Attachment 3

CEA Ejection Accident - Containment Release

PROC./WORK PLAN NO.	PROCEDURE/WORK PLAN TITLE:		
5010.015	ENGINEERING CALCULATIONS	CHANGE:	001-02-1

ARKANSAS NUCLEAR ONE
CALCULATION COVER SHEET

Calc. No.: 00-E-0028-01 **Rev. No.:** 0(1)

Calc. Title: CEA Ejection Accident – Containment Release

Unit: 2 **Category:** Q
System(s): RB,RCS
Calc. Type: NS

Components: NA

Comp Tag	Suffix	Comp Code

Topics: SGR UPR
Plt Area: **Bldg.** 2RB **Elev.** N/A
Room N/A **Wall**
Coordinates: N/A

Config. Checklist (per 5010.004) completed? (Y or N) Y
Document Comment/Resolution Form completed? (Y or N) Y

Abstract (Included Purpose/Results): The objective of this calculation is to determine the dose consequences of a CEA Ejection Accident with the releases assumed to be to the containment.

Pages Revised and/or Added: All, Pages 1-8, Attachment 1 (Pages 1-15)

Purpose of Revision: Correct containment sump volume and increase duration of event to 30 days

Initiating Documents	Resulting Document(s)	Key Design Input Documents
ER 980528 E202, "Revise ANO2 Dose Calculations to Support Power Uprate".		98-E-0036-01 Rev. 0(1)
		95-E-0030-09, Rev. 0(4)
		98-E-0029-01, Rev. 0
		98-R-2005-01

Verification Method: **Design Review** X **Alternate Calculation** ____ **Qualification Testing** ____

Amends Calc(s): N/A
Supersedes Calc(s): N/A
Computer Software Used: TRANSACT

	(Print Name)	(Initials)	(Date)		(Print Name)	(Initials)	(Date)
By:	Kathy Ashley	KLA	12/6/00	Rvw'd:	NA		
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Check if Additional Revisions: ____

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1 Purpose

The ANO-2 radiological dose analysis for non-Loss of Coolant Accidents (LOCA) which accounted for replacement steam generators (RSG) and power uprate is provided in calculation 98-E-0036-01 Rev. 0(1). Along with other events, this calculation determined the onsite and offsite doses due to a CEA Ejection accident with the releases assumed to be from the atmospheric dump valves (ADV's). The objective of this calculation is to determine the dose consequences of a CEA Ejection Accident with the releases assumed to be to the containment and from the containment to the environment at a leakage rate assumed in the maximum hypothetical accident. This calculation will also use the current control room atmospheric dispersion factors (χ/Q's).

2 Criteria

The acceptance criteria for the CEA ejection accident is "well within" (i.e., 25%) the limits of 10CFR100. This is equivalent to an offsite thyroid dose of 75 rem (0.25*300 rem) and a whole body dose of 6.25 rem (0.25*25 rem). Control room doses are limited by GDC 19 of 10CFR50 to 5 rem wholebody or its equivalent to any part of the body (i.e., 30 rem thyroid, and 75 rem skin).

3 Background

As described in 98-E-0036-01 Rev. 0(1), the CEA ejection is a fuel failure event for ANO-2. The analysis in calculation 98-E-0036-01 Rev. 0(1) assumes no credit for operator action is taken and the primary to secondary leakage of 0.5 gpm continues throughout the 2-hour and 8-hour event period. The analysis is terminated at 8 hours since shutdown cooling can be initiated well before 8 hours into the event. It is assumed that the operator does not begin to cooldown the plant until 30 minutes after event initiation, at which point both steam generators are used for the controlled 75°F/hr (2 hour event) or 35.5°F/hr cooldown (8 hour event).

Calculation 98-E-0036-01 assumes a loss of AC renders the main condenser unavailable. Thus, the entire cooldown must be performed by dumping steam to the atmosphere from the steam generators that are assumed to contain the maximum limit for steam generator activity. Fuel failure may occur by either DNBR or CLM for this event. Since CEA ejection is a fuel failure event, iodine spiking is not considered.

To demonstrate that the CEA ejection accident with releases through the ADV's is limiting, this calculation determines conservative CEA Ejection Accident dose consequences with the releases assumed to be to the containment.

4 References

1. Calculation 98-E-0036-01 Rev. 0(1), "ANO-2 Radiological Dose Analysis for RSG and Power Uprate".
2. Calculation 95-E-0030-09, Revision 0(4), "Control Room Atmospheric Dispersion Factors For Loss of Coolant Accident and Maximum Hypothetical Accident"

3. Calculation 98-E-0029-01, Rev. 0, "ANO-2 Power Uprate Source Terms for LOCA, Non-LOCA and FHA".
4. Engineering Calculation 98-R-2005-01, Rev. 6, "ANO-2 Cycle 15/16 Safety Analysis Groundrules".
5. Regulatory Guide 1.4, "Assumptions Used for Evaluation the Potential Radiological Consequences of a Loss of Cooling Accident for Pressurized Water Reactors", Rev. 2, 1974.
6. Calculation A-22, RB Net Free Volume, Rev. 2.
7. 91-E-0117-04, "ANO-1 and ANO-2 Control Room Free Air Volume", Rev. 0, 8/18/94.
8. Calculation 95-E-0030-05, "Alternate Nuclide Library for Transact Code", Rev. 0, 2/6/97.
9. Standard Review Plan 6.4, "Control Room Habitability System", Rev. 2, July 1981.
10. Regulatory Guide 1.78, "Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release", June1974.
11. Procedure 5120.415, In-Place Testing of the Unit 1 Control Room Filtration System, Rev. 004-00-0.
12. Murphy and Campe, "Nuclear Power Plant Control Room Ventilation System Design for Meeting General Design Criterion 19", August 1974.
13. Regulatory Guide 1.52, "Design, Testing and Maintenance Criteria for Post Accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants", Rev. 2, 1978.
14. ANO-2, SAR, Amendment 15.
15. SP 93-C-0003-01, TRANSACT Code Documentation Package, Rev. 2
16. Calculation 91-E-0117-16, Rev 0(3), ANO-2 MHA CR and Offsite Dose Analysis

5 Data

5.1 Atmospheric Dispersion Factors (χ/Q's)

The atmospheric dispersion factors for offsite locations are unchanged from the Reference 1 calculation. The EAB and LPZ (χ/Q's) given below:

Table 5-5
Offsite Atmospheric Dispersion Factors (χ/Q's), sec/m^3

Time Period	EAB	LPZ
0-2 hr	6.5E-04	3.1E-05
2-8 hr		3.1E-05
8-24 hr		3.6E-06
1-4 days		2.3E-06
4-30 days		1.4E-6

For the LPZ, the 2-8 hr χ/Q is used for the 0-8 hr time interval.

For the control room, the releases are assumed from the Unit 2 Penetration Rooms Ventilation System to VPH-1. The Control Room χ/Q's are as follows (see Reference 2):

Table 5-6
Control Room Atmospheric Dispersion Factors (χ/Q's), sec/m^3

Time Period	Control Room X/Q
0 to 2 hrs	9.77 x 10-4 sec/m3
2 to 8 hrs	5.76 x 10-4 sec/m3
8 to 24 hrs	2.56 x 10-4 sec/m3
1 to 4 days	1.68 x 10-4 sec/m3
4 to 30 days	1.25 x 10-4 sec/m3

5.2 Additional Data

Parameter	Unit 2	Reference
Power Level, Mwt	3026	[4]
Power Level for Analysis (102%)	3087	[4]
Fraction of iodine released from core	0.12	[1]
Fraction of noble gases released from core	0.1 (except 0.3 for Kr-85)	[1]
Iodine species distribution	1.0 elemental	Note: All iodines are assumed to be elemental in this calculation since spray credit is not taken.
RB Free Volume	1.778E6 ft^3	[6, 4]
Sump Volume	62898 ft^3	[16]
Sprayed volume	1.332E6 ft^3	RB_{free}-Unsp-Sump [2]
Unsprayed volume	3.831E5 ft^3	[2]
RB Free Volume minus sump volume	1.7151E6 ft^3	
Control Room volume	40,000 ft^3	[7]
Offsite Breathing Rates	3.47E-4 m^3/sec for 0-8 hours 1.750E-4 m^3/sec for 8-24 hrs 2.32E-4 m^3/sec for > 24 hours	[5]
Control Room Breathing Rates	3.47E-4 m^3/sec in CR throughout	[5]
DCFs	ICRP30	[8]
CR Unfiltered Inleakage Flow	10 cfm	[9, 10]
CR Filtered Inleakage Flow	333 cfm	[11]
CR Recirculation Flow	1667 cfm	[11]
CR Occupancy Factors	1.0 for 0-24 hours 0.6 for 1-4 days 0.4 for 4-30 days	[12]
CR Intake Filter Efficiency	99%	[13]
CR Recirc Filter Efficiency	95%	[13]
Accident Duration	30 days	
RB leak rates	0.1%/day for 1st 24 hrs 0.05%/day>24 hrs	[14, Table 15.1.13-1]

Removal of airborne halogens by containment sprays is not considered in this analysis.

