UNITED STATES
NUCLEAR REGULATORY COMMISSION
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August 31, 2001

MEMORANDUM TO: File

FROM: N. Kalyanam, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 RE: DISCUSSIONS ON THE PROPOSED EXTENSION OF INTEGRATED LEAK RATE TESTING (TAC NO. MB2461)

The U. S. Nuclear Regulatory Commission staff is planning discussions with Entergy Operations, Inc., the licensee, regarding the licensee's July 23, 2001, amendment application, subject as above. In order to facilitate the discussions, the staff provided the draft information contained in the attachment. The information is preliminary in nature and may be revised if required. This information was not used in rendering any regulatory decisions.

The purpose of this memorandum is to place the attachment in the Public Document Room.

Docket No. 50-382

Attachment: As stated

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OFFICE	PDIV-1/PM	PDIV-1/LA	PDIV-1/SC
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DATE	8/30/01	8/29/01	8/31/01

OFFICIAL RECORD COPY

Reproduction of Crystal River calculation to extend Type A Test Interval
From 1 in 10 Years to 1 in 15 Years Using Waterford Plant Specific Data

From Table 5-2 and 5-6 of CEOG topical report dated July 19, 2001

CDF = 2.54E-05
No containment failure frequency = 1.31E-05

Table 1 - Baseline Mean Consequence Measures

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	1.09E-05	6.73E+04	7.36E-01
2	Large Cont Isolation Failures (failure to close)	2.54E-08	6.73E+06	1.71E-01
3a	Small Isolation Failure (Type A test)	1.63E-06	6.73E+05	1.09E+00
3b	Large Isolation Failure (Type A test)	5.33E-07	2.36E+06	1.26E+00
6	Other Isolation Failures (dependent failures)	4.78E-10	2.36E+06	1.13E-03
7	Severe Accident Phenomena (Early and Late)	1.08E-05	1.88E+07	2.04E+02
8	Containment Bypassed (SGTR)	1.47E-06	1.08E+08	1.59E+02
CDF		2.54E-05		365.534

Class 1 frequency = D7-Class3a-Class3b =	1.09E-05
Class 2 frequency = From Table 5-2 =	2.54E-08
Class 3a frequency = .064*CDF=	1.63E-06
Class 3b frequency = .021*CDF =	5.33E-07
Class 6 frequency = From Table 5-2 =	4.78E-10
Class 7 frequency = From Table 5-2 =	1.08E-05
Class 8 frequency = From Table 5-2 =	1.47E-06

Class 1 dose = La =	6.73E+04
Class 2 dose = 100*La =	6.73E+06
Class 3a dose = 10*La =	6.73E+05
Class 3b dose = 35*La =	2.36E+06
Class 6 dose = 35*La =	2.36E+06
Class 7 dose = 280*La =	1.88E+07
Class 8 dose = Table 5-4 =	1.08E+08

CCFP = 1 minus (Class 1 plus Class 3a/CDF) = 5.052E-01

Table 2 - Mean Consequence Measures for 10 Year Test Interval

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	1.07E-05	6.73E+04	7.22E-01
2	Large Cont Isolation Failures (failure to close)	2.54E-08	6.73E+06	1.71E-01
3a	Small Isolation Failure (Type A test)	1.79E-06	6.73E+05	1.20E+00
3b	Large Isolation Failure (Type A test)	5.87E-07	2.36E+06	1.38E+00
6	Other Isolation Failures (dependent failures)	4.78E-10	2.36E+06	1.13E-03
7	Severe Accident Phenomena (Early and Late)	1.08E-05	1.88E+07	2.04E+02

8	Containment Bypassed (SGTR)	1.47E-06	1.08E+08	1.59E+02
CDF		2.54E-05		365.7546

Class 1 frequency = D7-Class3a-Class3b =	1.07E-05
Class 2 frequency = From Table 5-2 =	2.54E-08
Class 3a frequency = .064*CDF*1.1 =	1.79E-06
Class 3b frequency = .021*CDF*1.1 =	5.87E-07
Class 6 frequency = From Table 5-2 =	4.78E-10
Class 7 frequency = From Table 5-2 =	1.08E-05
Class 8 frequency = From Table 5-2 =	1.47E-06

