Project 1

Appendices

UPPER GREAT PLAINS REGION
Transmission Planning

JULY 2002

A. GENERATION AND TRANSMISSION FACILITY PARAMETERS

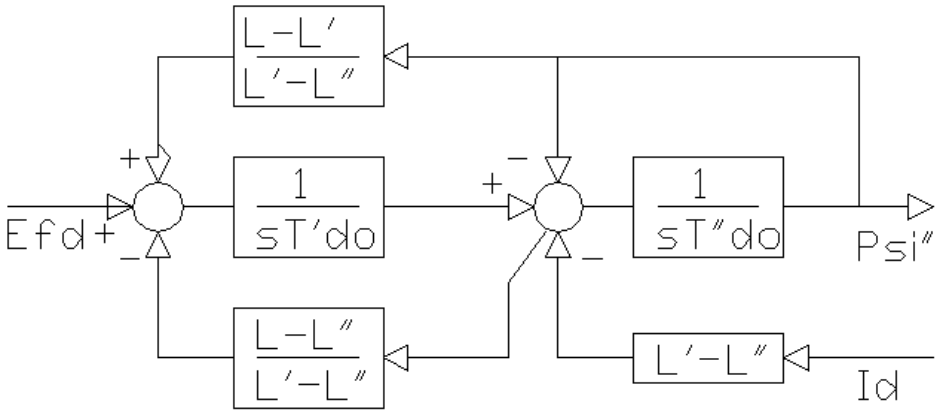
A.1 Generator Parameters

Thermal Power Plant Model

Generator

Rated kVA	552,000	
Rated kW	469,200	
Max kvar	290,800	(0.85 pf)
Min kvar	-172,400	(-0.95 pf)
Voltage	24,000	
Amperes	13,279	
P.F.	0.85	
Hertz	60	
RPM	3600	

Dynamic Model: gentpf
Description: Generator represented by uniform inductance ratios rotor modeling to match WSCC type F; shaft speed effects are neglected.



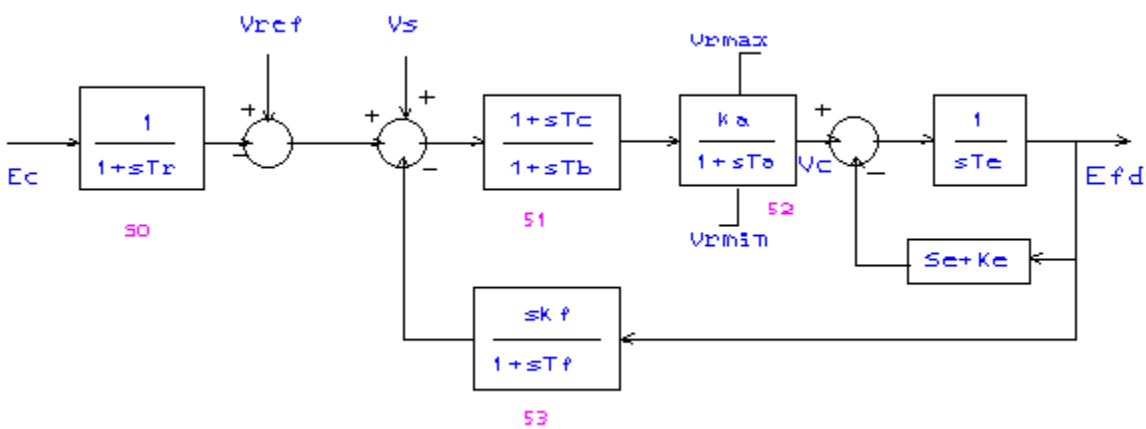
Value	Name	EPCL Variable	Description
4.5000	T'do	tpdo	Direct axis transient rotor time constant
0.0250	T"do	tppdo	Direct axis subtransient rotor time constant
1.2300	T'qo	tpqo	Quadrature axis transient rotor time constant
0.1000	T"qo	tppqo	Quadrature axis subtransient rotor time constant
5.4529	H	h	Inertia constant, sec
0.0	D	d	Damping factor, pu
1.8400	Ld	ld	Direct axis unsaturated synchronous reactance
1.6000	Lq	lq	Quadrature axis unsaturated synchronous reactance
0.3260	L'd	lpd	Direct axis unsaturated transient

			reactance
0.5100	L'q	lpq	Quadrature axis unsaturated transient reactance
0.2200	L"d	lppd	Direct axis unsaturated subtransient reactance
0.1000	L"q	lppq	Quadrature axis unsaturated subtransient reactance
0.1770	Ll	ll	Stator leakage reactance, pu
0.1320	Se(1.0)	s1	Saturation factor at 1 pu flux
0.4490	Se(1.2)	s12	Saturation factor at 1.2 pu flux
0.0013	Ra	ra	Stator resistance, pu
0.0	Rcomp	rcomp	Compounding resistance for voltage control, pu
0.0	Xcomp	xcomp	Compounding reactance for voltage control, pu
1.0000	accel	accel	Acceleration factor for network boundary iteration

Excitation System

Dynamic Model: exdc1

Description: IEEE type 1 excitation system model. Represents systems with d.c. exciters and continuously acting voltage regulators, such as amplidyne-based excitation systems.

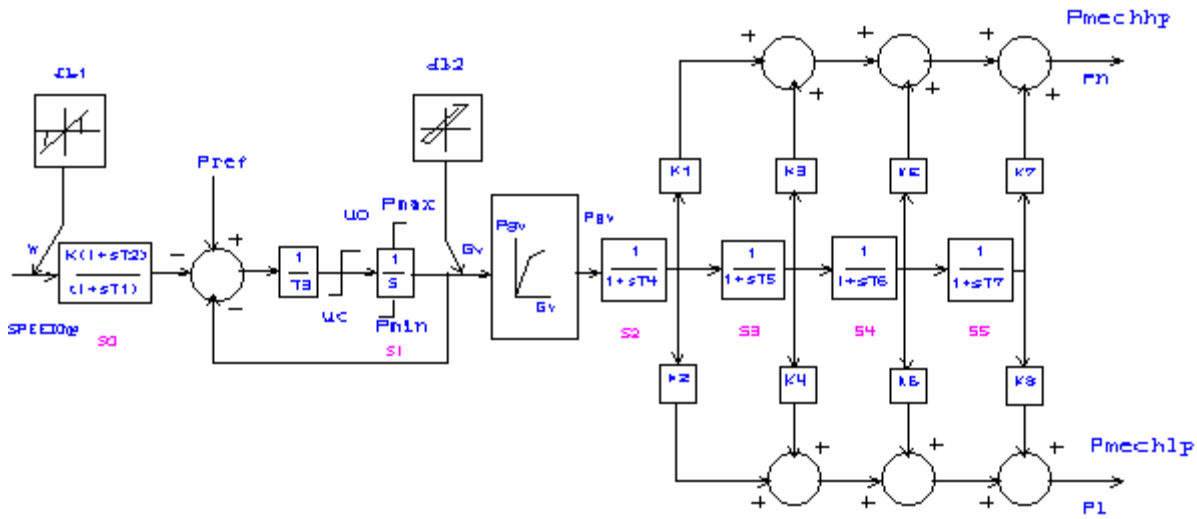


Value	*Name*	*EPCL Variable*	*Description*
0.0	Tr	tr	Transducer time constant, sec
30.0000	Ka	ka	Voltage regulator gain
0.4000	Ta	ta	Voltage regulator time constant, sec
0.0	Tb	tb	Lag time constant, sec
0.0	Tc	tc	Lead time constant, sec
6.0000	Vrmax	vrmax	Maximum control element output, pu
-6.0000	Vrmin	vrmin	Minimum control element output, pu
0.0	Ke	ke	Exciter field resistance line slope margin, pu
0.5600	Te	te	Exciter field time constant, sec
0.0500	Kf	kf	Rate feedback gain, pu
1.3000	Tf	tf1	Rate feedback time constant, sec
0.0	O.	tf2	Required entry of zero
3.3750	E1	e1	Field voltage value, 1

0.7300	Se(E1)	se1	Saturation factor at E1
4.5000	E2	e2	Field voltage value, 2
1.3500	Se(E2)	se2	Saturation factor at E2

Prime Mover

Dynamic Model: ieeeg1
Description: IEEE steam turbine/governor model (with deadband and nonlinear valve gain added)