5.3 Source Terms

The maximum pin activities for non-LOCA events are given in Calculation 98-E-0029-01, Table 4.1, Ref. 3. All pins in the core are assumed to be fuel pins (no poison pins or shims). Reference 3, page 8, gives the total number of rods in the core as 41756.

Table 5-7
Maximum Fission Product Activities
For Non-LOCA Transients

Isotope	Maximum Pin Activity (Ci)	Maximum Core Activity (Ci)
I-131	2.002E+03	8.360E+07
I-132	2.882E+03	1.203E+08
I-133	4.072E+03	1.700E+08
I-134	4.517E+03	1.886E+08
I-135	3.788E+03	1.582E+08
Kr-85	2.281E+01	9.525E+05
Kr-85m	6.473E+02	2.703E+07
Kr-87	1.279E+03	5.341E+07
Kr-88	1.805E+03	7.537E+07
Xe-131m	2.249E+01	9.391E+05
Xe-133	4.055E+03	1.693E+08
Xe-133m	1.263E+02	5.274E+06
Xe-135	1.055E+03	4.405E+07
Xe-135m	7.993E+02	3.338E+07
Xe-138	3.540E+03	1.478E+08

6 Calculation

The dose calculation first determines the activity released from the fuel to the RCS and the release of reactor coolant to the containment. These values are used in the TRANSACT code, along with the containment leakage rate to the environment, to determine the onsite and offsite doses.

6.1 Activity Released

6.1.1 Iodine Release from fuel to RCS

The Iodine releases to the RCS are the same as in Reference 1. The releases for fuel pins failing by violation of the departure from nucleate boiling (DNBR) criteria and failure by centerline melt (CLM) are as follows:

DNBR Criteria

For fuel failure due to violation of DNBR, 12% of the iodines resident in the fuel pins are assumed to be released. The amount of Iodine released to the RCS is then:

Total Iodine Released (DNBR) = Core Activity * 0.12 * Fraction of pins failed

CLM Criteria

For fuel failure due to violation of CLM, 50% of the iodines resident in the fuel pins are assumed to be released. The amount of Iodine released to the RCS is then:

Total Iodine Released (CLM) = Core Activity * 0.50 * Fraction of pins failed

Since the purpose of this calculation is to provide a comparison of the doses, assuming the release is to the containment, with the doses in Reference 1, which assumes all releases are through the ADV's, only the DNBR case will be evaluated.

6.1.2 Noble Gas Release From Fuel to RCS

For pins failing by violation of departure from nucleate boiling ratio (DNBR) criteria, 10% of the noble gas activity residing in the gas gap is assumed to be released to the RCS with the exception of Kr-85 which is assumed to be 30%. These assumptions are the same as those used in Reference 1.

6.1.3 Failed Fuel Fraction

Since the purpose of this calculation is to provide a comparison of the doses assuming a release to the containment with the doses assuming all releases are through the ADV's only a single failed fuel fraction is considered. This failed fuel fraction is **0.15**.

6.1.4 *Release to RCS*

The release of the core activity to the RCS is given below:

Isotope	Maximum Core Activity (Ci)	Failed Fuel Fraction	Release Fraction From Fuel (DNBR Criteria)	Release to RCS (Ci)
I-131	8.360E+07	0.15	0.12	1.505E+06
I-132	1.203E+08	0.15	0.12	2.166E+06
I-133	1.700E+08	0.15	0.12	3.061E+06
I-134	1.886E+08	0.15	0.12	3.395E+06
I-135	1.582E+08	0.15	0.12	2.847E+06
Kr-85m	9.525E+05	0.15	0.10	1.429E+04
Kr-85	2.703E+07	0.15	0.30	1.216E+06
Kr-87	5.341E+07	0.15	0.10	8.011E+05
Kr-88	7.537E+07	0.15	0.10	1.131E+06
Xe-131m	9.391E+05	0.15	0.10	1.409E+04
Xe-133m	1.693E+08	0.15	0.10	2.540E+06
Xe-133	5.274E+06	0.15	0.10	7.911E+04
Xe-135m	4.405E+07	0.15	0.10	6.608E+05
Xe-135	3.338E+07	0.15	0.10	5.006E+05
Xe-138	1.478E+08	0.15	0.10	2.217E+06

6.1.5 *RCS Leakage*

All leakage from the fuel to the RCS is assumed to be released to the containment at time zero of the accident. This is a very conservative assumption since any releases through the ejected CEA would result in a protracted release to the containment. In calculation 98-E-0036-01, the analysis is terminated at 8 hours since shutdown cooling can be initiated well before 8 hours into the event. However, since the release is to the containment, this event will continue for 30 days.

7 Analysis

The above data was used as input to the TRANSACT computer code (Reference 15). The input and output files are given in Attachment 1.

8 Results

The onsite and offsite doses for a CEA ejection accident with all releases assumed to be to the containment are given below:

Location	Thyroid Dose (rem)	Whole Body Dose (rem)	Skin Dose (rem)
EAB (0-2 hr)	4.275E+01	1.492E-01	2.875E-01
LPZ (0-8 hr)	1.174E+01	1.807E-02	3.767E-02
Control Room (0-8 hr)	3.175E+00	1.367E-03	1.257E-01

ATTACHMENT 1
TRANSACT Input and Output

Input File: CEA3

```
'ICRP30A                                                                    '
'TILTAPE   ','TIMTAPE   ','TINTAPE   '
'CEA Ejection Accident Containment Release, ICRP30A DATA        '
'  No sprays                                                    '
' Input File: CEA3 Output File: CEA3.out '
'                                                                           '
 0, 0, 0, 1, 0
  1,  3
'RB '
 36
 0.000E+00, 0.000E+00
 .0000E+00, 0.000E+00
 .0000E+00, 0.000E+00
 1.000E+00, .0000E+00, .0000E+00
 1.000E+00, 0.000E+00, 0.000E+00
 1.7151E+06, 4.000E+04
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'INITIAL CURIES  ',0,0,10,0,1, 1.131E+06
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'INITIAL CURIES  ',0,0,18,0,1, 2.217E+06

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.1000E+00

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.1000E+00
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'DOSE  PARAMS         ',0,0,0,0,7,  0.000E-00,  2.320E-04,  1.400E-06,  2.320E-04,  1.250E-04,  3.470E-04,
.0500E+00
'END             ',0,0,0,0,0, 0.000E+00, 0.000E+00
```

Output File: cea3.out

```
1                    TRANSACT Version 1.0, Revision 2
                    Based on TACT V - SEP 87 PC VERSION


                         REVISED TO REVISION 2 December 1996
                              BY OMEGA TECHNICAL SERVICES, INC.

                         REVISED TO REVISION 1 FEBRUARY 1995
                              BY OMEGA TECHNICAL SERVICES, INC.

                         MODIFIED FALL 1992 FOR GGNS
                              BY OMEGA TECHNICAL SERVICES, INC.

                         NUCLEAR REGULATORY COMMISSION
                           ACCIDENT EVALUATION BRANCH
                        DATE  12/ 4/2000    TIME  13: 2: 0

                          MODEL SUMMARY FOR CASE    1

 CEA Ejection Accident Containment Release, ICRP30A DATA
   No sprays
  Input File: CEA3 Output File: CEA3.out
1                            TIME INDEPENDENT INPUT
                               CASE NUMBER   1


                                 NODES  NSTEP
                                   1     56

                            OUTPUT CONTROL PARAMETER
                         I        1    2    3    4    5
                     IPRINT(I)    0    0    0    1    0

                     NUMBER OF DOSE EVALUATION POINTS -   3


                   POWER (MWT)     REACTOR SHUTDOWN TIME (HRS)
                     0.000E+00              0.000E+00


    FRACTION OF ACTIVITY RELEASED FROM CORE TO CONTAINMENT BY ISOTOPIC GROUP
          HALOGENS
          0.000E+00     0.000E+00


                  PLATEOUT FACTOR FOR ACTIVITY RELEASED FROM
                     CORE TO CONTAINMENT BY ISOTOPIC GROUP
          HALOGENS
          0.000E+00     0.000E+00


    FRACTION OF CORE INVENTORY AIRBORNE IN THE CONTAINMENT BY ISOTOPIC GROUP
          HALOGENS
         0.000E+00     0.000E+00


                            ISOTOPIC SPLIT BY GROUP
                         ELEM.          ORG.          PART.
      HALOGENS       1.000E+00     0.000E+00     0.000E+00
                     1.000E+00     0.000E+00     0.000E+00


                            VOLUME OF NODES (CU FT)
            RB
```

				Entergy Operations ARKANSAS NUCLEAR ONE	CALCULATION NUMBER
					Attachment 1 00-E-0028-01
0(1)	12/4/00	KLA	JL		
0	9/26/00	MAM	JGM		PAGE NUMBER 3 OF 15
REV.	DATE	BY	CHK'D		

