

Attachment 1 - List A: Pre-Project Contingency List

12/3/2015

#	CONTINGENCY	Contingency Type	Affected Facility	Adverse Result (e.g., voltage collapse, thermal overload)	Thermal Loading (% of Emergency Rating) or Voltage (p.u.) with Mesa Project (Basecase A)	Thermal Loading (% of Emergency Rating) or Voltage (p.u.) without Mesa Project (Basecase B)
1	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by Huntington Beach CCGT outage (HUNTX1,X2,&X3)	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	79%	114%
2	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by Huntington Beach CCGT outage (HUNTX1,X2,&X3)	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	79%	114%
3	LUGO to RANCHVST 500 kV No.1 Transmission Line outage followed by MIRALOMA to SERRANO 500 kV No.2 Transmission Line outage	N-1-1	MIRA LOMA 500 kV No. 4 Transformer Bank	Thermal overload	86%	113%
4	SERRANO 230 kV to VILLA PK 230 kV No. 2 Transmission Line outage followed by LEWIS 230 kV to SERRANO 230 kV No. 1 Transmission Line outage	N-1-1	SERRANO to VILLAPK 230kV No. 1 Transmission Line	Thermal overload	91%	113%
5	SERRANO 230 kV to VILLA PK 230 kV No. 2 Transmission Line outage followed by LEWIS 230 kV to SERRANO 230 kV No. 2 Transmission Line outage	N-1-1	SERRANO to VILLAPK 230kV No. 1 Transmission Line	Thermal overload	91%	113%
6	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by Alamitos CCGT outage (ALAMTX1,X2,&X3)	N-2	BARRE to LEWIS 230kV Transmission Line	Thermal overload	77%	112%
7	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by Alamitos CCGT outage (ALAMTX1,X2,&X3)	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	76%	112%
8	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by N.GILA 500 kV to IMPRLVLY 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	72%	107%
9	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by N.GILA 500 kV to IMPRLVLY 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	71%	107%
10	CHINO 230 kV to MIRALOMW 230 kV No. 1 Transmission Line outage followed by CHINO 230 kV to MIRALOMW 230 kV No. 2 Transmission Line outage	N-1-1	CHINO to MIRALOME 230 kV No.3 Transmission Line	Thermal overload	99%	107%
11	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by MIRALOME 230 kV to OLINDA 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	67%	107%
12	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by MIRALOME 230 kV to OLINDA 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	67%	106%
13	SERRANO 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by LEWIS 230 kV to SERRANO 230 kV No. 1 Transmission Line outage	N-1-1	SERRANO to VILLAPK 230kV No. 2 Transmission Line	Thermal overload	85%	106%
14	SERRANO 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by LEWIS 230 kV to SERRANO 230 kV No. 2 Transmission Line outage	N-1-1	SERRANO to VILLAPK 230kV No. 2 Transmission Line	Thermal overload	85%	106%
15	CHINO 230 kV to MIRALOME 230 kV No. 3 Transmission Line outage followed by MIRALOMA 500 kV No. 2 Transformer Bank outage	N-1-1	MIRA LOMA 500 kV No. 1 Transformer Bank	Thermal overload	88%	106%
16	SERRANO 500 kV No.1 Transformer Bank outage followed by N.GILA to IMPRLVLY 500 kV No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 2 Transformer Bank	Thermal overload	88%	105%
17	MIRALOME to OLINDA 230 kV No.1 Transmission Line outage followed by MIRALOMA 500 kV No.1 Transformer Bank outage	N-1-1	CHINO to MIRALOME 230 kV No.3 Transmission Line	Thermal overload	90%	105%
18	CHINO 230 kV to MIRALOME 230 kV No. 3 Transmission Line outage followed by MIRALOMA 500 kV No. 1 Transformer Bank outage	N-1-1	MIRA LOMA 500 kV No. 2 Transformer Bank	Thermal overload	87%	105%
19	MIRALOME to OLINDA 230 kV No.1 Transmission Line outage followed by MIRALOMA 500 kV No.2 Transformer Bank outage	N-1-1	CHINO to MIRALOME 230 kV No.3 Transmission Line	Thermal overload	89%	105%
20	SYLMAR 230 kV No.2 Transformer Bank outage followed by SYLMAR 230 kV No.3 Transformer Bank outage	N-2	SYLMAR 230 kV No.1 Transformer Bank	Thermal overload	70%	104%
21	SYLMAR 230 kV No.1 Transformer Bank outage followed by SYLMAR 230 kV No.3 Transformer Bank outage	N-2	SYLMAR 230 kV No.2 Transformer Bank	Thermal overload	70%	104%
22	SERRANO 500 kV No.3 Transformer Bank outage followed by N.GILA to IMPRLVLY 500 kV No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 2 Transformer Bank	Thermal overload	87%	104%
23	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by IMPRLVLY 500 kV to ECO 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	70%	104%
24	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by S.ONOFRE 230 kV to SANTIAGO 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	69%	104%
25	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by S.ONOFRE 230 kV to SANTIAGO 230 kV No. 2 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	69%	104%
26	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by ECO 500 kV to MIGUEL 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	70%	104%
27	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by IMPRLVLY 500 kV to ECO 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	69%	104%
28	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by S.ONOFRE 230 kV to SANTIAGO 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	69%	104%
29	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by S.ONOFRE 230 kV to SANTIAGO 230 kV No. 2 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	69%	104%
30	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by ECO 500 kV to MIGUEL 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	69%	104%
31	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by GOODRICH 230 kV to GOULD 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	64%	104%
32	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by GOODRICH 230 kV to GOULD 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	64%	103%
33	MIRALOMA 500 kV No.2 Transformer Bank outage followed by MIRALOMA to SERRANO 500 kV No.2 Transmission Line outage	N-1-1	MIRA LOMA 500 kV No.1 Transformer Bank	Thermal overload	79%	103%
34	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by MIRALOMW 230 kV to WALNUT 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	65%	103%
35	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by MIRALOMW 230 kV to WALNUT 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	65%	103%
36	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by VINCNT2 230 kV to MESA CAL 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	65%	103%
37	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by MESA CAL 230 kV to VINCNT2 230 kV No. 2 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	65%	103%
38	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by VINCNT 230 kV to RIOHONDO 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	65%	103%
39	SERRANO 500 kV No.2 Transformer Bank outage followed by N.GILA to IMPRLVLY 500.0 No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 1 Transformer Bank	Thermal overload	86%	103%
40	SERRANO 500 kV No.2 Transformer Bank outage followed by N.GILA to IMPRLVLY 500.0 No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 1 Transformer Bank	Thermal overload	86%	103%
41	SERRANO 230 kV to VILLA PK 230 kV No. 2 Transmission Line outage followed by Huntington Beach CCGT outage (HUNTX1,X2,&X3)	N-1-1	SERRANO to VILLAPK 230kV No. 1 Transmission Line	Thermal overload	84%	102%
42	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by VINCNT2 230 kV to MESA CAL 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	65%	102%
43	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by VINCNT 230 kV to RIOHONDO 230 kV No. 2 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	65%	102%
44	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by OCOTILLO 500 kV to SUNCREST 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	69%	102%
45	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by IMPRLVLY 500 kV to OCOTILLO 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	69%	102%
46	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by MESA CAL 230 kV to VINCNT2 230 kV No. 2 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	65%	102%
47	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by SYLMAR S 230 kV to GOULD 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	65%	102%
48	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by LITEHIPE 230 kV to MESA CAL 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	70%	102%