CCFP = 1 minus (Class 1 plus Class 3a/CDF) = 5.073E-01

Table 3 - Mean Consequence Measures for 15 Year Test Interval

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	1.06E-05	6.73E+04	7.15E-01
2	Large Cont Isolation Failures (failure to close)	2.54E-08	6.73E+06	1.71E-01
3a	Small Isolation Failure (Type A test)	1.87E-06	6.73E+05	1.26E+00
3b	Large Isolation Failure (Type A test)	6.13E-07	2.36E+06	1.44E+00
6	Other Isolation Failures (dependent failures)	4.78E-10	2.36E+06	1.13E-03
7	Severe Accident Phenomena (Early and Late)	1.08E-05	1.88E+07	2.04E+02
8	Containment Bypassed (SGTR)	1.47E-06	1.08E+08	1.59E+02
CDF		2.54E-05		365.8648

Class 1 frequency = D7-Class3a-Class3b =	1.06E-05
Class 2 frequency = From Table 5-2 =	2.54E-08
Class 3a frequency = .064*CDF*1.15 =	1.87E-06
Class 3b frequency = .021*CDF*1.15 =	6.13E-07
Class 6 frequency = From Table 5-2 =	4.78E-10
Class 7 frequency = From Table 5-2 =	1.08E-05
Class 8 frequency = From Table 5-2 =	1.47E-06

CCFP = 1 minus (Class 1 plus Class 3a/CDF) = 5.083E-01

Table 4 - Mean Consequence Measures for 20 Year Test Interval

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	1.05E-05	6.73E+04	7.07E-01
2	Large Cont Isolation Failures (failure to close)	2.54E-08	6.73E+06	1.71E-01
3a	Small Isolation Failure (Type A test)	1.95E-06	6.73E+05	1.31E+00
3b	Large Isolation Failure (Type A test)	6.40E-07	2.36E+06	1.51E+00
6	Other Isolation Failures (dependent failures)	4.78E-10	2.36E+06	1.13E-03
7	Severe Accident Phenomena (Early and Late)	1.08E-05	1.88E+07	2.04E+02
8	Containment Bypassed (SGTR)	1.47E-06	1.08E+08	1.59E+02

CDF	2.54E-05	365.9751

Class 1 frequency = D7-Class3a-Class3b =	1.05E-05
Class 2 frequency = From Table 5-2 =	2.54E-08
Class 3a frequency = .064*CDF*1.2 =	1.95E-06
Class 3b frequency = .021*CDF*1.2 =	6.40E-07
Class 6 frequency = From Table 5-2 =	4.78E-10
Class 7 frequency = From Table 5-2 =	1.08E-05
Class 8 frequency = From Table 5-2 =	1.47E-06

Delta LERF going from 3 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 8.00E-08

Delta LERF going from 3 in 10 year test interval to 1 in 20 year test interval =
Difference in Class 3b frequency = 1.07E-07

Delta LERF going from 1 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 2.67E-08

Delta person-rem/year going from 3 in 10 year test interval to 1 in 15 year interval = 0.330773
Percentage increase = ((Total15 - Total Base)/Total Base)*100 = 0.09%

Delta person-rem/year going from 1 in 10 year test interval to 1 in 15 year interval = 0.110258
Percentage increase = ((Total15 - Total10)/Total10)*100 = 0.03%

Delta increase in CCFP going from 3 in 10 year test interval to 1 in 15 year interval = 0.32%

Delta increase in CCFP going from 1 in 10 year test interval to 1 in 15 year interval = 0.11%

Reproduction of Waterford calculation to extend Type A Test Interval
From 1 in 10 Years to 1 in 15 Years Using CEOG topical report dated July 19, 2001

