUR
*M3ISTRHR001 9

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