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49	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by LITEHIPE 230 kV to MESA CAL 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	70%	102%
50	MIRALOMA 500 kV No.1 Transformer Bank outage followed by MIRALOMA to SERRANO 500 kV No.2 Transmission Line outage	N-1-1	MIRA LOMA 500 kV No.2 Tranformer Bank	Thermal overload	78%	102%
51	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by EAGLROCK 230 kV to SYLMAR S 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	65%	102%
52	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by S.ONOFRE 230 kV to SERRANO 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	68%	102%
53	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by VINCENT 230 kV to RIOHONDO 230 kV No. 2 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	64%	102%
54	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by CENTER S 230 kV to OLINDA 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	65%	102%
55	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by OCOTILLO 500 kV to SUNCREST 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	68%	102%
56	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by VINCENT 230 kV to RIOHONDO 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	64%	102%
57	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by IMPRLVLY 500 kV to OCOTILLO 500 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	68%	102%
58	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by SYLMAR S 230 kV to GOULD 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	65%	102%
59	MESA CAL 230 kV to VINCNT2 230 kV No. 2 Transmission Line outage followed by VINCENT 500 kV No. 2 Transformer Bank outage	N-1-1	VINCENT 500 kV No. 3 Transformer Bank	Thermal overload	66%	102%
60	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by CENTER S 230 kV to OLINDA 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	66%	102%
61	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by EAGLROCK 230 kV to SYLMAR S 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	65%	101%
62	VINCENT to MESA 230 kV No.1 Transmission Line outage followed by VINCENT 500 kV No.1 Transformer Bank outage	N-1-1	VINCENT 500 kV No. 3 Transformer Bank	Thermal overload	66%	101%
63	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by S.ONOFRE 230 kV to SERRANO 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	68%	101%
64	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by SERRANO 230 kV to VILLA PK 230 kV No. 2 Transmission Line outage	N-1-1	SERRANO to VILLAPK 230kV No. 1 Transmission Line	Thermal overload	80%	101%
65	SERRANO 230 kV to VILLA PK 230 kV No. 2 Transmission Line outage followed by Alamitos CCGT outage (ALAMTX1,X2,&X3)	N-1-1	SERRANO to VILLAPK 230kV No. 1 Transmission Line	Thermal overload	83%	101%
66	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by VIEJOSC 230 kV to CHINO 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	67%	101%
67	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by VIEJOSC 230 kV to CHINO 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	67%	101%
68	SERRANO 500 kV No.1 Transformer Bank outage followed by IMPRLVLY ECO 500 kV No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 2 Transformer Bank	Thermal overload	84%	101%
69	SERRANO 500 kV No. 1 Transformer Bank outage followed by ECO 500 kV to MIGUEL 500 kV No. 1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 2 Transformer Bank	Thermal overload	84%	101%
70	SERRANO 500 kV No.1 Transformer Bank outage followed by ECO to MIGUEL 500.0 No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 2 Transformer Bank	Thermal overload	84%	101%
71	SERRANO 500 kV No.3 Transformer Bank outage followed by N.GILA to IMPRLVLY 500 kV No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 1 Transformer Bank	Thermal overload	84%	101%