From Table 5-2 and 5-6 of CEOG topical report dated July 19, 2001

CDF = 2.54E-05
No containment failure frequency = 1.31E-05

Table 1 - Baseline Mean Consequence Measures

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	1.27E-05	6.73E+04	8.57E-01
2	Large Cont Isolation Failures (failure to close)	2.54E-08	1.35E+07	3.42E-01
3a	Small Isolation Failure (Type A test)	3.67E-07	1.68E+06	6.17E-01
3b	Large Isolation Failure (Type A test)	2.20E-09	1.35E+07	2.96E-02
6	Other Isolation Failures (dependent failures)	4.78E-10	4.71E+06	2.25E-03
7	Severe Accident Phenomena (Early and Late)	1.08E-05	3.77E+07	4.07E+02
8	Containment Bypassed (SGTR)	1.47E-06	1.08E+08	1.59E+02
CDF		2.54E-05		567.6384

Class 1 frequency = D7-Class3a-Class3b =	1.27E-05
Class 2 frequency = From Table 5-2 =	2.54E-08
Class 3a frequency = From Table 5-6 =	3.67E-07
Class 3b frequency = From Table 5-6 =	2.20E-09
Class 6 frequency = From Table 5-2 =	4.78E-10
Class 7 frequency = From Table 5-2 =	1.08E-05
Class 8 frequency = From Table 5-2 =	1.47E-06

Class 1 dose = La =	6.73E+04
Class 2 dose = 100*La/0.5 =	1.35E+07
Class 3a dose = 25*La =	1.68E+06
Class 3b dose = 100*La/0.5 =	1.35E+07
Class 6 dose = 35*La/0.5 =	4.71E+06
Class 7 dose = 280*La/0.5 =	3.77E+07
Class 8 dose = Table 5-4 =	1.08E+08

CCFP = 1 minus (Class 1 plus Class 3a/CDF) = 4.843E-01

Table 2 - Mean Consequence Measures for 10 Year Test Interval

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	1.20E-05	6.73E+04	8.07E-01
2	Large Cont Isolation Failures (failure to close)	2.54E-08	1.35E+07	3.42E-01
3a	Small Isolation Failure (Type A test)	1.10E-06	1.68E+06	1.85E+00
3b	Large Isolation Failure (Type A test)	6.60E-09	1.35E+07	8.88E-02
6	Other Isolation Failures (dependent failures)	4.78E-10	4.71E+06	2.25E-03
7	Severe Accident Phenomena (Early and Late)	1.08E-05	3.77E+07	4.07E+02

8	Containment Bypassed (SGTR)	1.47E-06	1.08E+08	1.59E+02
CDF		2.54E-05		568.8813

Class 1 frequency = D7-Class3a-Class3b =	1.20E-05
Class 2 frequency = From Table 5-2 =	2.54E-08
Class 3a frequency = From Table 5-6 =	1.10E-06
Class 3b frequency = From Table 5-6 =	6.60E-09
Class 6 frequency = From Table 5-2 =	4.78E-10
Class 7 frequency = From Table 5-2 =	1.08E-05
Class 8 frequency = From Table 5-2 =	1.47E-06

CCFP = 1 minus (Class 1 plus Class 3a/CDF) = 4.844E-01

Table 3 - Mean Consequence Measures for 15 Year Test Interval

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	1.14E-05	6.73E+04	7.70E-01
2	Large Cont Isolation Failures (failure to close)	2.54E-08	1.35E+07	3.42E-01
3a	Small Isolation Failure (Type A test)	1.65E-06	1.68E+06	2.78E+00
3b	Large Isolation Failure (Type A test)	9.90E-09	1.35E+07	1.33E-01
6	Other Isolation Failures (dependent failures)	4.78E-10	4.71E+06	2.25E-03
7	Severe Accident Phenomena (Early and Late)	1.08E-05	3.77E+07	4.07E+02
8	Containment Bypassed (SGTR)	1.47E-06	1.08E+08	1.59E+02
CDF		2.54E-05		569.8138

