

NRR-PMDAPEm Resource

From: Richards, Drew <amrichards@STPEGS.COM>
Sent: Tuesday, August 23, 2016 3:07 PM
To: Regner, Lisa
Cc: Harrison Albon
Subject: [External_Sender] FW: PRA model information for NRC
Attachments: STP_REV81 CDF contributions.pdf; STP_REV81 LERF contributions.pdf

Attached is the information regarding Level 1 and Level 2 Initiating Event contributions for the current PRA model (STP_REV81). And, here is the current CDF and LERF values:

CDF	7.86E-06
LERF	4.73E-07

Please forward to the Staff (C.J. and company) and contact us if you have any questions.

drew

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"Regner, Lisa" <Lisa.Regner@nrc.gov>
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Table 2 Initiating Event Contribution to CDF

STP_RV81 INITIATOR		IE_Freq	CDF	%CDF	CCDP
External Events					
HWIND	Tornado Induced Failure of Switchyard and ECP	1.22E-06	1.08E-06	13.72	8.84E-01
FR18	Control Room Fire Scenario 18	2.12E-06	8.30E-08	1.06	3.92E-02
Z047X	Fire Zone 047 Scenario X	1.46E-05	3.58E-07	4.55	2.45E-02
FLECW	ECW Failure Due to Breach of MCR	3.20E-07	2.83E-07	3.60	8.84E-01
Z071X	Fire Zone 071 Scenario X	2.34E-07	2.07E-07	2.63	8.84E-01
Z047B	Fire Zone 047 Scenario B	2.72E-03	1.60E-07	2.04	5.89E-05
Z47BC	Fire Zone 047 Scenario BC	3.18E-06	6.24E-08	0.79	1.96E-02
SEIS3	Seismic Event, 0.4g Acceleration	7.74E-07	3.93E-08	0.50	5.08E-02
FR23	Control Room Fire Scenario 23	1.61E-06	2.29E-08	0.29	1.42E-02
SEIS4	Seismic Event, 0.6g Acceleration	6.14E-08	2.02E-08	0.26	3.29E-01
Z147O	Fire Zone 147 Scenario O	1.08E-03	7.03E-09	0.09	6.51E-06
FL26	External Flooding Scenarios 2 Through 6	1.05E-08	9.23E-09	0.12	8.78E-01
SEIS2	Seismic Event, 0.2g Acceleration	2.89E-06	9.15E-09	0.12	3.17E-03
SEIS1	Seismic Event, 0.1g Acceleration	3.02E-05	1.74E-09	0.02	5.76E-05
FR10	Control Room Fire Scenario 10	3.43E-06	1.02E-09	0.01	2.98E-04
FL1	Flood Induced LOOP - Scenario 1	3.20E-06	9.93E-10	0.01	3.10E-04
Group Subtotal		3.87E-03	2.34E-06	29.81	
Loss of Coolant Accidents					
ELOCA	Excessive LOCA	3.54E-07	3.13E-07	3.97	8.83E-01
RCPL	RCP Seal LOCA	2.36E-03	1.82E-07	2.32	7.72E-05
MLOCA	Medium LOCA	4.90E-04	1.11E-07	1.41	2.26E-04
ILOCA	Isolable Small LOCA	9.13E-04	4.26E-08	0.54	4.67E-05
SLOCA	Non-Isolable Small LOCA	3.59E-04	2.09E-08	0.27	5.83E-05
LLOCA	Large LOCA	1.34E-06	2.40E-08	0.31	1.80E-02
RCR2	2 or More RCS SRVs Open	1.02E-06	4.27E-11	0.00	4.20E-05
RCRV	One RCS SRV Opens	1.45E-06	3.56E-11	0.00	2.46E-05
VSEQ	Interfacing Systems LOCA	6.91E-12	4.91E-12	0.00	7.10E-01
Group Subtotal		4.13E-03	6.93E-07	8.81	
Loss of Offsite Power Events					
LOOPG	Loss of Offsite Power Grid Related	4.80E-03	6.36E-07	8.09	1.33E-04
LOOPP	Loss of Offsite Power Plant Centered	8.57E-02	5.32E-08	0.68	6.21E-07