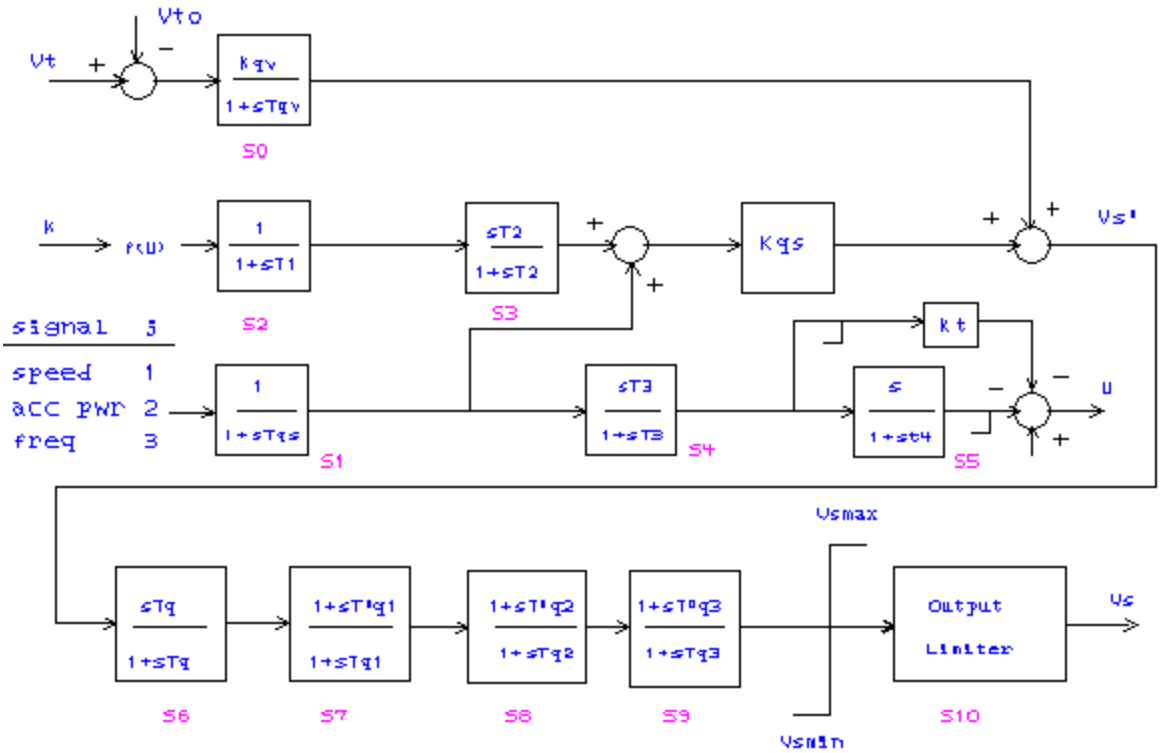


Value	Name	EPCL Variable	Description
20.0000	K	k	Governor gain (reciprocal of droop), p.u.
0.2500	T1	t1	Governor lag time constant, sec
0.0	T2	t2	Governor lead time constant, sec
0.2000	T3	t3	Valve positioner time constant, sec
0.1000	Uo	uo	Maximum valve opening velocity, p.u./sec
- 1.0000	Uc	uc	Maximum valve closing velocity, p.u./sec (< 0.)
1.0000	Pmax	pmax	Maximum valve opening, p.u. of mwcap
0.0	Pmin	pmin	Minimum valve opening, p.u. of mwcap
0.1000	T4	t4	Inlet piping/steam bowl time constant, sec
0.2750	K1	k1	Fraction of hp shaft power after first boiler pass
0.0	K2	k2	Fraction of lp shaft power after first boiler pass
8.0000	T5	t5	Time constant of second boiler pass, sec
0.4170	K3	k3	Fraction of hp shaft power after second boiler pass
0.0	K4	k4	Fraction of lp shaft power after second boiler pass

0.4000	T6	t6	Time constant of third boiler pass, sec
0.3080	K5	k5	Fraction of hp shaft power after third boiler pass
0.0	K6	k6	Fraction of lp shaft power after third boiler pass
0.0	T7	t7	Time constant of fourth boiler pass, sec
0.0	K7	k7	Fraction of hp shaft power after fourth boiler pass
0.0	K8	k8	Fraction of lp shaft power after fourth boiler pass
-	db1	db1	Intentional deadband width, Hz.
-	eps	eps	Intentional db hysteresis, Hz.
-	db2	db2	Unintentional deadband, MW
-	GV1	gv1	Nonlinear gain point 1, p.u. gv
-	Pgv1	pgv1	Nonlinear gain point 1, p.u. power
-	GV2	gv2	Nonlinear gain point 2, p.u. gv
-	Pgv2	pgv2	Nonlinear gain point 2, p.u. power
-	GV3	gv3	Nonlinear gain point 3, p.u. gv
-	Pgv3	pgv3	Nonlinear gain point 3, p.u. power
-	GV4	gv4	Nonlinear gain point 4, p.u. gv
-	Pgv4	pgv4	Nonlinear gain point 4, p.u. power
-	GV5	gv5	Nonlinear gain point 5, p.u. gv
-	Pgv5	pgv5	Nonlinear gain point 5, p.u. power
-	GV6	gv6	Nonlinear gain point 6, p.u. gv
-	Pgv6	pgv6	Nonlinear gain point 6, p.u. power

Power System Stabilizer

Dynamic Model: wsccst
Description: WSCC Power system stabilizer



Value	Name	EPCL Variable	Description
3.00	j	j	Input signal code: 1 for shaft speed, 2 for accelerating power, 3 for bus frequency
0.0	Kqv	kqv	Voltage deviation gain
0.0	Tqv	tqv	Voltage transducer time constant, sec
6.00	Kqs	kqs	Main input signal gain
0.0	Tqs	tqs	Main input signal transducer time constant, sec
20.00	Tq	tq	Stabilizer washout time constant, sec
0.04	Tq1	tq1	Lag time constant, sec
0.60	Tpq1	tpq1	Lead time constant, sec
0.04	Tq2	tq2	Lag time constant, sec
0.60	Tpq2	tpq2	Lead time constant, sec
0.0	Tq3	tq3	Lag time constant, sec
0.0	Tpq3	tpq3	Lead time constant, sec
0.06	Vsmax	vsmax	Maximum output signal, pu
0.0	Vcutoff	vcutoff	Voltage deviation level for stabilizer cutout, pu
0.0	Vslow	vslow	Minimum output signal, sec
-	T1	t1	Frequency boost signal transient stabilizer lag
-	T2	t2	Frequency boost signal transient stabilizer washout time constant, sec
-	T3	t3	Frequency boost signal transient stabilizer, Trigger washout time constant, sec
-	Kboost	kboost	Transient stabilizer boost signal, pu
-	Dw1	dw1	Speed deviation 1 for trigger, pu
-	Dw2	dw2	Speed deviation 2 for trigger, pu
-	Ddwt	ddwt	Acceleration value for trigger, pu
-	Tdelay	tdelay	Trigger delay, sec
-	T4	t4	Frequency boost signal transient stabilizer,

			Trigger circuit lag, sec
-	Sw1	sw1	Voltage boost signal transient stabilizer manual switch
-	Td1	td1	Voltage boost signal transient stabilizer lag,
-	Td2	td2	Voltage boost signal transient stabilizer washout time constant, sec
-	Vtl	vtl	Voltage boost signal transient stabilizer terminal voltage limit.
-	Vk	vk	Voltage boost signal transient stabilizer boost magnitude, pu

B. CATEGORY A (PRE-CONTINGENCY) DATA

Legend for filenames and abbreviations:

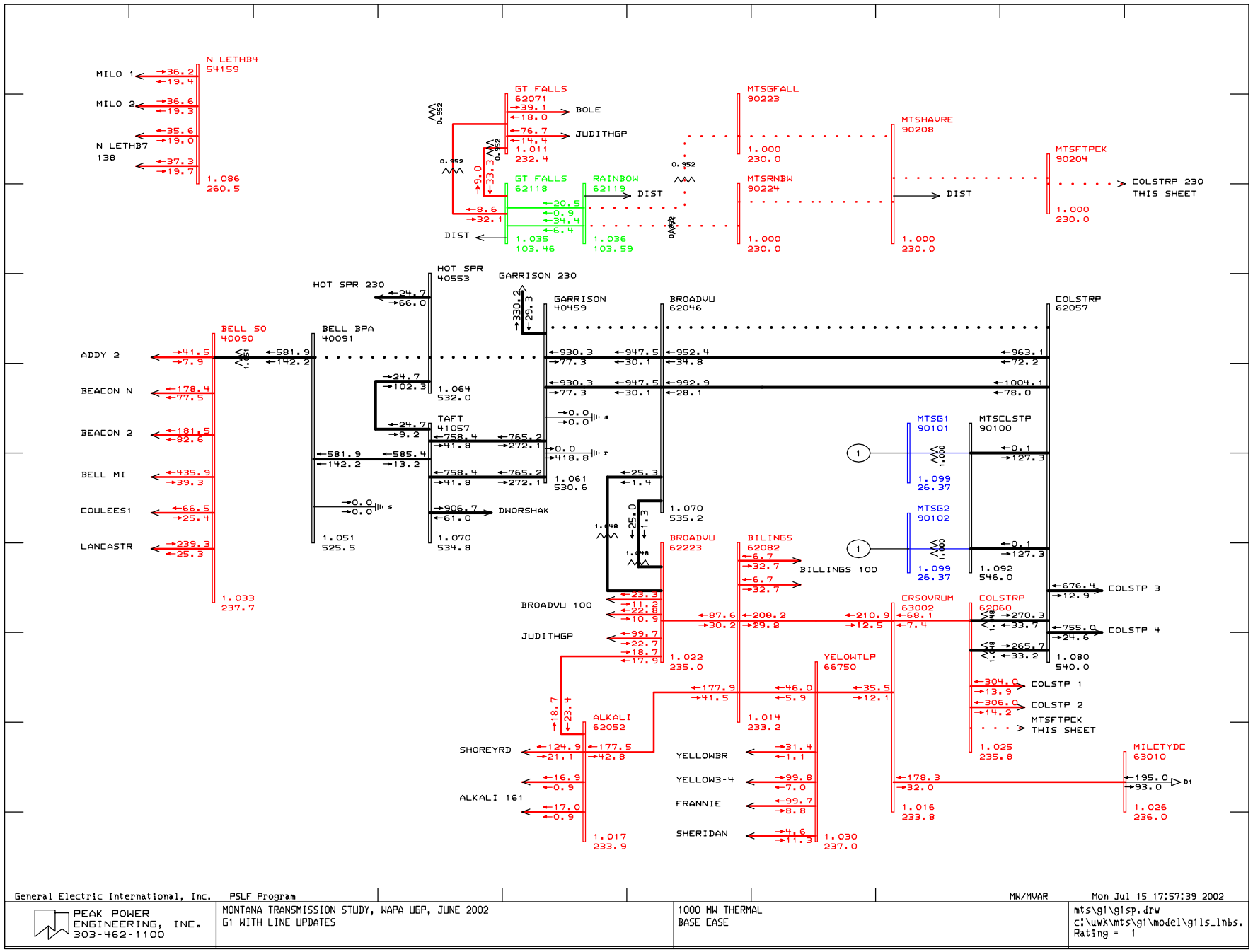
- G1 - Generator 1, synonymous with Project 1
- lsbs - Light Summer Base
- hsbs - Heavy Summer Base
- sp - schedule to Spokane
- slc - schedule to Salt Lake City
- den - schedule to Denver
- lb or let - schedule to N. Lethbridge

Example: A filename or title description containing the string “G1sp_l2” represents Project 1 Line 2 scheduled to Spokane.

Each case includes the following data:

- Power Flow Plots
- Rate Reports
- Voltage Reports
- Area Interchange Summaries
- Area Tie Line Summaries
- Loss Reports

B.1 lsbs


N LETHB4
54159
MILO 1
MILO 2
N LETHB7
138
1.086
260.5
GT FALLS
62071
BOLE
JUDITHGP
1.011
232.4
GT FALLS
62118
RAINBOW
62119
DIST
1.035
103.46
1.036
103.59
MTSGFALL
90223
1.000
230.0
MTSRNBW
90224
1.000
230.0
MTSHAVRE
90208
1.000
230.0
MTSFTPCK
90204
COLSTRP 230
THIS SHEET
1.000
230.0
HOT SPR
40553
HOT SPR 230
GARRISON 230
GARRISON
40459
BROADVU
62046
COLSTRP
62057
BELL SO
40090
BELL BPA
40091
ADDY 2
BEACON N
BEACON 2
BELL MI
COULEES1
LANCASTR
1.033
237.7
1.051
525.5
1.064
532.0
TAFT
41057
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530.6
DWORSHAK
1.070
534.8
1.070
535.2
BROADVU
62223
BROADVU 100
JUDITHGP
1.022
235.0
BILINGS
62082
BILLINGS 100
MTSG1
90101
MTSG2
90102
1.099
26.37
MTSCLSTP
90100
1.092
546.0
COLSTP 3
COLSTP 4
CRSOVRUM
63002
COLSTRP
62060
1.080
540.0
COLSTP 1
COLSTP 2
MTSFTPCK
THIS SHEET
1.025
235.8
YELOWTLP
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1.014
233.2
1.016
233.8
1.030
237.0
ALKALI
62052
SHOREYRD
ALKALI 161
1.017
233.9
YELLOWBR
YELLOW3-4
FRANNIE
SHERIDAN
MILCTYDC
63010
1.026
236.0
General Electric International, Inc.
PSLF Program
MW/MVAR
Mon Jul 15 17:57:39 2002
PEAK POWER
ENGINEERING, INC.
303-462-1100
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 WITH LINE UPDATES
1000 MW THERMAL
BASE CASE
mts\g1\g1sp.drw
c:\uwk\mts\g1\model\g11s_lnbs.
Rating = 1

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002

Percent Loading Summary -- using rating 1 - 100.0 percent of rating

----------from----------				---------- to ----------								rate	per cent	
--no.--	--name--	-kv-	-ar-	--no.--	--name--	-kv-	-ar-	ck	---mw---	-mvar-	-mva--	------	loading	
54083	E EDMON9	138	54	55938	STEL TAP	138	54	22	197.9	1.5	197.9	468.6A	169.9	F
54503	STELCOA9	138	54	55938	STEL TAP	138	54	22	-197.3	-0.1	197.3	497.9A	159.8	F
55015	DOME EA9	14	54	55525	163ST2	240	54	T2	-66.0	-5.3	66.2	45.0M	148.3	T
54506	BELLAMY4	240	54	54518	ARGYLL E	240	54	04	81.2	84.2	117.0	240.6A	134.0	T
54062	BARDO 7	138	54	54065	N HOLDE9	138	54	74	82.0	-53.0	97.7	355.6A	111.9	F
54154	E CALGAR	240	54	54161	SARCEE 4	240	54	16	-91.2	365.6	376.8	801.1A	110.9	T
54681	NEVIS 7	138	54	54823	NEVIS 9	138	54	1	33.2	15.6	36.7	33.3M	110.2	F
50459	KIT287	287	50	51075	KIT B5	13	50	5	80.3	23.6	83.7	79.0M	106.0	F
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	12	144.0	-51.7	153.0	156.5M	103.0	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	34	144.0	-51.7	153.0	156.5M	103.0	T
54290	BALZAC G	138	54	55290	BALZAC 1	14	54	T1	107.1	13.1	107.9	105.0M	102.8	F
41304	COUGAR T	7	40	46211	COUGAR T	115	40	1	28.0	-7.9	29.1	30.0M	100.8	T
54079	MILLAR 7	138	54	55102	MILLARA9	14	54	T2	55.6	29.0	62.7	62.5M	100.4	F