Class 1 frequency = D7-Class3a-Class3b =	1.14E-05
Class 2 frequency = From Table 5-2 =	2.54E-08
Class 3a frequency = From Table 5-6 =	1.65E-06
Class 3b frequency = From Table 5-6 =	9.90E-09
Class 6 frequency = From Table 5-2 =	4.78E-10
Class 7 frequency = From Table 5-2 =	1.08E-05
Class 8 frequency = From Table 5-2 =	1.47E-06

CCFP = 1 minus (Class 1 plus Class 3a/CDF) = 4.846E-01

Table 4 - Mean Consequence Measures for 20 Year Test Interval

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	1.09E-05	6.73E+04	7.33E-01
2	Large Cont Isolation Failures (failure to close)	2.54E-08	1.35E+07	3.42E-01
3a	Small Isolation Failure (Type A test)	2.20E-06	1.68E+06	3.70E+00
3b	Large Isolation Failure (Type A test)	1.32E-08	1.35E+07	1.78E-01
6	Other Isolation Failures (dependent failures)	4.78E-10	4.71E+06	2.25E-03
7	Severe Accident Phenomena (Early and Late)	1.08E-05	3.77E+07	4.07E+02
8	Containment Bypassed (SGTR)	1.47E-06	1.08E+08	1.59E+02

CDF	2.54E-05	570.7464

Class 1 frequency = D7-Class3a-Class3b =	1.09E-05
Class 2 frequency = From Table 5-2 =	2.54E-08
Class 3a frequency = From Table 5-6 =	2.20E-06
Class 3b frequency = From Table 5-6 =	1.32E-08
Class 6 frequency = From Table 5-2 =	4.78E-10
Class 7 frequency = From Table 5-2 =	1.08E-05
Class 8 frequency = From Table 5-2 =	1.47E-06

Delta LERF going from 3 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 7.70E-09

Delta LERF going from 3 in 10 year test interval to 1 in 20 year test interval =
Difference in Class 3b frequency = 1.10E-08

Delta LERF going from 1 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 3.30E-09

Delta person-rem/year going from 3 in 10 year test interval to 1 in 15 year interval = 2.175425
Percentage increase = ((Total15 - Total Base)/Total Base)*100 = 0.38%

Delta person-rem/year going from 1 in 10 year test interval to 1 in 15 year interval = 0.932556
Percentage increase = ((Total15 - Total10)/Total10)*100 = 0.16%

Delta increase in CCFP going from 3 in 10 year test interval to 1 in 15 year interval = 0.03%

Delta increase in CCFP going from 1 in 10 year test interval to 1 in 15 year interval = 0.01%

For a plant with CDF = 1E-04 The previously approved methodology estimates

Class 3b frequency = 0.021*CDF = 2.1E-06

Class 3b frequency for 10 year interval = 0.021*CDF*1.10 = 2.3E-06

Class 3b frequency for 15 year interval = 0.021*CDF*1.15 = 2.4E-06

Class 3b frequency for 20 year interval = 0.021*CDF*1.2 = 2.5E-06

Delta LERF going from 3 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 3.15E-07

Delta LERF going from 3 in 10 year test interval to 1 in 20 year test interval =
Difference in Class 3b frequency = 4.20E-07

Delta LERF going from 10 year test interval to 1 in 20 year test interval =
Difference in Class 3b frequency = 2.10E-07

From page 5-19 CEOG topical report estimates delta LERF in going from a 10 year test interval

to a 20 year test interval to be 3.80E-08

If data base was 1 large failure out of 145 tests then:

For a plant with CDF = 1E-04

Class 3b frequency = 0.033*CDF = 3.3E-06

Class 3b frequency for 15 year interval = 0.033*CDF*1.15 = 3.8E-06

Class 3b frequency for 20 year interval = 0.033*CDF*1.2 = 4.0E-06

Delta LERF going from 3 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 4.95E-07

Delta LERF going from 3 in 10 year test interval to 1 in 20 year test interval =
Difference in Class 3b frequency = 6.60E-07