STP_RV81 INITIATOR		IE_Freq	CDF	%CDF	CCDP
LOOPS	Loss of Offsite Power Switchyard Related	1.11E-02	1.39E-06	17.73	1.26E-04
LOOPW	Loss of Offsite Power Weather Related	4.05E-03	6.39E-07	8.12	1.58E-04
Group Subtotal		1.06E-01	2.72E-06	34.62	
Steam Generator Tube Rupture					
SGTR	Steam Generator Tube Rupture	6.49E-03	5.51E-07	7.00	8.49E-05
Group Subtotal		6.49E-03	5.51E-07	7.00	
Loss of Support Systems					
L1DCB	Loss of DC Bus E1B11	8.29E-03	7.86E-08	1.00	9.48E-06
L1DCA	Loss of DC Bus E1A11	8.29E-03	8.14E-08	1.04	9.82E-06
LOEAB3/6/9	Loss of EAB HVAC, BC/AB/ACRUN, All Support	2.74E-06	5.36E-08	0.68	1.96E-02
		2.74E-06	2.79E-08	0.35	1.02E-02
		2.74E-06	2.79E-08	0.35	1.02E-02
LOEAB2/5/8	Loss of EAB HVAC, BC/AB/ACRUN, HVAC A/C/B=F	4.07E-05	1.01E-08	0.13	2.47E-04
		4.07E-05	1.01E-08	0.13	2.47E-04
		4.07E-05	1.01E-08	0.13	2.47E-04
LOECW2/5/8	Loss of ECW, BC/AB/ACRUN, ECW A/C/B=F	6.10E-04	2.36E-08	0.30	3.87E-05
		6.10E-04	2.36E-08	0.30	3.87E-05
		6.10E-04	2.36E-08	0.30	3.87E-05
LOECW3/6/9	Loss of ECW, BC/AB/ACRUN, All Support	3.94E-06	2.83E-09	0.04	7.18E-04
		3.94E-06	2.50E-09	0.03	6.34E-04
		3.94E-06	2.50E-09	0.03	6.34E-04
LOCR3/6/9	Loss of CRE HVAC, BC/AB/ACRUN, All Support	1.38E-05	8.30E-09	0.11	6.04E-04
		1.38E-05	8.04E-09	0.10	5.85E-04
		1.38E-05	8.04E-09	0.10	5.85E-04
LOCR2/5/8	Loss of CRE HVAC, BC/AB/ACRUN, HVAC A/C/B=F	1.09E-04	1.54E-09	0.02	1.42E-05
		1.09E-04	1.54E-09	0.02	1.42E-05
		1.09E-04	1.54E-09	0.02	1.42E-05
LOCCW2/5/8	Loss of CCW, BC/AB/ACRUN, CCW A/C/B=F	1.84E-03	1.55E-10	0.00	8.39E-08
		1.84E-03	1.91E-10	0.00	1.03E-07
		1.84E-03	1.38E-10	0.00	7.51E-08
LOCCW3/6/9	Loss of CCW, BC/AB/ACRUN, All Support	5.50E-04	7.22E-10	0.01	1.31E-06
		5.50E-04	5.67E-10	0.01	1.03E-06
		5.50E-04	5.67E-10	0.01	1.03E-06
Group Subtotal		2.61E-02	4.10E-07	5.21	

STP_RV81 INITIATOR		IE_Freq	CDF	%CDF	CCDP
	General Transients				
SLBD	Steam Line Break Outside Containment	8.58E-03	1.74E-07	2.21	2.03E-05
TTRIP	Turbine Trip	4.24E-01	2.61E-07	3.31	6.14E-07
PLMFW	Partial Loss of Main Feedwater	4.00E-01	2.46E-07	3.12	6.14E-07
RTRIP	Reactor Trip	4.64E-01	2.81E-07	3.58	6.07E-07
LOPF	Loss of Primary Flow	1.28E-01	7.81E-08	0.99	6.11E-07
SLBI	Steam Line Break Inside Containment	9.31E-04	1.72E-08	0.22	1.85E-05
EXMFW	Excessive Feedwater Flow	4.31E-02	2.59E-08	0.33	6.01E-07
IMSIV	Closure of One MSIV	1.11E-02	6.55E-09	0.08	5.90E-07
TLMFW	Total Loss of Main Feedwater	3.23E-02	1.94E-08	0.25	5.99E-07
LCV	Loss of Condenser Vacuum	2.46E-02	1.47E-08	0.19	5.97E-07
SI	Inadvertent Safety Injection	9.40E-03	5.75E-09	0.07	6.12E-07
AMSIV	Closure of All MSIV's	1.02E-02	6.00E-09	0.08	5.88E-07
LOIA	Loss of Instrument Air	5.47E-03	4.06E-09	0.05	7.42E-07
FLBO	Feed Line Break in the IVC	3.26E-03	2.21E-09	0.03	6.79E-07
MSV	MS Relief or Safety Valve Opening	3.85E-03	2.18E-09	0.03	5.67E-07
	Group Subtotal	1.57E+00	1.14E-06	14.54	
	Total Reported Frequencies of the Group:	1.72E+00	7.86E-06	100.00	