1.715E+06

CONTROL ROOM VOLUME (CU FT)
4.000E+04

DATA FROM NUCLIDE FILE ICRP30A

ISOTOPE NAME	SPLIT	SOURCE (CI/MWT)	DECAY CONSTANT (1/HR)	DOSE CONVERSION FACTORS WHOLEBDY	SKIN-B	THYROID	SKIN-G	SKIN-T
I 131	ELEM.	2.5080000E+04	3.5870390E-03	5.590E-02	3.070E-02	1.100E+06	7.950E-02	0.000E+00
I 132	ELEM.	3.8060000E+04	2.9768400E-01	3.550E-01	1.100E-01	6.300E+03	5.070E-01	0.000E+00
I 133	ELEM.	5.6220000E+04	3.3188400E-02	9.110E-02	8.900E-02	1.800E+05	1.310E-01	0.000E+00
I 134	ELEM.	6.5750000E+04	8.0208000E-01	4.110E-01	1.420E-01	1.100E+03	5.860E-01	0.000E+00
I 135	ELEM.	5.1030000E+04	1.0310400E-01	2.490E-01	7.860E-02	3.100E+04	3.520E-01	0.000E+00
KR 83M	ELEM.	4.1520000E+03	3.7260000E-01	1.270E-05	0.000E+00	0.000E+00	1.360E-04	0.000E+00
KR 85M	ELEM.	1.2970000E+04	1.5786000E-01	2.310E-02	4.970E-02	0.000E+00	3.200E-02	0.000E+00
KR 85	ELEM.	4.1020000E+02	7.3512000E-06	3.310E-04	4.840E-02	0.000E+00	4.750E-04	0.000E+00
KR 87	ELEM.	2.3350000E+04	5.4684000E-01	1.330E-01	3.360E-01	0.000E+00	1.850E-01	0.000E+00
KR 88	ELEM.	3.2000000E+04	2.4750000E-01	3.380E-01	7.760E-02	0.000E+00	4.690E-01	0.000E+00
KR 89	ELEM.	3.9790000E+04	1.3068000E+01	3.030E-01	3.470E-01	0.000E+00	4.210E-01	0.000E+00
XE 131M	ELEM.	2.5950000E+02	2.4048000E-03	1.250E-03	1.330E-02	0.000E+00	2.710E-03	0.000E+00
XE 133M	ELEM.	1.3840000E+03	1.2564000E-02	4.290E-03	2.960E-02	0.000E+00	7.000E-03	0.000E+00
XE 133	ELEM.	5.6220000E+04	5.4792000E-03	4.960E-03	9.670E-03	0.000E+00	7.890E-03	0.000E+00
XE 135M	ELEM.	1.5570000E+04	2.6640000E+00	6.370E-02	2.140E-02	0.000E+00	9.160E-02	0.000E+00
XE 135	ELEM.	5.3630000E+04	7.5311970E-02	3.590E-02	6.320E-02	0.000E+00	5.070E-02	0.000E+00
XE 137	ELEM.	5.1030000E+04	1.0659600E+01	2.830E-02	4.590E-01	0.000E+00	4.020E-02	0.000E+00
XE 138	ELEM.	4.7750000E+04	2.4465600E+00	1.870E-01	1.470E-01	0.000E+00	2.610E-01	0.000E+00

TIME DEPENDENT INPUT
CASE NUMBER 1

TIME INTERVAL	0	0	0	0	2	0.00000E+00	1.00000E-05
INITIAL CURIES	0	0	1	0	1	1.50500E+06	
INITIAL CURIES	0	0	2	0	1	2.16600E+06	
INITIAL CURIES	0	0	3	0	1	3.06100E+06	
INITIAL CURIES	0	0	4	0	1	3.39500E+06	
INITIAL CURIES	0	0	5	0	1	2.84700E+06	
INITIAL CURIES	0	0	7	0	1	1.42900E+04	
INITIAL CURIES	0	0	8	0	1	1.21600E+06	
INITIAL CURIES	0	0	9	0	1	8.01100E+05	
INITIAL CURIES	0	0	10	0	1	1.13100E+06	
INITIAL CURIES	0	0	12	0	1	1.40900E+04	
INITIAL CURIES	0	0	13	0	1	2.54000E+06	
INITIAL CURIES	0	0	14	0	1	7.91100E+04	
INITIAL CURIES	0	0	15	0	1	6.60800E+05	
INITIAL CURIES	0	0	16	0	1	5.00600E+05	
INITIAL CURIES	0	0	18	0	1	2.21700E+06	
TIME INTERVAL	0	0	0	0	2	1.00000E-05	1.50000E-02
CONTROL ROOM	0	0	0	0	5	1.00000E+01	3.33000E+02
3.43000E+02	1.66700E+03	1.00000E+00					
CR FILTER EFF	1	1	0	0	2	9.50000E+01	9.90000E+01
CR FILTER EFF	1	2	0	0	2	9.50000E+01	9.90000E+01
CR FILTER EFF	1	3	0	0	2	9.50000E+01	9.90000E+01
TRANSFER PERCENT	0	0	0	1	1	1.00000E-01	
DOSE PARAMS	0	0	0	0	7	6.50000E-04	3.47000E-04
3.10000E-05	3.47000E-04	9.77000E-04	3.47000E-04	1.00000E-01			
TIME INTERVAL	0	0	0	0	2	1.50000E-02	1.75000E-02
TIME INTERVAL	0	0	0	0	2	1.75000E-02	4.30000E-01
TIME INTERVAL	0	0	0	0	2	4.30000E-01	1.85300E+00
TIME INTERVAL	0	0	0	0	2	1.85300E+00	1.98000E+00
TIME INTERVAL	0	0	0	0	2	1.98000E+00	2.00000E+00
TIME INTERVAL	0	0	0	0	2	2.00000E+00	2.10000E+00
DOSE PARAMS	0	0	0	0	7	0.00000E+00	3.47000E-04
3.10000E-05	3.47000E-04	5.76000E-04	3.47000E-04	1.00000E-01			
TIME INTERVAL	0	0	0	0	2	2.10000E+00	2.20000E+00

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TIME INTERVAL          0    0    0    0    2   2.20000E+00   2.30000E+00
TIME INTERVAL          0    0    0    0    2   2.30000E+00   2.40000E+00
TIME INTERVAL          0    0    0    0    2   2.40000E+00   2.50000E+00
TIME INTERVAL          0    0    0    0    2   2.50000E+00   2.60000E+00
TIME INTERVAL          0    0    0    0    2   2.60000E+00   2.70000E+00
TIME INTERVAL          0    0    0    0    2   2.70000E+00   2.80000E+00
TIME INTERVAL          0    0    0    0    2   2.80000E+00   2.90000E+00
TIME INTERVAL          0    0    0    0    2   2.90000E+00   3.00000E+00
TIME INTERVAL          0    0    0    0    2   3.00000E+00   3.50000E+00
TIME INTERVAL          0    0    0    0    2   3.50000E+00   4.00000E+00
TIME INTERVAL          0    0    0    0    2   4.00000E+00   4.50000E+00
TIME INTERVAL          0    0    0    0    2   4.50000E+00   5.00000E+00
TIME INTERVAL          0    0    0    0    2   5.00000E+00   5.50000E+00
TIME INTERVAL          0    0    0    0    2   5.50000E+00   6.00000E+00
TIME INTERVAL          0    0    0    0    2   6.00000E+00   6.50000E+00
TIME INTERVAL          0    0    0    0    2   6.50000E+00   7.00000E+00
TIME INTERVAL          0    0    0    0    2   7.00000E+00   7.50000E+00
TIME INTERVAL          0    0    0    0    2   7.50000E+00   8.00000E+00
DOSE PARAMS            0    0    0    0    7   0.00000E+00   3.47000E-04
 3.10000E-05   3.47000E-04   5.76000E-04   3.47000E-04   1.00000E-01
TIME INTERVAL          0    0    0    0    2   8.00000E+00   2.40000E+01
DOSE PARAMS            0    0    0    0    7   0.00000E+00   1.75000E-04