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V12.0
WESTERN SYSTEMS COORDINATING COUNCIL
2002 LS2B APPROVED OPERATING CASE

overvoltage summary > 1.100000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54054	LAMOURE4	240	1.1046	54081	METIS644	240	1.1120	54090	BICKERD4	240	1.1205
54103	DEERLAN4	240	1.1029	54121	ELLERSLI	240	1.1124	54126	WABAMUN4	240	1.1072
54128	SUNDANM9	240	1.1080	54129	E EDMON4	240	1.1084	54130	N CALDE4	240	1.1056
54131	N BARRH4	240	1.1049	54150	LANGDON2	500	1.1250	54329	KEEPHIL4	240	1.1222
54441	946/947X	240	1.1124	54505	JASPER 4	240	1.1078	54506	BELLAMY4	240	1.1213
54509	ARGYLL W	240	1.1206	54512	DOME T29	240	1.1119	54513	LAMBTON4	240	1.1090
54514	CLOVERB4	240	1.1050	54518	ARGYLL E	240	1.1201	54519	CASTLTX2	240	1.1045
54521	PETROLIA	240	1.1140	54524	GENESEE4	240	1.1210	54675	PAINTRT7	240	1.1015
54681	NEVIS 7	138	1.1099	54806	946/947N	240	1.1084	54844	709S702T	138	1.1092
54978	EAST IN4	240	1.1085	55891	904AL TP	240	1.1085	55969	770S701T	138	1.1087
51017	KMS230	230	1.1064								

overvoltage summary > 1.050000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54003	COLINTO9	138	1.0523	54007	BOYLE 9	138	1.0564	54012	FOX CREE	138	1.0666
54013	KAYBOB 9	138	1.0717	54014	GULF RO9	138	1.0819	54015	MTN COA9	138	1.0653
54016	FLATBUS9	138	1.0542	54017	COLD CR7	138	1.0666	54019	WESGEN T	138	1.0531
54020	EDSON A9	138	1.0624	54021	WESGEN 7	138	1.0556	54054	LAMOURE4	240	1.1046
54069	JARROW 9	138	1.0542	54073	IPPL ST9	138	1.0585	54075	SEDGEWI9	138	1.0508
54076	BUFFALO9	138	1.0545	54077	BIGSTON4	240	1.0949	54078	CHEVRON7	138	1.0717
54081	METIS644	240	1.1120	54082	BICKERD7	138	1.0718	54090	BICKERD4	240	1.1205
54097	BIG HOR9	138	1.0675	54103	DEERLAN4	240	1.1029	54111	SANDHIL7	138	1.0794
54121	ELLERSLI	240	1.1124	54125	SUNDANL9	138	1.0654	54126	WABAMUN4	240	1.1072
54128	SUNDANM9	240	1.1080	54129	E EDMON4	240	1.1084	54130	N CALDE4	240	1.1056
54131	N BARRH4	240	1.1049	54134	DALEHUR9	138	1.0656	54139	GAETZ 4	240	1.0751
54141	HIGHVAL9	138	1.0652	54142	WILLESD4	240	1.0883	54144	RED DEE4	240	1.0671
54147	BENALTO4	240	1.0665	54148	E CROSS4	240	1.0574	54150	LANGDON2	500	1.1250
54153	BRAZEAU4	240	1.0977	54155	SAGITAW4	240	1.0591	54157	PEIGAN 4	240	1.0705
54159	N LETHB4	240	1.0856	54200	848S901T	240	1.0730	54232	PANCAN 9	138	1.0792
54233	DOME EM7	138	1.0794	54258	PLAMOND9	138	1.0551	54259	LAC LA 9	138	1.0996
54260	WINEFRE9	138	1.0966	54269	COALSPU7	138	1.0846	54281	MILO 2	240	1.0684
54285	LEISMER9	240	1.0825	54287	GREGG R9	138	1.0959	54298	ALB NEWS	240	1.0502
54302	MARIONA9	138	1.0652	54308	FLATLK-3	138	1.0559	54325	CHEV KG9	138	1.0717
54326	COAL VA9	138	1.0834	54329	KEEPHIL4	240	1.1222	54335	W BROOK4	240	1.0589
54362	EDGERTO7	138	1.0548	54381	FLATLK-1	138	1.0558	54412	BENBOW 9	138	1.0717
54441	946/947X	240	1.1124	54505	JASPER 4	240	1.1078	54506	BELLAMY4	240	1.1213
54509	ARGYLL W	240	1.1206	54512	DOME T29	240	1.1119	54513	LAMBTON4	240	1.1090
54514	CLOVERB4	240	1.1050	54518	ARGYLL E	240	1.1201	54519	CASTLTX2	240	1.1045
54521	PETROLIA	240	1.1140	54524	GENESEE4	240	1.1210	54557	WESLY C4	240	1.0613
54558	WESLY C7	138	1.0651	54559	CARMON 9	138	1.0630	54560	PEACE/29	138	1.0623
54561	DIASHOW7	138	1.0624	54567	FRIEDEN7	138	1.0537	54571	MERCER 9	138	1.0735
54572	MERC TAP	138	1.0738	54576	CRYST L7	138	1.0749	54578	SADHL TP	138	1.0598
54579	SADDLE 9	138	1.0529	54580	FLYSHT/2	138	1.0630	54581	WAP JCT7	138	1.0513
54584	ALBRIGHT	138	1.0569	54585	P&G 7	138	1.0570	54588	BIG MTN7	138	1.0614
54589	DOME CU7	138	1.0736	54590	BRDGE C7	138	1.0619	54593	DONNELL9	138	1.0661
54594	TAP7L487	138	1.0690	54595	TRIANGL7	138	1.0645	54596	VALLEYV9	138	1.0777
54598	BEZANSON	138	1.0756	54599	L. SMOKY	240	1.0645	54600	L.SMOKY7	138	1.0840
54601	STURGEO7	138	1.0838	54606	SIMONET9	138	1.0843	54607	FOXCRK/2	138	1.0643
54608	GOOSE R9	138	1.0662	54612	RUTH LA7	138	1.0925	54613	RUTH LK7	138	1.0929
54618	PARS CR7	138	1.0897	54619	HANGSTO9	138	1.0871	54621	MITS E.4	240	1.0748
54622	MITS E.7	138	1.0980	54623	AEC MILL	138	1.0970	54624	OTAUWAU7	138	1.0978
54632	LOU CR.4	240	1.0638	54633	LOU CR.7	138	1.0596	54634	SARHLK/2	138	1.0532
54636	ESSO JU7	138	1.0543	54637	MORSE RV	138	1.0548	54639	VIRGINI9	138	1.0521
54643	WOLF LK9	138	1.0698	54646	MARG LK4	240	1.0781	54647	MARG LK7	138	1.0829
54648	LACOREY9	138	1.0806	54649	ETHEL L7	138	1.0671	54652	BONNY 9	138	1.0838
54654	BONN SVC	138	1.0838	54655	WHITFISH	240	1.0951	54656	WHITBY 7	138	1.0841
54657	VILNA 9	138	1.0819	54663	IRISH C9	138	1.0616	54665	BUFALOTP	138	1.0545
54666	VERMILO7	138	1.0596	54670	HILL 9	138	1.0685	54675	PAINTRT7	240	1.1015
54680	NEVIS 4	240	1.0776	54681	NEVIS 7	138	1.1099	54685	3HILLS/3	138	1.0615
54691	MICH. C9	138	1.0997	54693	WINT HI9	138	1.0934	54694	BULLPON9	138	1.0872
54700	MCNEILL	138	1.0795	54701	OYEN 7	138	1.0600	54707	SHEER 14	240	1.0545
54709	ANDERSO4	240	1.0547	54710	ANDERSON	138	1.0846	54711	SHEER 24	240	1.0535
54714	JAROW TP	138	1.0542	54715	BAT. RV7	138	1.0809	54721	BAT RV79	240	1.0990
54723	CORDEL 4	240	1.0990	54729	PRIM TAP	138	1.0650	54730	PRIMROSE	138	1.0710
54798	800S701T	138	1.0612	54802	STURGEO9	138	1.0860	54806	946/947N	240	1.1084
54809	732S901T	240	1.0752	54814	717S701T	138	1.0634	54818	VERMILA9	138	1.0803
54819	TER 70A9	138	1.0630	54822	766S901T	240	1.0624	54823	NEVIS 9	138	1.0747
54827	MONITOR9	138	1.0519	54828	767S701T	138	1.0935	54836	MILNERB9	138	1.0720
54838	848S902T	240	1.0734	54840	732S902T	240	1.0517	54844	709S702T	138	1.1092
54847	BAT RV80	240	1.0990	54962	KAYBOBTP	138	1.0717	54978	EAST IN4	240	1.1085
54983	MARION T	138	1.0653	54984	HIGHVL T	138	1.0652	54988	CROSSF T	240	1.0574
54995	W.GRN TP	240	1.0883	55003	SANDYPT9	138	1.0794	55007	ALGAR-39	138	1.0918
55008	MARIANA7	138	1.0931	55072	SYNC_D04	240	1.0652	55073	AURORA 4	240	1.0698