Reproduction of Crystal River calculation to extend Type A Test Interval
From 1 in 10 Years to 1 in 15 Years Using Oconee Plant Specific Data

CDF = 2.60E-05
No containment failure frequency = 5.50E-06

Table 1 - Baseline Mean Consequence Measures

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	3.29E-06	4.27E+02	1.40E-03
2	Large Cont Isolation Failures (failure to close)	7.09E-08	4.27E+05	3.03E-02
3a	Small Isolation Failure (Type A test)	1.66E-06	4.27E+03	7.11E-03
3b	Large Isolation Failure (Type A test)	5.46E-07	1.49E+04	8.16E-03
6	Other Isolation Failures (dependent failures)	0.00E+00	1.49E+04	0.00E+00
7	Severe Accident Phenomena (Early and Late)	2.01E-05	7.52E+04	1.51E+00
8	Containment Bypassed (SGTR)	4.17E-07	7.51E+05	3.13E-01
CDF		2.61E-05		1.871631

Class 1 frequency = D7-Class3a-Class3b =	3.29E-06
Class 2 frequency =	7.09E-08
Class 3a frequency = .064*CDF=	1.66E-06
Class 3b frequency = .021*CDF =	5.46E-07
Class 6 frequency = Included in Class 2 =	0.00E+00
Class 7 frequency =	2.01E-05
Class 8 frequency =	4.17E-07

Class 1 dose = La =	4.27E+02
Class 2 dose = 1000*La =	4.27E+05
Class 3a dose = 10*La =	4.27E+03
Class 3b dose = 35*La =	1.49E+04
Class 6 dose = 35*La =	1.49E+04
Class 7 dose =	7.52E+04
Class 8 dose =	7.51E+05

CCFP = 1 minus (Class 1 plus Class 3a/CDF) = 8.101E-01

Table 2 - Mean Consequence Measures for 10 Year Test Interval

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	3.07E-06	4.27E+02	1.31E-03
2	Large Cont Isolation Failures (failure to close)	7.09E-08	4.27E+05	3.03E-02
3a	Small Isolation Failure (Type A test)	1.83E-06	4.27E+03	7.82E-03
3b	Large Isolation Failure (Type A test)	6.01E-07	1.49E+04	8.98E-03
6	Other Isolation Failures (dependent failures)	0.00E+00	1.49E+04	0.00E+00
7	Severe Accident Phenomena (Early and Late)	2.01E-05	7.52E+04	1.51E+00

8	Containment Bypassed (SGTR)	4.17E-07	7.51E+05	3.13E-01
CDF		2.61E-05		1.873064

Class 1 frequency = D7-Class3a-Class3b =	3.07E-06
Class 2 frequency =	7.09E-08
Class 3a frequency = .064*CDF*1.1 =	1.83E-06
Class 3b frequency = .021*CDF*1.1 =	6.01E-07
Class 6 frequency = Included in Class 2 =	0.00E+00
Class 7 frequency =	2.01E-05
Class 8 frequency =	4.17E-07

CCFP = 1 minus (Class 1 plus Class 3a/CDF) = 8.122E-01

Table 3 - Mean Consequence Measures for 15 Year Test Interval

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	2.96E-06	4.27E+02	1.26E-03
2	Large Cont Isolation Failures (failure to close)	7.09E-08	4.27E+05	3.03E-02
3a	Small Isolation Failure (Type A test)	1.91E-06	4.27E+03	8.17E-03
3b	Large Isolation Failure (Type A test)	6.28E-07	1.49E+04	9.38E-03
6	Other Isolation Failures (dependent failures)	0.00E+00	1.49E+04	0.00E+00
7	Severe Accident Phenomena (Early and Late)	2.01E-05	7.52E+04	1.51E+00
8	Containment Bypassed (SGTR)	4.17E-07	7.51E+05	3.13E-01
CDF		2.61E-05		1.87378