                         TIME DEPENDENT INPUT
                           CASE NUMBER   1


 3.60000E-06   1.75000E-04   2.56000E-04   3.47000E-04   1.00000E-01
TIME INTERVAL          0    0    0    0    2   2.40000E+01   2.41000E+01
TRANSFER PERCENT       0    0    0    1    1   5.00000E-02
CONTROL ROOM           0    0    0    0    5   1.00000E+01   3.33000E+02
 3.43000E+02   1.66700E+03   6.00000E-01
DOSE PARAMS            0    0    0    0    7   0.00000E+00   2.32000E-04
 2.30000E-06   2.32000E-04   1.68000E-04   3.47000E-04   5.00000E-02
TIME INTERVAL          0    0    0    0    2   2.41000E+01   2.42000E+01
TIME INTERVAL          0    0    0    0    2   2.42000E+01   2.43000E+01
TIME INTERVAL          0    0    0    0    2   2.43000E+01   2.44000E+01
TIME INTERVAL          0    0    0    0    2   2.44000E+01   2.45000E+01
TIME INTERVAL          0    0    0    0    2   2.45000E+01   2.46000E+01
TIME INTERVAL          0    0    0    0    2   2.46000E+01   2.47000E+01
TIME INTERVAL          0    0    0    0    2   2.47000E+01   2.48000E+01
TIME INTERVAL          0    0    0    0    2   2.48000E+01   2.49000E+01
TIME INTERVAL          0    0    0    0    2   2.49000E+01   2.50000E+01
TIME INTERVAL          0    0    0    0    2   2.50000E+01   2.51000E+01
TIME INTERVAL          0    0    0    0    2   2.51000E+01   2.52000E+01
TIME INTERVAL          0    0    0    0    2   2.52000E+01   2.53000E+01
TIME INTERVAL          0    0    0    0    2   2.53000E+01   2.54000E+01
TIME INTERVAL          0    0    0    0    2   2.54000E-01   2.55000E+01
TIME INTERVAL          0    0    0    0    2   2.55000E+01   2.56000E+01
TIME INTERVAL          0    0    0    0    2   2.56000E+01   2.57000E+01
TIME INTERVAL          0    0    0    0    2   2.57000E+01   2.58000E+01
TIME INTERVAL          0    0    0    0    2   2.58000E+01   2.59000E+01
TIME INTERVAL          0    0    0    0    2   2.59000E+01   2.60000E+01
TIME INTERVAL          0    0    0    0    2   2.60000E+01   2.61000E+01
TIME INTERVAL          0    0    0    0    2   2.61000E+01   2.62000E+01
TIME INTERVAL          0    0    0    0    2   2.62000E+01   2.63000E+01
TIME INTERVAL          0    0    0    0    2   2.63000E+01   2.64000E+01
TIME INTERVAL          0    0    0    0    2   2.64000E+01   2.65000E+01
TIME INTERVAL          0    0    0    0    2   2.65000E+01   2.66000E+01
TIME INTERVAL          0    0    0    0    2   2.66000E+01   9.60000E+01
TIME INTERVAL          0    0    0    0    2   9.60000E+01   7.20000E+02
CONTROL ROOM           0    0    0    0    5   1.00000E+01   3.33000E+02
 3.43000E+02   1.66700E+03   4.00000E-01
DOSE PARAMS            0    0    0    0    7   0.00000E+00   2.32000E-04
 1.40000E-06   2.32000E-04   1.25000E-04   3.47000E-04   5.00000E-02
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SUMMARY OF OFF-SITE DOSES

CEA Ejection Accident Containment Release, ICRP30A DATA
CALCULATION FOR WHOLEBDY DOSE (REMS)
SINGLE NODE CONTAINMENT WITH NO ESF

START TIME (HRS)	EXCLUSION RADIUS EACH STEP	EXCLUSION RADIUS ACCUM.	LOW POPULATION ZONE EACH STEP	LOW POPULATION ZONE ACCUM.	CONTROL ROOM EACH STEP	CONTROL ROOM ACCUM.
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.500E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.750E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.300E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.853E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.980E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.100E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.200E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.300E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.700E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.800E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.900E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.410E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.420E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.430E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.440E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.450E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.460E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.470E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.480E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.490E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.510E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.520E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.530E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.540E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.550E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.560E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.570E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.580E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.590E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.610E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.620E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.630E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.640E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.650E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.660E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
9.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	TOTAL	0.000E+00	TOTAL	0.000E+00	TOTAL	0.000E+00

CALCULATION FOR WHOLEBDY DOSE (REMS)

MULTI NODE CONTAINMENT WITH ESF

START TIME (HRS)	EXCLUSION RADIUS EACH STEP	EXCLUSION RADIUS ACCUM.	LOW POPULATION ZONE EACH STEP	LOW POPULATION ZONE ACCUM.	CONTROL ROOM EACH STEP	CONTROL ROOM ACCUM.
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	1.702E-03	1.702E-03	8.116E-05	8.116E-05	7.789E-08	7.789E-08
1.500E-02	2.822E-04	1.984E-03	1.346E-05	9.461E-05	2.795E-08	1.058E-07
1.750E-02	4.140E-02	4.338E-02	1.974E-03	2.069E-03	4.184E-05	4.195E-05
4.300E-01	9.805E-02	1.414E-01	4.676E-03	6.745E-03	3.177E-04	3.596E-04
1.853E+00	6.770E-03	1.482E-01	3.229E-04	7.068E-03	3.404E-05	3.936E-04
1.980E+00	1.045E-03	1.492E-01	4.985E-05	7.118E-03	5.321E-06	3.990E-04
2.000E+00	0.000E+00	1.492E-01	2.454E-04	7.363E-03	2.599E-05	4.250E-04
2.100E+00	0.000E+00	1.492E-01	2.392E-04	7.602E-03	2.492E-05	4.499E-04
2.200E+00	0.000E+00	1.492E-01	2.333E-04	7.836E-03	2.395E-05	4.738E-04
2.300E+00	0.000E+00	1.492E-01	2.277E-04	8.063E-03	2.308E-05	4.969E-04
2.400E+00	0.000E+00	1.492E-01	2.223E-04	8.286E-03	2.227E-05	5.192E-04
2.500E+00	0.000E+00	1.492E-01	2.173E-04	8.503E-03	2.153E-05	5.407E-04
2.600E+00	0.000E+00	1.492E-01	2.124E-04	8.715E-03	2.084E-05	5.615E-04
2.700E+00	0.000E+00	1.492E-01	2.077E-04	8.923E-03	2.019E-05	5.817E-04
2.800E+00	0.000E+00	1.492E-01	2.033E-04	9.126E-03	1.958E-05	6.013E-04
2.900E+00	0.000E+00	1.492E-01	1.991E-04	9.325E-03	1.900E-05	6.203E-04
3.000E+00	0.000E+00	1.492E-01	9.374E-04	1.026E-02	8.703E-05	7.073E-04
3.500E+00	0.000E+00	1.492E-01	8.538E-04	1.112E-02	7.599E-05	7.833E-04
4.000E+00	0.000E+00	1.492E-01	7.843E-04	1.190E-02	6.682E-05	8.502E-04
4.500E+00	0.000E+00	1.492E-01	7.254E-04	1.263E-02	5.909E-05	9.092E-04
5.000E+00	0.000E+00	1.492E-01	6.749E-04	1.330E-02	5.251E-05	9.618E-04
5.500E+00	0.000E+00	1.492E-01	6.309E-04	1.393E-02	4.685E-05	1.009E-03
6.000E+00	0.000E+00	1.492E-01	5.923E-04	1.452E-02	4.198E-05	1.051E-03
6.500E+00	0.000E+00	1.492E-01	5.580E-04	1.508E-02	3.774E-05	1.088E-03
7.000E+00	0.000E+00	1.492E-01	5.274E-04	1.561E-02	3.405E-05	1.122E-03
7.500E+00	0.000E+00	1.492E-01	4.999E-04	1.611E-02	3.082E-05	1.153E-03
8.000E+00	0.000E+00	1.492E-01	1.058E-03	1.717E-02	1.546E-04	1.308E-03
2.400E+01	0.000E+00	1.492E-01	1.319E-06	1.717E-02	4.956E-07	1.308E-03
2.410E+01	0.000E+00	1.492E-01	1.313E-06	1.717E-02	4.628E-07	1.309E-03
2.420E+01	0.000E+00	1.492E-01	1.308E-06	1.717E-02	4.340E-07	1.309E-03
2.430E+01	0.000E+00	1.492E-01	1.302E-06	1.717E-02	4.084E-07	1.310E-03
2.440E+01	0.000E+00	1.492E-01	1.297E-06	1.717E-02	3.854E-07	1.310E-03
2.450E+01	0.000E+00	1.492E-01	1.292E-06	1.718E-02	3.646E-07	1.310E-03
2.460E+01	0.000E+00	1.492E-01	1.287E-06	1.718E-02	3.457E-07	1.311E-03
2.470E+01	0.000E+00	1.492E-01	1.282E-06	1.718E-02	3.284E-07	1.311E-03
2.480E+01	0.000E+00	1.492E-01	1.277E-06	1.718E-02	3.124E-07	1.311E-03
2.490E+01	0.000E+00	1.492E-01	1.271E-06	1.718E-02	2.977E-07	1.312E-03
2.500E+01	0.000E+00	1.492E-01	1.266E-06	1.718E-02	2.841E-07	1.312E-03
2.510E+01	0.000E+00	1.492E-01	1.261E-06	1.718E-02	2.714E-07	1.312E-03
2.520E+01	0.000E+00	1.492E-01	1.256E-06	1.718E-02	2.596E-07	1.312E-03
2.530E+01	0.000E+00	1.492E-01	1.252E-06	1.719E-02	2.487E-07	1.313E-03
2.540E+01	0.000E+00	1.492E-01	1.247E-06	1.719E-02	2.384E-07	1.313E-03
2.550E+01	0.000E+00	1.492E-01	1.242E-06	1.719E-02	2.288E-07	1.313E-03
2.560E+01	0.000E+00	1.492E-01	1.237E-06	1.719E-02	2.198E-07	1.313E-03
2.570E+01	0.000E+00	1.492E-01	1.232E-06	1.719E-02	2.114E-07	1.314E-03
2.580E+01	0.000E+00	1.492E-01	1.228E-06	1.719E-02	2.035E-07	1.314E-03
2.590E+01	0.000E+00	1.492E-01	1.223E-06	1.719E-02	1.961E-07	1.314E-03
2.600E+01	0.000E+00	1.492E-01	1.218E-06	1.719E-02	1.891E-07	1.314E-03
2.610E+01	0.000E+00	1.492E-01	1.214E-06	1.720E-02	1.826E-07	1.314E-03
2.620E+01	0.000E+00	1.492E-01	1.209E-06	1.720E-02	1.764E-07	1.315E-03
2.630E+01	0.000E+00	1.492E-01	1.204E-06	1.720E-02	1.707E-07	1.315E-03
2.640E+01	0.000E+00	1.492E-01	1.200E-06	1.720E-02	1.652E-07	1.315E-03
2.650E+01	0.000E+00	1.492E-01	1.195E-06	1.720E-02	1.601E-07	1.315E-03
2.660E+01	0.000E+00	1.492E-01	4.168E-04	1.762E-02	3.129E-05	1.346E-03
9.600E+01	0.000E+00	1.492E-01	4.564E-04	1.807E-02	2.073E-05	1.367E-03
	TOTAL	1.492E-01	TOTAL	1.807E-02	TOTAL	1.367E-03