55117	CLAIR L	138	1.0736	55118	POPLAR 7	138	1.0599	55147	MILNERC9	138	1.0825
55226	WABASCA9	240	1.0677	55260	EMP LIQ7	138	1.0774	55272	FIELDGA9	138	1.0534
55280	BRINTNEL	240	1.0629	55352	GRND CTR	138	1.0684	55367	VEGREVL9	138	1.0539
55515	PRIMROSE	138	1.0563	55820	FICKLE 9	138	1.0675	55891	904AL TP	240	1.1085
55909	DALEH TP	138	1.0656	55910	OBED TAP	138	1.0656	55911	EMPLIQTP	138	1.0779
55912	740L JNC	138	1.0846	55913	G.ROBB T	138	1.0825	55924	CH KGT T	138	1.0717
55943	MILO 1	240	1.0684	55969	770S701T	138	1.1087	50010	COM132	132	1.0509
50016	CKY230	230	1.0520	50020	CMS230	230	1.0500	50036	RBW230	230	1.0582
50037	PEM230	230	1.0614	50038	RBW230-1	230	1.0573	50182	ARN132	132	1.0675
50185	ALZ230	230	1.0610	50186	ROS230	230	1.0718	50187	BRT230	230	1.0684
50188	BUT230	230	1.0500	50190	CBN230	230	1.0531	50191	ROS360	360	1.0530
50192	WAH360	360	1.0535	50193	BRT360	360	1.0500	50313	VIT132	132	1.0704
50314	PVO133	132	1.0699	50315	PVO132	132	1.0703	50316	LDY132	132	1.0524
50318	JPT132	132	1.0715	50319	COC132	132	1.0681	50320	HMC132	132	1.0679
50321	PHY132	132	1.0566	50322	CFT132	132	1.0661	50323	DMR132	132	1.0838
50324	PAL132	132	1.0666	50325	GCL132	132	1.0681	50326	NFD132	132	1.0725
50327	ASH132	132	1.0718	50328	PUN132	132	1.0563	50330	LDR132	132	1.0500
50334	KGH132	132	1.0609	50335	UTA132	132	1.0612	50336	PVL132-2	132	1.0732
50337	LDY122	132	1.0712	50338	CMX132	132	1.0578	50339	PVL132	132	1.0732
50342	SCA132	132	1.0500	50343	KSH132-2	132	1.0732	50344	SHA1	132	1.0715
50345	KSH132	132	1.0726	50346	SHA2	132	1.0757	50347	GOW132	132	1.0862
50348	GTP132	132	1.0901	50349	CLD132	132	1.0940	50350	SOO132	132	1.0954
50351	JOR132	132	1.0991	50352	PML132	132	1.0592	50353	WOS132	132	1.0561
50354	GLSTP17	132	1.0748	50355	GLSTP18	132	1.0719	50356	DND132	132	1.0855
50357	LTZ115	132	1.0713	50358	LTZ116	132	1.0713	50359	JHT132	132	1.0500
50377	LDYTP138	132	1.0526	50381	PVLTP116	132	1.0732	50382	HWDTP122	132	1.0716
50383	LDYTP122	132	1.0712	50385	CMXTP102	132	1.0559	50386	CMXTP101	132	1.0598
50387	PVLTP115	132	1.0732	50390	KSHTP11	132	1.0728	50391	KSHTP14	132	1.0735
50393	SHATP10	132	1.0716	50394	SHATP14	132	1.0757	50395	SALTP17	132	1.0733
50396	SALTP18	132	1.0733	50399	LTZTP115	132	1.0713	50400	LTZTP116	132	1.0713
50403	CMX132-2	132	1.0543	50460	KMO287	287	1.0539	50463	SKA500	500	1.0502
50545	BLW230	230	1.0703	50546	SCK230	230	1.0657	50547	HMH230	230	1.0629
50548	BLM230	230	1.0525	50549	QNT230	230	1.0518	50550	QRP230	230	1.0700
50551	TLR230	230	1.0523	50553	BCR230	230	1.0523	50554	RBF230	230	1.0714
50556	LAP230	230	1.0501	50557	SNK230	230	1.0517	50560	KDS500	500	1.0565
50562	GLN500	500	1.0556	50677	MCK138	138	1.0538	50678	AVO138	138	1.0559
50679	BLU138	138	1.0629	50680	VLM138	138	1.0694	50686	SCO138	138	1.0688
50687	ABA138	138	1.0686	50701	REV500	500	1.0500	50729	PRI138TP	138	1.0687
50782	CBK230	230	1.0502	50783	SEL230	230	1.0534	50785	SEV230	230	1.0519
50786	INV230	230	1.0514	50789	AAL230	230	1.0506	50791	CBK500	500	1.0802
50792	SEL500	500	1.0500	50899	ABA138TP	138	1.0686	50913	HWD132-2	132	1.0694
50914	HWDTP112	132	1.0694	50922	DNDTAP	132	1.0861	50923	HSY-PH	132	1.0904
50924	ESQ-PH	132	1.0855	50928	SCG IPP	132	1.0500	50932	IPH132	132	1.0679
50933	JUL132	132	1.0578	50934	JULTP130	132	1.0609	51017	KMS230	230	1.1064
51019	OYR132B1	132	1.0540	51020	OYR132B2	132	1.0563	51021	OYR T101	132	1.0545
51022	OYR T119	132	1.0570	51024	QLC132B1	132	1.0757	51025	QLC132B2	132	1.0756
51040	ICG132	132	1.0500	51045	ALH230	230	1.0547	51051	PGS132	132	1.0699
51052	PGS-105T	132	1.0699	51053	PGS-114T	132	1.0699	60085	BRIDGER	345	1.0500
60240	MIDPOINT	500	1.0630	62012	TOWN2	500	1.0852	62013	TOWN1	500	1.0852
62033	ANA BPA	115	1.0512	62046	BROADVU	500	1.0706	62053	BROADV&2	500	1.0634
62054	BROADV&1	500	1.0641	62057	COLSTRP	500	1.0800	40045	ALLSTON	500	1.0769
40051	ALVEY	500	1.0813	40061	ASHE	500	1.0800	41184	BALD MT	115	1.0514
40091	BELL BPA	500	1.0511	40111	BIG EDDY	500	1.0803	43049	BOARD F	500	1.0800
47013	BRIDGPRT	115	1.0548	40155	BUCKLEY	500	1.0832	45029	BURNS	500	1.0668
45035	CAPTJACK	500	1.0755	46209	CARMEN	115	1.0524	42315	CASCADEP	115	1.0582
41311	CELILO1	500	1.0801	41312	CELILO2	500	1.0801	40233	CHIEF JO	500	1.0800
42316	CLE ELUM	115	1.0586	40269	CONNEL T	115	1.0510	40271	CONNELL	115	1.0541
40287	COULEE	500	1.0810	40302	COVINGT4	500	1.0770	40306	COVINGT5	500	1.0775
43123	COYOTE	500	1.0834	40323	CUSTER W	500	1.0538	45095	DIXONVLE	500	1.0779
40369	DWORSHAK	500	1.0722	42395	EASTON	115	1.0601	40381	ECHOLAKE	500	1.0825
40451	GAR1EAST	500	1.0817	40453	GAR2EAST	500	1.0817	40459	GARRISON	500	1.0613
40485	GREEN PT	115	1.0520	40489	GRIZZLY	500	1.0725	40499	HANFORD	500	1.0872
47165	HANLY R1	115	1.0509	40517	HATTON T	115	1.0522	40521	HATWAI	500	1.0739
45137	HERMIST	230	1.0509	41212	HILLS CR	115	1.0500	40553	HOT SPR	500	1.0641
42405	HYAK	115	1.0609	40585	JOHN DAY	500	1.0800	40601	KEELER	500	1.0758
45262	KFALLS	500	1.0794	42411	KITTITAS	115	1.0609	40629	LANE	500	1.0717
40665	LIT GOOS	500	1.0805	40679	LOW GRAN	500	1.0800	40683	LOW MON	500	1.0800
40687	MALIN	500	1.0736	40693	MAPLE VL	500	1.0842	40699	MARION	500	1.0807
40711	MCLOUGLN	500	1.0802	40721	MCNARY	345	1.0513	40723	MCNARY	500	1.0815
45197	MERIDINP	500	1.0798	40749	MONROE	500	1.0787	42429	NCLE ELM	115	1.0582
40797	OLYMPIA	500	1.0799	40809	OSTRNDER	500	1.0796	40821	PAUL	500	1.0800
40827	PEARL	500	1.0798	40837	PONDROSA	500	1.0761	40869	RAVER	500	1.0806
40887	RINGOLD	115	1.0500	43485	ROUND BU	500	1.0696	40913	SACJAWEA	500	1.0813
40917	SACJWA T	500	1.0817	40941	SANTIAM	500	1.0804	40949	SATSOP	500	1.0820
40957	SCHULTZ	500	1.0926	40973	SICKLER	500	1.0842	40989	SLATT	500	1.0825
41043	SUMMER L	500	1.0736	45289	SWIFT	230	1.0500	41051	TACOMA	500	1.0815
41057	TAFT	500	1.0697	41095	TROUTDAL	500	1.0825	41103	UNDRWOOD	115	1.0513
41113	VANTAGE	500	1.0905	47099	WELLS	115	1.0623	42467	WOLDALE	115	1.0597
42314	X-POINT	200	1.0597	65510	EMERY	345	1.0500	64074	MILLERS	120	1.0556
64165	SQAW VLY	120	1.0605	64182	SANDIA	120	1.0555	64229	SUMMIT 2	115	1.0507
52226	PRI138	138	1.0696	52229	KER138	138	1.0766	52230	HED138	138	1.0745
52291	DKL138	138	1.0582	52300	LEE138T3	138	1.0580	52301	LEE138T4	138	1.0580