Attachment 1: Initiating Event Contributions to LERF

Table Attachment 1: Initiating Event Contributions to LERF

Initiator	IE_Frequency	Contribution	CLERP
HWIND2	1.22E-06	1.16E-07	9.52E-02
LOOPS2	1.11E-02	8.92E-08	8.06E-06
LOOPW2	4.05E-03	4.09E-08	1.01E-05
LOOPG2	4.80E-03	4.09E-08	8.53E-06
FLECW2	3.20E-07	3.03E-08	9.48E-02
RTRIP2	1.46E-05	1.82E-08	1.25E-03
Z047X2	8.58E-03	1.76E-08	2.05E-06
TTRIP2	4.64E-01	1.68E-08	3.62E-08
SLBDL2	4.24E-01	1.53E-08	3.61E-08
PLMFW2	4.00E-01	1.44E-08	3.61E-08
SGTRL2	6.49E-03	8.66E-09	1.33E-06
Z047B2	2.36E-03	7.59E-09	3.21E-06
RCPLL2	2.72E-03	5.48E-09	2.01E-06
LOPFL2	2.12E-06	4.91E-09	2.32E-03
FR18L2	1.28E-01	4.52E-09	3.53E-08
Z071X2	2.34E-07	4.34E-09	1.85E-02
LOOPP2	8.57E-02	3.18E-09	3.71E-08
Z47BC2	3.18E-06	3.06E-09	9.61E-04
L1DCA2	8.29E-03	2.41E-09	2.91E-07
L1DCB2	2.74E-06	2.25E-09	8.22E-04
LEB3L2	8.29E-03	2.22E-09	2.68E-07
SEIS32	7.74E-07	2.02E-09	2.61E-03
LEB6L2	2.74E-06	1.92E-09	7.01E-04
LEB9L2	2.74E-06	1.92E-09	7.01E-04
LEW5L2	6.10E-04	1.55E-09	2.53E-06
LEW2L2	6.10E-04	1.54E-09	2.53E-06
LEW8L2	6.10E-04	1.54E-09	2.53E-06
EXMFW2	9.13E-04	1.50E-09	1.64E-06
ILOCA2	4.31E-02	1.47E-09	3.40E-08
TLMFW2	3.23E-02	1.08E-09	3.36E-08
SLBIL2	9.31E-04	1.02E-09	1.10E-06
LCVL2	1.05E-08	9.69E-10	9.22E-02
FL26L2	6.14E-08	8.81E-10	1.44E-02
SEIS42	2.46E-02	8.11E-10	3.29E-08
LEB2L2	4.07E-05	6.83E-10	1.68E-05
LEB5L2	4.07E-05	6.83E-10	1.68E-05

LEB8L2	4.07E-05	6.83E-10	1.68E-05
SIL2	9.40E-03	5.06E-10	5.38E-08
SLOCA2	3.59E-04	5.05E-10	1.41E-06
IMSIV2	1.11E-02	3.50E-10	3.15E-08
AMSIV2	1.02E-02	3.21E-10	3.15E-08
SEIS22	2.89E-06	3.02E-10	1.04E-04
ELOCA2	3.54E-07	2.84E-10	8.03E-04
FR23L2	1.61E-06	2.79E-10	1.73E-04
LOIAL2	5.47E-03	1.81E-10	3.32E-08
LEW3L2	1.38E-05	1.67E-10	1.21E-05
LEW6L2	1.38E-05	1.63E-10	1.18E-05
LEW9L2	1.38E-05	1.63E-10	1.18E-05
LCR3L2	3.94E-06	1.51E-10	3.83E-05
LCR6L2	3.94E-06	1.48E-10	3.76E-05
LCR9L2	3.94E-06	1.48E-10	3.76E-05
MSVL2	3.85E-03	9.89E-11	2.57E-08
FLBOL2	3.20E-06	6.66E-11	2.08E-05
FL1L2	3.26E-03	5.88E-11	1.81E-08
Z147O2	1.09E-04	3.02E-11	2.78E-07
LCR2L2	1.09E-04	3.02E-11	2.78E-07
LCR5L2	1.09E-04	3.02E-11	2.78E-07
LCR8L2	1.08E-03	2.50E-11	2.31E-08
SEIS12	3.02E-05	1.29E-11	4.28E-07
LLOCA2	1.34E-06	1.20E-11	9.00E-06
FR10L2	3.43E-06	1.15E-11	3.35E-06
LCC9L2	6.91E-12	4.91E-12	7.10E-01
LCC3L2	5.50E-04	4.25E-12	7.72E-09
LCC6L2	5.50E-04	4.24E-12	7.72E-09
VSEQL2	5.50E-04	4.24E-12	7.71E-09
LCC5L2	1.84E-03	1.52E-12	8.25E-10
LCC2L2	1.84E-03	0.00E+00	0.00E+00
LCC8L2	1.84E-03	0.00E+00	0.00E+00
RRCVL2	1.45E-06	0.00E+00	0.00E+00
MLOCA2	4.90E-04	0.00E+00	0.00E+00
RRC2L2	1.02E-06	0.00E+00	0.00E+00