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SUMMARY OF OFF-SITE DOSES

CEA Ejection Accident Containment Release, ICRP30A DATA
CALCULATION FOR SKIN-B DOSE (REMS)
SINGLE NODE CONTAINMENT WITH NO ESF

START TIME (HRS)	EXCLUSION RADIUS EACH STEP	EXCLUSION RADIUS ACCUM.	LOW POPULATION ZONE EACH STEP	LOW POPULATION ZONE ACCUM.	CONTROL ROOM EACH STEP	CONTROL ROOM ACCUM.
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.500E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.750E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.300E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.853E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.980E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.100E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.200E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.300E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.700E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.800E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.900E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.410E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.420E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.430E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.440E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.450E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.460E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.470E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.480E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.490E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.510E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.520E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.530E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.540E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.550E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.560E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.570E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.580E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.590E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.610E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.620E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.630E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.640E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.650E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.660E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	TOTAL	0.000E+00	TOTAL	0.000E+00	TOTAL	0.000E+00

CALCULATION FOR SKIN-B DOSE (REMS)
MULTI NODE CONTAINMENT WITH ESF

START TIME	EXCLUSION RADIUS EACH	EXCLUSION RADIUS ACCUM.	LOW POPULATION ZONE EACH	LOW POPULATION ZONE ACCUM.	CONTROL ROOM EACH	CONTROL ROOM ACCUM.

HRS)	STEP		STEP		STEP	
1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	8.590E-04	8.590E-04	4.097E-05	4.097E-05	2.113E-06	2.113E-06
1.500E-02	1.424E-04	1.001E-03	6.791E-06	4.776E-05	7.588E-07	2.872E-06
1.750E-02	2.074E-02	2.174E-02	9.890E-04	1.037E-03	1.185E-03	1.188E-03
4.300E-01	4.982E-02	7.156E-02	2.376E-03	3.413E-03	9.821E-03	1.101E-02
1.853E+00	3.566E-03	7.512E-02	1.701E-04	3.583E-03	1.090E-03	1.210E-02
1.980E+00	5.527E-04	7.568E-02	2.636E-05	3.609E-03	1.713E-04	1.227E-02
1.000E+00	0.000E+00	7.568E-02	1.301E-04	3.739E-03	8.417E-04	1.311E-02
1.100E+00	0.000E+00	7.568E-02	1.275E-04	3.867E-03	8.143E-04	1.393E-02
1.200E+00	0.000E+00	7.568E-02	1.250E-04	3.992E-03	7.896E-04	1.472E-02
1.300E+00	0.000E+00	7.568E-02	1.226E-04	4.114E-03	7.671E-04	1.548E-02
1.400E+00	0.000E+00	7.568E-02	1.204E-04	4.235E-03	7.465E-04	1.623E-02
1.500E+00	0.000E+00	7.568E-02	1.182E-04	4.353E-03	7.274E-04	1.696E-02
1.600E+00	0.000E+00	7.568E-02	1.162E-04	4.469E-03	7.098E-04	1.767E-02
1.700E+00	0.000E+00	7.568E-02	1.142E-04	4.583E-03	6.933E-04	1.836E-02
1.800E+00	0.000E+00	7.568E-02	1.124E-04	4.696E-03	6.779E-04	1.904E-02
1.900E+00	0.000E+00	7.568E-02	1.106E-04	4.806E-03	6.634E-04	1.970E-02
3.000E+00	0.000E+00	7.568E-02	5.289E-04	5.335E-03	3.123E-03	2.282E-02
3.500E+00	0.000E+00	7.568E-02	4.943E-04	5.829E-03	2.866E-03	2.569E-02
4.000E+00	0.000E+00	7.568E-02	4.658E-04	6.295E-03	2.664E-03	2.835E-02
4.500E+00	0.000E+00	7.568E-02	4.418E-04	6.737E-03	2.504E-03	3.086E-02
5.000E+00	0.000E+00	7.568E-02	4.214E-04	7.159E-03	2.374E-03	3.323E-02
5.500E+00	0.000E+00	7.568E-02	4.037E-04	7.562E-03	2.269E-03	3.550E-02
6.000E+00	0.000E+00	7.568E-02	3.882E-04	7.950E-03	2.181E-03	3.768E-02
6.500E+00	0.000E+00	7.568E-02	3.744E-04	8.325E-03	2.108E-03	3.979E-02
7.000E+00	0.000E+00	7.568E-02	3.621E-04	8.687E-03	2.046E-03	4.184E-02
7.500E+00	0.000E+00	7.568E-02	3.509E-04	9.038E-03	1.993E-03	4.383E-02
8.000E+00	0.000E+00	7.568E-02	9.432E-04	9.981E-03	2.465E-02	6.848E-02
2.400E+01	0.000E+00	7.568E-02	1.458E-06	9.983E-03	8.322E-05	6.857E-02
2.410E+01	0.000E+00	7.568E-02	1.455E-06	9.984E-03	8.005E-05	6.865E-02
2.420E+01	0.000E+00	7.568E-02	1.451E-06	9.986E-03	7.709E-05	6.872E-02
2.430E+01	0.000E+00	7.568E-02	1.448E-06	9.987E-03	7.431E-05	6.880E-02
2.440E+01	0.000E+00	7.568E-02	1.444E-06	9.988E-03	7.170E-05	6.887E-02
2.450E+01	0.000E+00	7.568E-02	1.441E-06	9.990E-03	6.923E-05	6.894E-02
2.460E+01	0.000E+00	7.568E-02	1.437E-06	9.991E-03	6.691E-05	6.901E-02
2.470E+01	0.000E+00	7.568E-02	1.434E-06	9.993E-03	6.471E-05	6.907E-02
2.480E+01	0.000E+00	7.568E-02	1.431E-06	9.994E-03	6.264E-05	6.913E-02
2.490E+01	0.000E+00	7.568E-02	1.427E-06	9.996E-03	6.067E-05	6.919E-02
2.500E+01	0.000E+00	7.568E-02	1.424E-06	9.997E-03	5.881E-05	6.925E-02
2.510E+01	0.000E+00	7.568E-02	1.421E-06	9.998E-03	5.705E-05	6.931E-02
2.520E+01	0.000E+00	7.568E-02	1.417E-06	1.000E-02	5.538E-05	6.936E-02
2.530E+01	0.000E+00	7.568E-02	1.414E-06	1.000E-02	5.380E-05	6.942E-02
2.540E+01	0.000E+00	7.568E-02	1.411E-06	1.000E-02	5.230E-05	6.947E-02
2.550E+01	0.000E+00	7.568E-02	1.407E-06	1.000E-02	5.088E-05	6.952E-02
2.560E+01	0.000E+00	7.568E-02	1.404E-06	1.001E-02	4.953E-05	6.957E-02
2.570E+01	0.000E+00	7.568E-02	1.401E-06	1.001E-02	4.825E-05	6.962E-02
2.580E+01	0.000E+00	7.568E-02	1.398E-06	1.001E-02	4.703E-05	6.967E-02
2.590E+01	0.000E+00	7.568E-02	1.395E-06	1.001E-02	4.588E-05	6.971E-02
2.600E+01	0.000E+00	7.568E-02	1.391E-06	1.001E-02	4.479E-05	6.976E-02
2.610E+01	0.000E+00	7.568E-02	1.388E-06	1.001E-02	4.375E-05	6.980E-02
2.620E+01	0.000E+00	7.568E-02	1.385E-06	1.001E-02	4.276E-05	6.984E-02
2.630E+01	0.000E+00	7.568E-02	1.382E-06	1.002E-02	4.183E-05	6.989E-02
2.640E+01	0.000E+00	7.568E-02	1.379E-06	1.002E-02	4.094E-05	6.993E-02
2.650E+01	0.000E+00	7.568E-02	1.376E-06	1.002E-02	4.010E-05	6.997E-02
2.660E+01	0.000E+00	7.568E-02	5.959E-04	1.061E-02	1.395E-02	8.392E-02
3.600E+01	0.000E+00	7.568E-02	1.360E-03	1.197E-02	3.980E-02	1.237E-01
	TOTAL	7.568E-02	TOTAL	1.197E-02	TOTAL	1.237E-01

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SUMMARY OF OFF-SITE DOSES

CEA Ejection Accident Containment Release, ICRP30A DATA
CALCULATION FOR THYROID DOSE (REMS)
SINGLE NODE CONTAINMENT WITH NO ESF