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  52302 LEE138C   138 1.0580    52303 JOR138TP  138 1.0576    52304 DGB138    138 1.0568
  52306 SEX138    138 1.0583    52307 GLE138    138 1.0584    52308 REC138    138 1.0587
  52309 SAU138    138 1.0572    52310 SPR138TP  138 1.0572    52313 HOL138    138 1.0571
  52314 OKM138    138 1.0564    52319 JOR138    138 1.0574    52426 MAS138    138 1.0745
  52809 LEE-T3    230 1.0588    52810 LEE-T4A   230 1.0581    52811 LEE-T4B   230 1.0599
  52812 LEE-T4C   230 1.0585    52813 LEE-T4D   230 1.0586    52815 PRI-T2    138 1.0729


    undervoltage summary < 0.900000
--no.-- --name-- -kv- (v pu)  --no.-- --name-- -kv- (v pu)  --no.-- --name-- -kv- (v pu)



    undervoltage summary < 0.950000
--no.-- --name-- -kv- (v pu)  --no.-- --name-- -kv- (v pu)  --no.-- --name-- -kv- (v pu)

  54551 RING CK7  138 0.9484    54796 791S701T  138 0.9196    54835 791S702T  138 0.9260
  50781 NTL VR    138 0.9447
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GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V12.0
WESTERN SYSTEMS COORDINATING COUNCIL
2002 LS2B APPROVED OPERATING CASE

		generation capacity	generation on-line	--- load categories ---- power	current	imped.	shunt	-- svd --	net inter	losses	slack bus
area name	ALBERTA										
	mw	10743.6	6887.3	6274.4	0.0	0.0	0.0	0.0	200.4	412.4	37.5
54	mvar	4941.5	852.3	1997.1	0.0	0.0	-21.7	-1195.6	-19.2	91.8	20.4
area name	B.C.HYDRO										
	mw	14043.0	8254.7	6035.1	0.0	0.0	0.0	0.0	1799.8	419.8	260.9
50	mvar	6475.0	225.2	2359.8	0.0	0.0	2924.0	2703.5	-386.1	-7376.0	1.1
area name	IDAHO										
	mw	4676.4	3192.7	1955.0	0.0	0.0	0.0	0.0	1066.3	171.4	177.3
60	mvar	2192.5	558.8	501.3	0.0	0.0	-96.2	0.0	-377.3	531.0	25.7
area name	MONTANA										
	mw	3502.2	3004.4	1207.7	0.0	0.0	0.4	0.0	1700.6	95.7	736.4
62	mvar	1309.0	404.9	524.8	0.0	0.0	-121.3	26.4	-444.0	419.0	152.8
area name	NORTHWEST										
	mw	43404.3	17473.9	16651.6	0.0	0.0	0.0	0.0	253.5	568.8	579.5
40	mvar	15534.6	198.7	5157.0	0.0	0.0	-1726.4	2143.4	1169.1	-6544.3	-308.9
area name	PACE										
	mw	6242.0	5528.2	4750.0	0.0	0.0	0.0	0.0	589.7	188.5	77.2
65	mvar	3201.9	530.2	1528.0	0.0	0.0	-528.2	0.0	-173.8	-295.8	12.6
area name	PSCOLORADO										
	mw	5792.0	4234.7	4858.1	0.0	0.0	0.0	0.0	-744.4	121.0	102.7
70	mvar	3667.3	621.6	1835.0	0.0	0.0	0.0	-1397.7	49.8	134.4	3.8
area name	SIERRA										
	mw	1901.7	1069.7	1075.2	0.0	0.0	0.0	0.0	-36.3	30.8	99.7
64	mvar	925.4	-25.6	280.4	0.0	0.0	-158.5	73.9	16.2	-237.5	7.8
area name	W KOOTENAY										
	mw	763.5	498.0	486.1	0.0	0.0	0.0	0.0	0.4	11.5	98.0
52	mvar	450.0	8.4	160.7	0.0	0.0	-79.2	-71.9	-8.8	7.6	-3.5
area name	WAPA R.M.										
	mw	6091.6	3956.3	2784.2	0.0	0.0	0.0	0.0	1050.4	121.7	411.4
73	mvar	2883.8	-184.9	950.8	0.0	0.0	-299.3	-177.1	-206.0	-453.5	16.2
area name	WAPA U.M.										
	mw	61.8	28.9	-120.2	0.0	0.0	0.0	0.0	140.8	8.3	28.9
63	mvar	34.0	1.8	117.5	0.0	0.0	-79.0	4.5	-5.8	-35.4	1.8
TOTL	mw	97222.1	54128.8	45957.1	0.0	0.0	0.4	0.0	6021.3	2150.0	
	mvar	41615.0	3191.5	15412.5	0.0	0.0	-185.8	2109.5	-386.0	-13758.7	