72	SERRANO 500 kV No.2 Transformer Bank outage followed by N.GILA to IMPRLVLY 500.0 No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 3 Transformer Bank	Thermal overload	84%	101%
73	SERRANO 500 kV No.2 Transformer Bank outage followed by N.GILA to IMPRLVLY 500.0 No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 3 Transformer Bank	Thermal overload	84%	101%
74	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by ELSEGND0 230 kV to ELSEG78 230 kV No. 2 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	66%	101%
75	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by El Segundo 7_8 MODULE (ELSEG7GT &ELSEG8ST) outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	66%	101%
76	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by El Segundo 5_6 MODULE (ELSEG5GT &ELSEG6ST) outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	66%	101%
77	BARRE 230 kV to VILLA PK 230 kV No. 1 Transmission Line outage followed by ELSEGND0 230 kV to ELSEG56 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to LEWIS 230kV Transmission Line	Thermal overload	66%	101%
78	VINCENT 500 kV No. 2 Transformer Bank outage followed by Alamitos CCGT outage (ALAMTX1,X2,&X3)	N-1-1	VINCENT 500 kV No. 3 Transformer Bank	Thermal overload	69%	100%
79	MIRALOMA 500 kV No.2 Transformer Bank outage followed by MIRALOMA 500 kV No.4 Transformer Bank outage	N-1-1	MIRA LOMA 500 kV No.1 Tranformer Bank	Thermal overload	80%	100%
80	SERRANO 500 kV No.3 Transformer Bank outage followed by IMPRLVLY to ECO 500 kV No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 2 Transformer Bank	Thermal overload	84%	100%
81	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by ELSEGND0 230 kV to ELSEG78 230 kV No. 2 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	66%	100%
82	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by El Segundo 7_8 MODULE (ELSEG7GT &ELSEG8ST) outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	66%	100%
83	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by ELSEGND0 230 kV to ELSEG56 230 kV No. 1 Transmission Line outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	66%	100%
84	BARRE 230 kV to LEWIS 230 kV No. 1 Transmission Line outage followed by El Segundo 5_6 (ELSEG5GT &ELSEG6ST) MODULE outage	N-1-1	BARRE to VILLAPK 230kV Transmission Line	Thermal overload	66%	100%
85	SERRANO 230 kV No. 3 Transformer Bank outage followed by ECO 500 kV to MIGUEL 500 kV No. 1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 2 Transformer Bank	Thermal overload	83%	100%
86	SERRANO 500 kV No.3 Transformer Bank outage followed by ECO to MIGUEL 500.0 No.1 Transmission Line outage	N-1-1	SERRANO 500 kV No. 2 Transformer Bank	Thermal overload	83%	100%
87	SERRANO 500 kV No. 1 Transformer Bank outage followed by Huntington Beach CCGT outage (HUNTX1,X2,&X3)	N-1-1	SERRANO 500 kV No. 2 Transformer Bank	Thermal overload	83%	100%
88	Base Case	N-0	GOODRICH 230 kV Bus	Low Voltage	0.963	0.946
89	Base Case	N-0	GOULD 230 kV Bus	Low Voltage	0.967	0.949
90	Base Case	N-0	RIOHONDO 230 kV Bus	Low Voltage	0.963	0.949
91	ECO 500 kV to MIGUEL 500 kV No. 1 Transmission Line outage followed by OCOTILLO 500 kV to SUNCREST 500 kV No. 1 Transmission Line outage	N-1-1	SERRANO 230 kV Bus	Low Voltage*	0.921	0.893
92	ECO 500 kV to MIGUEL 500 kV No. 1 Transmission Line outage followed by OCOTILLO 500 kV to SUNCREST 500 kV No. 1 Transmission Line outage	N-1-1	VILLAPK 230 kV Bus	Low Voltage*	0.923	0.895
93	ECO 500 kV to MIGUEL 500 kV No. 1 Transmission Line outage followed by OCOTILLO 500 kV to SUNCREST 500 kV No. 1 Transmission Line outage	N-1-1	LEWIS 230 kV Bus	Low Voltage*	0.923	0.896
94	ECO 500 kV to MIGUEL 500 kV No. 1 Transmission Line outage followed by OCOTILLO 500 kV to SUNCREST 500 kV No. 1 Transmission Line outage	N-1-1	RIOHONDO 230 kV Bus	Low Voltage*	0.944	0.898

*Removal of the permanent transmission solution package causes this contingency to result in Voltage Collapse