START TIME (HRS)	EXCLUSION RADIUS EACH STEP	EXCLUSION RADIUS ACCUM.	LOW POPULATION ZONE EACH STEP	LOW POPULATION ZONE ACCUM.	CONTROL ROOM EACH STEP	CONTROL ROOM ACCUM.
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.500E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.750E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.300E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.853E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.980E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.100E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.200E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.300E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.700E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.800E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.900E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.410E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.420E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.430E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.440E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.450E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.460E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.470E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.480E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.490E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.510E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.520E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.530E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.540E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.550E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.560E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.570E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.580E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.590E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.610E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.620E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.630E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.640E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.650E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.660E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
9.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
		TOTAL 0.000E+00		TOTAL 0.000E+00		TOTAL 0.000E+00

CALCULATION FOR THYROID DOSE (REMS)
MULTI NODE CONTAINMENT WITH ESF

START TIME (HRS)	EXCLUSION RADIUS EACH STEP	EXCLUSION RADIUS ACCUM.	LOW POPULATION ZONE EACH STEP	LOW POPULATION ZONE ACCUM.	CONTROL ROOM EACH STEP	CONTROL ROOM ACCUM.
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	3.257E-01	3.257E-01	1.553E-02	1.553E-02	7.231E-05	7.231E-05

1.500E-02	5.431E-02	3.800E-01	2.590E-03	1.812E-02	2.589E-05	9.820E-05
1.750E-02	8.929E+00	9.309E+00	4.258E-01	4.440E-01	4.126E-02	4.136E-02
4.300E-01	3.034E+01	3.965E+01	1.447E+00	1.891E+00	2.951E-01	3.365E-01
1.853E+00	2.676E+00	4.233E+01	1.276E-01	2.019E+00	2.786E-02	3.643E-01
1.980E+00	4.209E-01	4.275E+01	2.008E-02	2.039E+00	4.381E-03	3.687E-01
2.000E+00	0.000E+00	4.275E+01	1.003E-01	2.139E+00	2.070E-02	3.894E-01
2.100E+00	0.000E+00	4.275E+01	1.001E-01	2.239E+00	1.871E-02	4.081E-01
2.200E+00	0.000E+00	4.275E+01	9.999E-02	2.339E+00	1.722E-02	4.253E-01
2.300E+00	0.000E+00	4.275E+01	9.984E-02	2.439E+00	1.610E-02	4.414E-01
2.400E+00	0.000E+00	4.275E+01	9.970E-02	2.539E+00	1.526E-02	4.567E-01
2.500E+00	0.000E+00	4.275E+01	9.956E-02	2.638E+00	1.463E-02	4.713E-01
2.600E+00	0.000E+00	4.275E+01	9.941E-02	2.738E+00	1.415E-02	4.855E-01
2.700E+00	0.000E+00	4.275E+01	9.927E-02	2.837E+00	1.378E-02	4.992E-01
2.800E+00	0.000E+00	4.275E+01	9.913E-02	2.936E+00	1.351E-02	5.128E-01
2.900E+00	0.000E+00	4.275E+01	9.899E-02	3.035E+00	1.330E-02	5.261E-01
3.000E+00	0.000E+00	4.275E+01	4.929E-01	3.528E+00	6.463E-02	5.907E-01
3.500E+00	0.000E+00	4.275E+01	4.895E-01	4.018E+00	6.322E-02	6.539E-01
4.000E+00	0.000E+00	4.275E+01	4.862E-01	4.504E+00	6.257E-02	7.165E-01
4.500E+00	0.000E+00	4.275E+01	4.830E-01	4.987E+00	6.211E-02	7.786E-01
5.000E+00	0.000E+00	4.275E+01	4.799E-01	5.467E+00	6.170E-02	8.403E-01
5.500E+00	0.000E+00	4.275E+01	4.768E-01	5.943E+00	6.130E-02	9.016E-01
6.000E+00	0.000E+00	4.275E+01	4.739E-01	6.417E+00	6.092E-02	9.625E-01
6.500E+00	0.000E+00	4.275E+01	4.710E-01	6.888E+00	6.055E-02	1.023E+00
7.000E+00	0.000E+00	4.275E+01	4.681E-01	7.356E+00	6.018E-02	1.083E+00
7.500E+00	0.000E+00	4.275E+01	4.654E-01	7.822E+00	5.983E-02	1.143E+00
8.000E+00	0.000E+00	4.275E+01	8.018E-01	8.624E+00	7.796E-01	1.923E+00
2.400E+01	0.000E+00	4.275E+01	1.970E-03	8.626E+00	2.655E-03	1.925E+00
2.410E+01	0.000E+00	4.275E+01	1.969E-03	8.628E+00	2.211E-03	1.928E+00
2.420E+01	0.000E+00	4.275E+01	1.967E-03	8.629E+00	1.879E-03	1.929E+00
2.430E+01	0.000E+00	4.275E+01	1.965E-03	8.631E+00	1.629E-03	1.931E+00
2.440E+01	0.000E+00	4.275E+01	1.964E-03	8.633E+00	1.443E-03	1.933E+00
2.450E+01	0.000E+00	4.275E+01	1.962E-03	8.635E+00	1.303E-03	1.934E+00
2.460E+01	0.000E+00	4.275E+01	1.961E-03	8.637E+00	1.198E-03	1.935E+00
2.470E+01	0.000E+00	4.275E+01	1.959E-03	8.639E+00	1.120E-03	1.936E+00
2.480E+01	0.000E+00	4.275E+01	1.958E-03	8.641E+00	1.061E-03	1.937E+00
2.490E+01	0.000E+00	4.275E+01	1.956E-03	8.643E+00	1.017E-03	1.938E+00
2.500E+01	0.000E+00	4.275E+01	1.954E-03	8.645E+00	9.833E-04	1.939E+00
2.510E+01	0.000E+00	4.275E+01	1.953E-03	8.647E+00	9.582E-04	1.940E+00
2.520E+01	0.000E+00	4.275E+01	1.951E-03	8.649E+00	9.392E-04	1.941E+00
2.530E+01	0.000E+00	4.275E+01	1.950E-03	8.651E+00	9.248E-04	1.942E+00
2.540E+01	0.000E+00	4.275E+01	1.948E-03	8.653E+00	9.139E-04	1.943E+00
2.550E+01	0.000E+00	4.275E+01	1.947E-03	8.655E+00	9.056E-04	1.944E+00
2.560E+01	0.000E+00	4.275E+01	1.945E-03	8.657E+00	8.991E-04	1.945E+00
2.570E+01	0.000E+00	4.275E+01	1.943E-03	8.659E+00	8.941E-04	1.946E+00
2.580E+01	0.000E+00	4.275E+01	1.942E-03	8.661E+00	8.903E-04	1.947E+00
2.590E+01	0.000E+00	4.275E+01	1.940E-03	8.663E+00	8.872E-04	1.947E+00
2.600E+01	0.000E+00	4.275E+01	1.939E-03	8.665E+00	8.847E-04	1.948E+00
2.610E+01	0.000E+00	4.275E+01	1.937E-03	8.667E+00	8.826E-04	1.949E+00
2.620E+01	0.000E+00	4.275E+01	1.936E-03	8.669E+00	8.809E-04	1.950E+00
2.630E+01	0.000E+00	4.275E+01	1.934E-03	8.670E+00	8.795E-04	1.951E+00
2.640E+01	0.000E+00	4.275E+01	1.933E-03	8.672E+00	8.782E-04	1.952E+00
2.650E+01	0.000E+00	4.275E+01	1.931E-03	8.674E+00	8.771E-04	1.953E+00
2.660E+01	0.000E+00	4.275E+01	1.095E+00	9.769E+00	4.957E-01	2.448E+00
9.600E+01	0.000E+00	4.275E+01	1.968E+00	1.174E+01	7.266E-01	3.175E+00
	TOTAL	4.275E+01	TOTAL	1.174E+01	TOTAL	3.175E+00

SUMMARY OF OFF-SITE DOSES

CEA Ejection Accident Containment Release, ICRP30A DATA
CALCULATION FOR SKIN-G DOSE (REMS)
SINGLE NODE CONTAINMENT WITH NO ESF

START TIME (HRS)	EXCLUSION RADIUS EACH STEP	EXCLUSION RADIUS ACCUM.	LOW POPULATION ZONE EACH STEP	LOW POPULATION ZONE ACCUM.	CONTROL ROOM EACH STEP	CONTROL ROOM ACCUM.