Area Interchange Summary

		mw	mvar
FROM AREA	54 ALBERTA		
TO AREA	50 B.C.HYDRO	200.4	-19.2
TOTAL		200.4	-19.2

FROM AREA	50 B.C.HYDRO	mw	mvar
TO AREA	54 ALBERTA	-200.4	19.2
TO AREA	40 NORTHWEST	2000.7	-414.2
TO AREA	52 W KOOTENAY	-0.4	8.8
TOTAL		1799.8	-386.1
FROM AREA	60 IDAHO	mw	mvar
TO AREA	40 NORTHWEST	948.9	-336.3
TO AREA	65 PACE	249.9	-23.4
TO AREA	64 SIERRA	-132.6	-17.5
TOTAL		1066.3	-377.3
FROM AREA	62 MONTANA	mw	mvar
TO AREA	40 NORTHWEST	1784.2	-451.3
TO AREA	65 PACE	21.7	4.7
TO AREA	63 WAPA U.M.	-105.3	2.6
TOTAL		1700.6	-444.0
FROM AREA	40 NORTHWEST	mw	mvar
TO AREA	50 B.C.HYDRO	-2000.7	414.2
TO AREA	60 IDAHO	-948.9	336.3
TO AREA	26 LADWP	1956.0	411.8
TO AREA	62 MONTANA	-1784.2	451.3
TO AREA	30 PG AND E	2897.8	-424.5
TO AREA	64 SIERRA	133.4	-20.1
TOTAL		253.5	1169.1
FROM AREA	65 PACE	mw	mvar
TO AREA	14 ARIZONA	270.5	36.8
TO AREA	60 IDAHO	-249.9	23.4
TO AREA	26 LADWP	66.9	-133.0
TO AREA	62 MONTANA	-21.7	-4.7
TO AREA	18 NEVADA	154.8	-81.3
TO AREA	64 SIERRA	23.7	9.1
TO AREA	19 WAPA L.C.	177.1	-26.4
TO AREA	73 WAPA R.M.	168.4	2.3
TOTAL		589.7	-173.8
FROM AREA	70 PSCOLORADO	mw	mvar
TO AREA	73 WAPA R.M.	-744.4	49.8
TOTAL		-744.4	49.8
FROM AREA	64 SIERRA	mw	mvar
TO AREA	60 IDAHO	132.6	17.5
TO AREA	26 LADWP	-30.7	6.3
TO AREA	40 NORTHWEST	-133.4	20.1
TO AREA	65 PACE	-23.7	-9.1
TO AREA	30 PG AND E	6.2	-15.5
TO AREA	24 SOCALIF	12.9	-3.1
TOTAL		-36.3	16.2
FROM AREA	52 W KOOTENAY	mw	mvar
TO AREA	50 B.C.HYDRO	0.4	-8.8
TOTAL		0.4	-8.8
FROM AREA	73 WAPA R.M.	mw	mvar
TO AREA	10 NEW MEXICO	334.8	-92.9
TO AREA	65 PACE	-168.4	-2.3
TO AREA	70 PSCOLORADO	744.4	-49.8
TO AREA	19 WAPA L.C.	175.1	-64.2
TO AREA	63 WAPA U.M.	-35.5	3.2

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  TOTAL                                          1050.4     -206.0

FROM AREA   63 WAPA U.M.                           mw        mvar
  TO AREA   62 MONTANA                           105.3       -2.6
  TO AREA   73 WAPA R.M.                          35.5       -3.2
  TOTAL                                          140.8       -5.8
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AREA TIE LINE SUMMARY

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V12.0
WESTERN SYSTEMS COORDINATING COUNCIL
2002 LS2B APPROVED OPERATING CASE

--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
54150	LANGDON2	500	50791	CBK500	500	1	193.16	4.17	f
54205	COLEMAN7	138	50776	NTL138	138	1	6.34	-20.67	t
54273	POCATER7	138	50830	FRO T274	138	1	0.92	-2.70	t
from area 54 to area 50 B.C.HYDRO							200.41	-19.20	
Total from area 54 ALBERTA							200.41	-19.20	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
62004	ANACOND	230	40457	GARRISON	230	1	-80.48	6.94	f
62004	ANACOND	230	40457	GARRISON	230	2	-87.58	3.85	f
62009	RATTLE S	161	40867	RATTLE S	230	1	-63.16	-22.36	t
62012	TOWN2	500	40453	GAR2EAST	500	2	930.26	-199.40	t
62013	TOWN1	500	40451	GAR1EAST	500	1	930.26	-199.40	t
62066	KERR	115	40391	ELMO	115	1	15.82	-22.16	f
62072	OVANDO	230	40457	GARRISON	230	1	-48.80	11.23	t
62072	OVANDO	230	40551	HOT SPR	230	1	94.14	6.41	t
62085	CROWCR B	115	48055	BURKAVAB	115	1	45.54	-18.10	t
62086	THOMSON	115	48053	BURKAVAA	115	1	48.17	-18.31	t
from area 62 to area 40 NORTHWEST							1784.16	-451.31	
62030	PTRSNFLT	230	65025	AMPS	230	1	69.42	12.47	t
62045	BLGS PHA	230	66750	YELOWTLP	230	1	-46.01	-5.99	t
62061	RMRK PHA	161	66755	YELOWTLP	161	1	-22.96	-5.87	f
62084	DILLON S	161	65155	BIGGRASS	161	1	21.27	4.09	t
from area 62 to area 65 PACE							21.71	4.70	
62023	GT FALLS	161	63008	HAVRE	161	1	18.48	-10.61	f
62024	RAINBOW	161	63015	VERONA	161	1	16.74	-10.83	f
62027	SHELBY	115	63014	TIBERTAP	115	1	2.16	0.14	f
62051	HARDIN	230	63002	CRSOVRUM	230	1	69.16	16.54	t
62056	HUNTLEY	230	63002	CRSOVRUM	230	1	-211.84	7.35	t
from area 62 to area 63 WAPA U.M.							-105.30	2.58	
Total from area 62 MONTANA							1700.57	-444.02	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
40145	BOUNDARY	230	50822	NLYPHS	230	1	-239.74	2.37	f
40323	CUSTER W	500	50194	ING500	500	1	-887.85	207.14	t
40323	CUSTER W	500	50194	ING500	500	2	-873.08	204.67	t
from area 40 to area 50 B.C.HYDRO							-2000.67	414.18	
45029	BURNS	500	60240	MIDPOINT	500	1	-995.66	360.71	t
45103	ENTERPRS	230	60150	HELLSCYN	230	1	-19.06	-13.65	f
40507	HARNEY	115	61826	HINES	115	1	-15.61	10.68	f
40621	LAGRANDE	230	60192	LADD	230	1	9.25	-10.91	f
48197	LOLO	230	60278	IMNAHA	230	1	72.13	-10.49	t
from area 40 to area 60 IDAHO							-948.94	336.34	
41311	CELILO1	500	26097	SYLMAR1	230	1	388.82	62.88	f
41313	CELILO3	230	26098	SYLMAR3	230	1	589.18	142.96	f
41312	CELILO2	500	26099	SYLMAR2	230	1	388.82	62.86	f
41314	CELILO4	230	26100	SYLMAR4	230	1	589.18	143.08	f
from area 40 to area 26 LADWP							1956.00	411.78	
48053	BURKAVAA	115	62086	THOMSON	115	1	-48.17	18.31	f
48055	BURKAVAB	115	62085	CROWCR B	115	1	-45.54	18.10	f
40391	ELMO	115	62066	KERR	115	1	-15.82	22.16	t
40451	GAR1EAST	500	62013	TOWN1	500	1	-930.26	199.40	f
40453	GAR2EAST	500	62012	TOWN2	500	2	-930.26	199.40	f
40457	GARRISON	230	62072	OVANDO	230	1	48.80	-11.23	f
40457	GARRISON	230	62004	ANACOND	230	1	80.48	-6.94	t
40457	GARRISON	230	62004	ANACOND	230	2	87.58	-3.85	t
40551	HOT SPR	230	62072	OVANDO	230	1	-94.14	-6.41	f
40867	RATTLE S	230	62009	RATTLE S	161	1	63.16	22.36	f
from area 40 to area 62 MONTANA							-1784.16	451.31	
45035	CAPTJACK	500	30020	OLINDA	500	1	1067.90	-144.52	f
45087	DELTA	115	31468	CASCADE	115	1	71.13	-19.39	f
40687	MALIN	500	30005	ROUND MT	500	1	875.77	-122.30	f
40687	MALIN	500	30005	ROUND MT	500	2	883.03	-138.25	f

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from area  40 to area  30 PG AND E                              2897.83   -424.45

   40537 HIL TOP   230        64058 HIL TOP   345  1             133.44    -20.10   f
from area  40 to area  64 SIERRA                                 133.44    -20.10

Total from area  40 NORTHWEST                                    253.50   1169.05

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   66235 PINTO PS  345        14101 FOURCORN  345  1             270.45     36.79   t
from area  65 to area  14 ARIZONA                                270.45     36.79