Class 1 frequency = D7-Class3a-Class3b =	2.96E-06
Class 2 frequency =	7.09E-08
Class 3a frequency = .064*CDF*1.15 =	1.91E-06
Class 3b frequency = .021*CDF*1.15 =	6.28E-07
Class 6 frequency = Included in Class 2 =	0.00E+00
Class 7 frequency =	2.01E-05
Class 8 frequency =	4.17E-07

CCFP = 1 minus (Class 1 plus Class 3a/CDF) = 8.132E-01

Table 4 - Mean Consequence Measures for 20 Year Test Interval

Class	Description	Frequency per Rx-yr	Persn-Rem	Persn-Rem per year
1	No Containment Failure	2.85E-06	4.27E+02	1.22E-03
2	Large Cont Isolation Failures (failure to close)	7.09E-08	4.27E+05	3.03E-02
3a	Small Isolation Failure (Type A test)	2.00E-06	4.27E+03	8.53E-03
3b	Large Isolation Failure (Type A test)	6.55E-07	1.49E+04	9.79E-03
6	Other Isolation Failures (dependent failures)	0.00E+00	1.49E+04	0.00E+00
7	Severe Accident Phenomena (Early and Late)	2.01E-05	7.52E+04	1.51E+00
8	Containment Bypassed (SGTR)	4.17E-07	7.51E+05	3.13E-01

CDF	2.61E-05	1.874496

Class 1 frequency = D7-Class3a-Class3b =	2.85E-06
Class 2 frequency =	7.09E-08
Class 3a frequency = .064*CDF*1.2 =	2.00E-06
Class 3b frequency = .021*CDF*1.2 =	6.55E-07
Class 6 frequency = Included in Class 2 =	0.00E+00
Class 7 frequency =	2.01E-05
Class 8 frequency =	4.17E-07

Delta LERF going from 3 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 8.19E-08

Delta LERF going from 3 in 10 year test interval to 1 in 20 year test interval =
Difference in Class 3b frequency = 1.09E-07

Delta LERF going from 1 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 2.73E-08

Delta person-rem/year going from 3 in 10 year test interval to 1 in 15 year interval = 0.002148
Percentage increase = ((Total15 - Total Base)/Total Base)*100 = 0.11%

Delta person-rem/year going from 1 in 10 year test interval to 1 in 15 year interval = 0.000716
Percentage increase = ((Total15 - Total10)/Total10)*100 = 0.04%

Delta increase in CCFP going from 3 in 10 year test interval to 1 in 15 year interval = 0.31%

Delta increase in CCFP going from 1 in 10 year test interval to 1 in 15 year interval = 0.10%

For a plant with CDF = 1E-04 The previously approved methodology estimates

Class 3b frequency = 0.021*CDF = 2.1E-06

Class 3b frequency for 10 year interval = 0.021*CDF*1.10 = 2.3E-06

Class 3b frequency for 15 year interval = 0.021*CDF*1.15 = 2.4E-06

Class 3b frequency for 20 year interval = 0.021*CDF*1.2 = 2.5E-06

Delta LERF going from 3 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 3.15E-07

Delta LERF going from 3 in 10 year test interval to 1 in 20 year test interval =
Difference in Class 3b frequency = 4.20E-07

Delta LERF going from 10 year test interval to 1 in 20 year test interval =
Difference in Class 3b frequency = 2.10E-07

From page 5-19 CEOG topical report estimates delta LERF in going from a 10 year test interval

to a 20 year test interval to be 3.80E-08

If data base was 1 large failure out of 145 tests then:

For a plant with CDF = 1E-04

Class 3b frequency = 0.033*CDF = 3.3E-06

Class 3b frequency for 15 year interval = 0.033*CDF*1.15 = 3.8E-06

Class 3b frequency for 20 year interval = 0.033*CDF*1.2 = 4.0E-06

Delta LERF going from 3 in 10 year test interval to 1 in 15 year test interval =
Difference in Class 3b frequency = 4.95E-07

Delta LERF going from 3 in 10 year test interval to 1 in 20 year test interval =
Difference in Class 3b frequency = 6.60E-07