0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.500E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.750E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.300E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.853E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.980E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.100E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.200E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.300E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.700E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.800E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.900E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.410E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.420E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.430E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.440E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.450E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.460E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.470E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.480E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.490E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.510E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.520E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.530E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.540E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.550E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.560E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.570E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.580E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.590E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.610E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.620E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.630E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.640E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.650E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.660E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	TOTAL	0.000E+00	TOTAL	0.000E+00	TOTAL	0.000E+00

CALCULATION FOR SKIN-G DOSE (REMS)
MULTI NODE CONTAINMENT WITH ESF

START TIME (HRS)	EXCLUSION RADIUS EACH STEP	EXCLUSION RADIUS ACCUM.	LOW POPULATION ZONE EACH STEP	LOW POPULATION ZONE ACCUM.	CONTROL ROOM EACH STEP	CONTROL ROOM ACCUM.
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	2.413E-03	2.413E-03	1.151E-04	1.151E-04	1.091E-07	1.091E-07
1.500E-02	4.003E-04	2.814E-03	1.909E-05	1.342E-04	3.913E-08	1.482E-07
1.750E-02	5.873E-02	6.155E-02	2.801E-03	2.935E-03	5.855E-05	5.870E-05
4.300E-01	1.392E-01	2.007E-01	6.639E-03	9.574E-03	4.444E-04	5.031E-04

1.853E+00	9.613E-03	2.104E-01	4.584E-04	1.003E-02	4.764E-05	5.508E-04
1.980E+00	1.484E-03	2.118E-01	7.079E-05	1.010E-02	7.448E-06	5.582E-04
2.000E+00	0.000E+00	2.118E-01	3.485E-04	1.045E-02	3.638E-05	5.946E-04
2.100E+00	0.000E+00	2.118E-01	3.397E-04	1.079E-02	3.488E-05	6.295E-04
2.200E+00	0.000E+00	2.118E-01	3.313E-04	1.112E-02	3.353E-05	6.630E-04
2.300E+00	0.000E+00	2.118E-01	3.233E-04	1.145E-02	3.231E-05	6.953E-04
2.400E+00	0.000E+00	2.118E-01	3.157E-04	1.176E-02	3.119E-05	7.265E-04
2.500E+00	0.000E+00	2.118E-01	3.085E-04	1.207E-02	3.016E-05	7.567E-04
2.600E+00	0.000E+00	2.118E-01	3.016E-04	1.237E-02	2.919E-05	7.858E-04
2.700E+00	0.000E+00	2.118E-01	2.950E-04	1.267E-02	2.829E-05	8.141E-04
2.800E+00	0.000E+00	2.118E-01	2.887E-04	1.296E-02	2.744E-05	8.416E-04
2.900E+00	0.000E+00	2.118E-01	2.827E-04	1.324E-02	2.663E-05	8.682E-04
3.000E+00	0.000E+00	2.118E-01	1.331E-03	1.457E-02	1.221E-04	9.903E-04
3.500E+00	0.000E+00	2.118E-01	1.213E-03	1.578E-02	1.067E-04	1.097E-03
4.000E+00	0.000E+00	2.118E-01	1.114E-03	1.690E-02	9.395E-05	1.191E-03
4.500E+00	0.000E+00	2.118E-01	1.031E-03	1.793E-02	8.319E-05	1.274E-03
5.000E+00	0.000E+00	2.118E-01	9.595E-04	1.889E-02	7.403E-05	1.348E-03
5.500E+00	0.000E+00	2.118E-01	8.972E-04	1.978E-02	6.617E-05	1.414E-03
6.000E+00	0.000E+00	2.118E-01	8.426E-04	2.063E-02	5.938E-05	1.474E-03
6.500E+00	0.000E+00	2.118E-01	7.941E-04	2.142E-02	5.349E-05	1.527E-03
7.000E+00	0.000E+00	2.118E-01	7.507E-04	2.217E-02	4.835E-05	1.576E-03
7.500E+00	0.000E+00	2.118E-01	7.117E-04	2.288E-02	4.386E-05	1.619E-03
8.000E+00	0.000E+00	2.118E-01	1.512E-03	2.440E-02	2.286E-04	1.848E-03
2.400E+01	0.000E+00	2.118E-01	1.890E-06	2.440E-02	7.348E-07	1.849E-03
2.410E+01	0.000E+00	2.118E-01	1.883E-06	2.440E-02	6.874E-07	1.849E-03
2.420E+01	0.000E+00	2.118E-01	1.875E-06	2.440E-02	6.456E-07	1.850E-03
2.430E+01	0.000E+00	2.118E-01	1.868E-06	2.440E-02	6.083E-07	1.851E-03
2.440E+01	0.000E+00	2.118E-01	1.860E-06	2.440E-02	5.749E-07	1.851E-03
2.450E+01	0.000E+00	2.118E-01	1.853E-06	2.441E-02	5.446E-07	1.852E-03
2.460E+01	0.000E+00	2.118E-01	1.845E-06	2.441E-02	5.170E-07	1.852E-03
2.470E+01	0.000E+00	2.118E-01	1.838E-06	2.441E-02	4.916E-07	1.853E-03
2.480E+01	0.000E+00	2.118E-01	1.831E-06	2.441E-02	4.683E-07	1.853E-03
2.490E+01	0.000E+00	2.118E-01	1.823E-06	2.441E-02	4.468E-07	1.854E-03
2.500E+01	0.000E+00	2.118E-01	1.816E-06	2.442E-02	4.268E-07	1.854E-03
2.510E+01	0.000E+00	2.118E-01	1.809E-06	2.442E-02	4.083E-07	1.855E-03
2.520E+01	0.000E+00	2.118E-01	1.802E-06	2.442E-02	3.910E-07	1.855E-03
2.530E+01	0.000E+00	2.118E-01	1.795E-06	2.442E-02	3.748E-07	1.855E-03
2.540E+01	0.000E+00	2.118E-01	1.788E-06	2.442E-02	3.598E-07	1.856E-03
2.550E+01	0.000E+00	2.118E-01	1.781E-06	2.442E-02	3.456E-07	1.856E-03
2.560E+01	0.000E+00	2.118E-01	1.774E-06	2.443E-02	3.324E-07	1.856E-03
2.570E+01	0.000E+00	2.118E-01	1.767E-06	2.443E-02	3.200E-07	1.857E-03
2.580E+01	0.000E+00	2.118E-01	1.761E-06	2.443E-02	3.084E-07	1.857E-03
2.590E+01	0.000E+00	2.118E-01	1.754E-06	2.443E-02	2.974E-07	1.857E-03
2.600E+01	0.000E+00	2.118E-01	1.747E-06	2.443E-02	2.872E-07	1.858E-03
2.610E+01	0.000E+00	2.118E-01	1.741E-06	2.444E-02	2.775E-07	1.858E-03
2.620E+01	0.000E+00	2.118E-01	1.734E-06	2.444E-02	2.684E-07	1.858E-03
2.630E+01	0.000E+00	2.118E-01	1.728E-06	2.444E-02	2.599E-07	1.858E-03
2.640E+01	0.000E+00	2.118E-01	1.721E-06	2.444E-02	2.518E-07	1.859E-03
2.650E+01	0.000E+00	2.118E-01	1.715E-06	2.444E-02	2.443E-07	1.859E-03
2.660E+01	0.000E+00	2.118E-01	5.988E-04	2.504E-02	4.953E-05	1.908E-03
9.600E+01	0.000E+00	2.118E-01	6.512E-04	2.569E-02	3.159E-05	1.940E-03
	TOTAL	2.118E-01	TOTAL	2.569E-02	TOTAL	1.940E-03

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SUMMARY OF OFF-SITE DOSES

CEA Ejection Accident Containment Release, ICRP30A DATA
CALCULATION FOR SKIN-T DOSE (REMS)
SINGLE NODE CONTAINMENT WITH NO ESF

START	EXCLUSION RADIUS		LOW POPULATION ZONE		CONTROL ROOM	
TIME	EACH	ACCUM.	EACH	ACCUM.	EACH	ACCUM.
(HRS)	STEP		STEP		STEP	
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.500E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

1.750E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.300E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.853E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.980E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.100E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.200E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.300E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.700E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.800E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.900E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
3.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
4.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
5.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
6.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
7.500E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.400E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.410E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.420E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.430E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.440E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.450E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.460E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.470E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.480E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.490E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.500E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.510E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.520E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.530E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.540E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.550E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.560E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.570E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.580E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.590E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.610E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.620E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.630E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.640E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.650E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.660E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
9.600E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	TOTAL	0.000E+00	TOTAL	0.000E+00	TOTAL	0.000E+00

CALCULATION FOR SKIN-T DOSE (REMS)
MULTI NODE CONTAINMENT WITH ESF

START	EXCLUSION RADIUS		LOW POPULATION ZONE		CONTROL ROOM	
TIME (HRS)	EACH STEP	ACCUM.	EACH STEP	ACCUM.	EACH STEP	ACCUM.
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E-05	3.272E-03	3.272E-03	1.561E-04	1.561E-04	2.222E-06	2.222E-06
1.500E-02	5.427E-04	3.815E-03	2.588E-05	1.819E-04	7.979E-07	3.020E-06
1.750E-02	7.947E-02	8.328E-02	3.790E-03	3.972E-03	1.243E-03	1.246E-03
4.300E-01	1.890E-01	2.723E-01	9.015E-03	1.299E-02	1.027E-02	1.151E-02
1.853E+00	1.318E-02	2.855E-01	6.285E-04	1.362E-02	1.137E-03	1.265E-02
1.980E+00	2.037E-03	2.875E-01	9.715E-05	1.371E-02	1.788E-04	1.283E-02
2.000E+00	0.000E+00	2.875E-01	4.786E-04	1.419E-02	8.781E-04	1.371E-02

