



52-001

GE NUCLEAR ENERGY  
Advanced Reactor Programs

Date: July 9, 1992

To: Bob Palla, 504-1095 1054

This page plus 2 pages

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Subject: PRA Consequence Analysis - Backup Evaluations

Message:

The following tables contain the bin sorting used to produce Table 1-1 of the 30 June 92 Fax to you. Table 1 shows the raw data in a sorted form which was binned by me into the nine consequence cases. Please note that these cases are binned primarily by CsI and CsOH release fractions.

Table 2 was then produced from Table 1 by binning the first six events under Case 1, the next two under Case 2, etc. as is shown in your original Table 1-1.

Table 3 converts the CsI and CsOH releases from the MAAP code into pure I and Cs releases for use in the CRAC 2 code.

Finally Table 4 modifies the I and Cs release to a 10 hour duration of release which CRAC 2 requires. I do not modify the noble gases since they normally come out a little faster than the iodines and cesiums.

Please note that this latest evaluation corrects the weather input data error that we identified in the original calculations.

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Table 1 Raw data on Event Sequences

#	Name	TL	DR	TLL	NG	CsI	CsOH
4	LCHPFSRN	50.2	1	49.3	1	1.112E-09	5.900E-08
3	LCHPPSRN	25	1	24.1	1	2.776E-08	1.890E-07
8	LBLCFSRN	29.5	1	28.7	1	5.192E-08	4.740E-07
6	SBRCPFERN	23.5	1	12.2	1	1.107E-07	1.081E-05
1	LCLPPERN	20.2	1	19.3	1	1.259E-07	1.349E-05
2	LCLPFSRN	31.1	1	30.3	1	1.467E-07	3.088E-07
19	LCLPPFCR	19.1	1	18.3	1	2.000E-06	2.000E-06
20	LCLPFSCR	24.6	1	23.7	1	5.000E-06	5.000E-06
14	LCHPFS90	50.2	69.4	49.3	1	3.101E-04	2.364E-03
17	DF100FSR*	31.2	1	30.3	1	1.177E-03	1.061E-03
16	DF100PFR*	20.2	1	19.3	1	1.557E-03	1.528E-03
7	LBLCPFERN	19.1	1	18.3	1	6.041E-03	3.891E-05
15	LCHPPS90	25	100	24.1	1	1.637E-02	2.382E-02
11	LBLCPF90	19.1	86.5	18.3	1	2.579E-02	6.336E-02
12	LBLCFS90	29.5	51.1	28.7	1	3.420E-02	8.129E-02
9	LCLPF90	31.2	55.6	30.3	1	6.917E-02	7.960E-02
5	LCHPPFPM	18.1	52	17.2	0.7857	8.850E-02	1.132E-01
10	LCLPPF90	20.2	75.3	19.3	1	9.737E-02	9.908E-02
18	LCHPPFEH	2	54.9	1.2	1	2.100E-01	2.470E-01
13	SBRCPF90	23.6	58.3	12.2	1	4.064E-01	3.484E-01

Table 2 Initial Bin Sort based upon the above Table 1

Name	TL	DR	TLL	NG	CsI	CsOH
CASE1	20	1	19.2	1	1.5E-07	1.4E-05
CASE2	19	1	18.2	1	5.0E-06	5.0E-06
CASE3	50	70	49.2	1	3.1E-04	2.4E-03
CASE4	20	1	19.2	1	1.6E-03	1.6E-03
CASE5	19	1	19.2	1	6.0E-03	3.9E-05
CASE6	19	52	18.2	1	3.4E-02	8.1E-02
CASE7	20	55	19.2	1	9.7E-02	9.9E-02
CASE8	2	54.9	1.2	1	2.1E-01	2.5E-01
CASE9	23.6	58.3	12.2	1	4.1E-01	3.5E-01

**Table 3** Iodine and Cesium release fractions corrected from Table 2 CsI and CsOH

Name	TL	DR	TLL	NG	I	Cs
CASE1	20	1	19.2	1	1.5E-07	1.3E-05
CASE2	19	1	18.2	1	5.0E-06	5.0E-06
CASE3	50	70	49.2	1	3.1E-04	2.2E-03
CASE4	20	1	19.2	1	1.6E-03	1.6E-03
CASE5	19	1	19.2	1	6.0E-03	5.3E-04
CASE6	19	52	18.2	1	3.4E-02	7.7E-02
CASE7	20	55	19.2	1	9.7E-02	9.9E-02
CASE8	2	54.9	1.2	1	2.1E-01	2.5E-01
CASE9	23.6	58.3	12.2	1	4.1E-01	3.6E-01

**Table 4** Release fractions corrected from Table 3 to a CRAC 2 Ten Hour Duration of Release. (Note: Noble Gases conservatively not corrected.)

Name	TL	DR	TLL	NG	I	Cs
CASE1	20	1	19.2	1	1.5E-07	1.2E-05
CASE2	19	1	18.2	1	5.0E-06	5.0E-06
CASE3	50	10	49.2	1	2.8E-04	2.2E-03
CASE4	20	1	19.2	1	1.6E-03	1.6E-03
CASE5	19	1	19.2	1	6.0E-03	5.3E-04
CASE6	19	10	18.2	1	3.1E-02	7.7E-02
CASE7	20	10	19.2	1	8.9E-02	9.9E-02
CASE8	2	10	1.2	1	1.9E-01	2.5E-01
CASE9	23.6	10	12.2	1	3.7E-01	3.6E-01

< TRANSACTION REPORT >

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[ RECEIVE ]

NO.	DATE	TIME	DESTINATION STATION	PG.	DURATION	MODE	RESULT
4091	7-09	16:35	408 9251607	3	0'01'27"	NORM.E	OK
				3	0'01'27"		