2.100E+00	0.000E+00	2.875E-01	4.671E-04	1.466E-02	8.492E-04	1.456E-02
2.200E+00	0.000E+00	2.875E-01	4.563E-04	1.511E-02	8.232E-04	1.538E-02
2.300E+00	0.000E+00	2.875E-01	4.459E-04	1.556E-02	7.994E-04	1.618E-02
2.400E+00	0.000E+00	2.875E-01	4.361E-04	1.600E-02	7.777E-04	1.696E-02
2.500E+00	0.000E+00	2.875E-01	4.267E-04	1.642E-02	7.576E-04	1.771E-02
2.600E+00	0.000E+00	2.875E-01	4.178E-04	1.684E-02	7.389E-04	1.845E-02
2.700E+00	0.000E+00	2.875E-01	4.093E-04	1.725E-02	7.216E-04	1.917E-02
2.800E+00	0.000E+00	2.875E-01	4.011E-04	1.765E-02	7.053E-04	1.988E-02
2.900E+00	0.000E+00	2.875E-01	3.933E-04	1.804E-02	6.900E-04	2.057E-02
3.000E+00	0.000E+00	2.875E-01	1.860E-03	1.990E-02	3.246E-03	2.381E-02
3.500E+00	0.000E+00	2.875E-01	1.707E-03	2.161E-02	2.972E-03	2.679E-02
4.000E+00	0.000E+00	2.875E-01	1.580E-03	2.319E-02	2.758E-03	2.955E-02
4.500E+00	0.000E+00	2.875E-01	1.473E-03	2.467E-02	2.587E-03	3.213E-02
5.000E+00	0.000E+00	2.875E-01	1.381E-03	2.605E-02	2.448E-03	3.458E-02
5.500E+00	0.000E+00	2.875E-01	1.301E-03	2.735E-02	2.335E-03	3.692E-02
6.000E+00	0.000E+00	2.875E-01	1.231E-03	2.858E-02	2.241E-03	3.916E-02
6.500E+00	0.000E+00	2.875E-01	1.169E-03	2.975E-02	2.161E-03	4.132E-02
7.000E+00	0.000E+00	2.875E-01	1.113E-03	3.086E-02	2.094E-03	4.341E-02
7.500E+00	0.000E+00	2.875E-01	1.063E-03	3.192E-02	2.037E-03	4.545E-02
8.000E+00	0.000E+00	2.875E-01	2.455E-03	3.438E-02	2.488E-02	7.033E-02
2.400E+01	0.000E+00	2.875E-01	3.349E-06	3.438E-02	8.395E-05	7.041E-02
2.410E+01	0.000E+00	2.875E-01	3.337E-06	3.438E-02	8.074E-05	7.050E-02
2.420E+01	0.000E+00	2.875E-01	3.326E-06	3.439E-02	7.774E-05	7.057E-02
2.430E+01	0.000E+00	2.875E-01	3.315E-06	3.439E-02	7.492E-05	7.065E-02
2.440E+01	0.000E+00	2.875E-01	3.304E-06	3.439E-02	7.227E-05	7.072E-02
2.450E+01	0.000E+00	2.875E-01	3.293E-06	3.440E-02	6.978E-05	7.079E-02
2.460E+01	0.000E+00	2.875E-01	3.283E-06	3.440E-02	6.743E-05	7.086E-02
2.470E+01	0.000E+00	2.875E-01	3.272E-06	3.440E-02	6.520E-05	7.092E-02
2.480E+01	0.000E+00	2.875E-01	3.261E-06	3.441E-02	6.311E-05	7.099E-02
2.490E+01	0.000E+00	2.875E-01	3.251E-06	3.441E-02	6.112E-05	7.105E-02
2.500E+01	0.000E+00	2.875E-01	3.240E-06	3.441E-02	5.924E-05	7.111E-02
2.510E+01	0.000E+00	2.875E-01	3.230E-06	3.442E-02	5.746E-05	7.116E-02
2.520E+01	0.000E+00	2.875E-01	3.219E-06	3.442E-02	5.577E-05	7.122E-02
2.530E+01	0.000E+00	2.875E-01	3.209E-06	3.442E-02	5.417E-05	7.127E-02
2.540E+01	0.000E+00	2.875E-01	3.199E-06	3.443E-02	5.266E-05	7.133E-02
2.550E+01	0.000E+00	2.875E-01	3.189E-06	3.443E-02	5.122E-05	7.138E-02
2.560E+01	0.000E+00	2.875E-01	3.178E-06	3.443E-02	4.986E-05	7.143E-02
2.570E+01	0.000E+00	2.875E-01	3.168E-06	3.444E-02	4.857E-05	7.148E-02
2.580E+01	0.000E+00	2.875E-01	3.158E-06	3.444E-02	4.734E-05	7.152E-02
2.590E+01	0.000E+00	2.875E-01	3.149E-06	3.444E-02	4.618E-05	7.157E-02
2.600E+01	0.000E+00	2.875E-01	3.139E-06	3.444E-02	4.507E-05	7.161E-02
2.610E+01	0.000E+00	2.875E-01	3.129E-06	3.445E-02	4.403E-05	7.166E-02
2.620E+01	0.000E+00	2.875E-01	3.119E-06	3.445E-02	4.303E-05	7.170E-02
2.630E+01	0.000E+00	2.875E-01	3.110E-06	3.445E-02	4.209E-05	7.174E-02
2.640E+01	0.000E+00	2.875E-01	3.100E-06	3.446E-02	4.119E-05	7.178E-02
2.650E+01	0.000E+00	2.875E-01	3.091E-06	3.446E-02	4.034E-05	7.183E-02
2.660E+01	0.000E+00	2.875E-01	1.195E-03	3.566E-02	1.400E-02	8.582E-02
9.600E+01	0.000E+00	2.875E-01	2.011E-03	3.767E-02	3.984E-02	1.257E-01
	TOTAL	2.875E-01	TOTAL	3.767E-02	TOTAL	1.257E-01

1 NO MORE CASES

END OF EXECUTION

I, Philip W. Richardson, depose and say that I am the Licensing Project Manager, Windsor Nuclear Licensing, of Westinghouse Electric Company LLC (WEC), duly authorized to make this affidavit, and have reviewed or caused to have reviewed the information which is identified as proprietary and described below.

I am submitting this affidavit in conjunction with the application by Entergy Operations Incorporated and in conformance with the provisions of 10 CFR 2.790 of the Commission's regulations for withholding this information. I have personal knowledge of the criteria and procedures utilized by WEC in designating information as a trade secret, privileged, or as confidential commercial or financial information.

The information for which proprietary treatment is sought, and which document has been appropriately designated as proprietary, is contained in the following:

- A-AN-FE-0233, Rev. 004, (ANO-2 Document Number 98-E-0036-04), "ANO-2 Radiological Dose Analysis for RSG and Power Uprate," November 27, 2000

Pursuant to the provisions of Section 2.790(b)(4) of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information included in the document listed above should be withheld from public disclosure.

i. The information sought to be withheld from public disclosure is owned and has been held in confidence by WEC. It consists of information concerning the evaluation of radiological consequences associated with non – Loss of Coolant Accident transient analyses for Arkansas Nuclear One, Unit 2 (ANO-2).

ii. The information consists of test data or other similar data concerning a process, method or component, the application of which results in substantial competitive advantage to WEC.

iii. The information is of a type customarily held in confidence by WEC and not customarily disclosed to the public.

iv. The information is being transmitted to the Commission in confidence under the provisions of 10 CFR 2.790 with the understanding that it is to be received in confidence by the Commission.

v. The information, to the best of my knowledge and belief, is not available in public sources, and any disclosure to third parties has been made pursuant to regulatory provisions or proprietary agreements that provide for maintenance of the information in confidence.

vi. Public disclosure of the information is likely to cause substantial harm to the competitive position of WEC because:

   a. A similar product is manufactured and sold by major competitors of WEC.

   b. Development of this information by WEC required tens of thousands of dollars and hundreds of manhours of effort. A competitor would have to undergo similar expense in generating equivalent information. In order to acquire such information, a competitor would also require considerable time and inconvenience to develop radiological

consequences associated with non – Loss of Coolant Accident transient analyses for ANO-2.

c. The information consists of technical data and details concerning the development of radiological consequences associated with non – Loss of Coolant Accident transient analyses for ANO-2, the application of which provides WEC a competitive economic advantage. The availability of such information to competitors would enable them to design their product to better compete with WEC, take marketing or other actions to improve their product's position or impair the position of WEC's product, and avoid developing similar technical analysis in support of their processes, methods or apparatus.

d. In pricing WEC's products and services, significant research, development, engineering, analytical, manufacturing, licensing, quality assurance and other costs and expenses must be included. The ability of WEC's competitors to utilize such information without similar expenditure of resources may enable them to sell at prices reflecting significantly lower costs.

e. Use of the information by competitors in the international marketplace would increase their ability to market comparable analytical services by reducing the costs associated with their technology development. In addition, disclosure would have an adverse economic impact on WEC's potential for obtaining or maintaining foreign licenses.

Philip W. Richardson
Licensing Project Manager

Sworn to before me this 15th day of June, 2001.

Laurie J. White
Notary Public

My Commission expires: 8/31/04