   65075 ANTLOPE   230        60073 BRADY     230  1              35.55    -19.18   f
   65135 BENLOMND  345        60060 BORAH     345  1             -10.57     94.46   t
   65220 BRIDGER   230        60085 BRIDGER   345  1              -5.29     -4.20   t
   65220 BRIDGER   230        60085 BRIDGER   345  2              -5.38     -4.27   t
   65220 BRIDGER   230        60085 BRIDGER   345  3              -5.29     -4.20   t
   65665 GOSHEN    345        60085 BRIDGER   345  1            -606.31    -57.46   f
   65665 GOSHEN    345        60190 KINPORT   345  1             306.99      2.16   t
   65670 GOSHEN    161        60030 BLACKFT   161  1              81.95     -2.31   f
   65920 MALAD     138        60020 AMFLS     138  1             -19.95      0.72   t
   66565 TREASTON  230        60073 BRADY     230  1             -21.63     17.73   t
from area  65 to area  60 IDAHO                                 -249.93     23.45

   65995 MONA      345        26043 INTERMT   345  1              33.46    -66.48   f
   65995 MONA      345        26043 INTERMT   345  2              33.46    -66.48   f
from area  65 to area  26 LADWP                                   66.93   -132.96

   65025 AMPS      230        62030 PTRSNFLT  230  1             -69.42    -12.47   f
   65155 BIGGRASS  161        62084 DILLON S  161  1             -21.27     -4.09   f
   66750 YELOWTLP  230        62045 BLGS PHA  230  1              46.01      5.99   f
   66755 YELOWTLP  161        62061 RMRK PHA  161  1              22.96      5.87   t
from area  65 to area  62 MONTANA                                -21.71     -4.70

   66280 REDBUTTE  345        18002 HA PS     345  1             154.76    -81.31   f
from area  65 to area  18 NEVADA                                 154.76    -81.31

   66210 PAVANT    230        64124 UTAH-NEV  230  1              23.74      9.12   t
from area  65 to area  64 SIERRA                                  23.74      9.12

   66355 SIGURDPS  230        79031 GLENCANY  230  1             177.11    -26.45   t
from area  65 to area  19 WAPA L.C.                              177.11    -26.45

   65060 ANT MINE  230        73276 TEKLA     230  1              36.54     12.75   f
   65085 ASHLEY    138        79067 VERNAL    138  1             -47.98      5.37   t
   65192 BONANZA   138        79067 VERNAL    138  1              48.34     -2.78   t
   65193 BONANZA   345        79005 BEARS     345  1            -187.44    -11.13   f
   65305 CASPERPP  115        73167 REFNRYTP  115  1             -38.85     -0.18   f
   65305 CASPERPP  115        73042 CASPERLM  115  1              -0.02     -8.25   t
   65420 DAVEJOHN  230        73107 LAR.RIVR  230  1              84.19    -20.15   f
   65420 DAVEJOHN  230        73190 STEGALL   230  1              88.41    -18.23   f
   65425 DAVEJOHN  115        73070 GLENRCKN  115  1              70.85     -2.91   f
   65425 DAVEJOHN  115        73071 GLENRCKS  115  1              80.84     -0.09   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  1             -52.19      9.17   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  2             -52.19      9.17   f
   66278 RANGELY   138        79001 ARTESIA   138  1              -5.64     -6.18   f
   66278 RANGELY   138        79046 MEEKER    138  1              18.46     -4.80   f
   66305 RIVERTON  230        73170 RIVERTON  115  1               4.60      5.21   f
   66535 THERMOPL  230        73197 THERMOPL  115  1               2.59      5.93   t
   66540 THERPACE  115        73197 THERMOPL  115  1               6.82      4.38   t
   66720 WORLAND   115        73222 WORLANTP  115  1              -5.56      4.25   t
   66725 WYODAK    230        73148 OSAGE     230  1             102.62    -11.96   t
   66725 WYODAK    230        73168 RENO      230  1              54.09     -0.83   f
   66725 WYODAK    230        73294 HUGHES    230  1             107.11     -2.53   f
   66725 WYODAK    230        73282 WYODAK     69  1              11.61     13.90   f
   66725 WYODAK    230        73282 WYODAK     69  2               7.85      9.40   f
   66725 WYODAK    230        74016 WYGEN      14  1               0.00      0.00   f
   66750 YELOWTLP  230        73229 YELLOWBR  230  1            -166.68     12.77   t
from area  65 to area  73 WAPA R.M.                              168.39      2.27

Total from area  65 PACE                                         589.73   -173.79

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   70005 BRUSHCPP  115        73013 B.CK PS   115  1              42.00      2.48   f
   70005 BRUSHCPP  115        73013 B.CK PS   115  2              44.57      4.60   f
   70116 COBBLAKE  115        73044 COBBLKTP  115  1             -11.50     -1.10   f
   70122 COMANCHE  230        73477 FULLER    230  1              85.18     16.97   t
   70139 DANIELPK  230        73477 FULLER    230  1             -23.06      2.09   t
   70193 FTN VALL  115        73412 MIDWAYBR  115  1              11.71     -5.84   t
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70205	GRANDJCT	230	79036	GRANDJCT	345	1	-21.68	-12.02	f
70256	LAPORTPS	115	73105	LAPORTE	115	1	-13.32	-5.91	t
70274	MALTA	230	73138	MT.ELBRT	230	1	-69.85	6.78	f
70285	MIDWAYPS	115	73412	MIDWAYBR	115	1	20.22	-43.14	f
70286	MIDWAYPS	230	73413	MIDWAYBR	230	1	152.43	51.05	t
70287	MILL	115	73296	FRASER	115	1	-35.27	5.40	f
70308	PALMER	115	73414	MONUMENT	115	1	-14.44	3.39	t
70311	PAWNEE	230	73192	STORY	230	1	-88.07	-29.76	t
70327	PONCHA	115	79037	GUNNISON	115	1	-3.83	4.19	f
70350	RAWHIDE	24	73165	RAWHIDE	230	1	262.21	33.58	t
70358	RIFLE PS	230	79059	RIFLE WA	230	1	-67.89	27.21	f
70358	RIFLE PS	230	79250	AMATLAS	230	1	-49.95	-13.05	f
70375	SAN LUIS	230	79054	PONCHABR	230	1	-60.01	13.25	t
70410	ST.VRAIN	230	73116	LONGPEAK	230	1	-30.82	32.07	f
70470	WELD PS	115	73211	WELD LM	115	1	-16.11	122.25	f
70471	WELD PS	230	73212	WELD LM	230	1	-272.04	-84.74	f
70474	WINDSOR	230	73011	AULT	230	1	-223.63	-11.97	t
70476	WOODLAND	115	73400	EMIL AND	115	1	11.49	-0.05	f
70525	MTHARRIS	138	79038	HAYDEN	138	1	-5.59	-1.05	t
79033	GOREPASS	230	79039	HAYDEN	230	1	-188.03	-0.69	t
79033	GOREPASS	230	73072	GOREPASS	138	1	-3.11	5.45	f
79034	GRANDJCT	115	79048	MONTROSE	115	1	29.82	-6.64	t
79056	RIFLE CU	138	79046	MEEKER	138	1	-44.03	0.67	f
79057	RIFLE CU	230	79059	RIFLE WA	230	1	1.18	-52.22	t
79058	RIFLE CU	345	79014	CRAIG	345	1	-399.54	-18.61	f
79058	RIFLE CU	345	79036	GRANDJCT	345	1	393.86	18.81	f
79091	WOLCOTTP	230	79039	HAYDEN	230	1	-151.73	6.59	f
79173	COLBRAN	115	79174	MOLINA-L	115	1	0.00	-0.53	f
70351	RAWHIDEA	14	73165	RAWHIDE	230	1	0.00	0.00	t
70550	W CANON	115	73551	W CANON	230	1	-5.58	-19.68	t
from area 70 to area 73 WAPA R.M.							-744.38	49.82	
Total from area 70 PSCOLORADO							-744.38	49.82	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
79060	SANJN PS	345	10292	SAN_JUAN	345	1	334.78	-92.93	t
from area 73 to area 10 NEW MEXICO							334.78	-92.93	
73042	CASPERLM	115	65305	CASPERPP	115	1	0.02	8.25	f
73070	GLENRCKN	115	65425	DAVEJOHN	115	1	-70.85	2.91	t
73071	GLENRCKS	115	65425	DAVEJOHN	115	1	-80.84	0.09	t
73107	LAR.RIVR	230	65420	DAVEJOHN	230	1	-84.19	20.15	t
73148	OSAGE	230	66725	WYODAK	230	1	-102.62	11.96	f
73167	REFNRYTP	115	65305	CASPERPP	115	1	38.85	0.18	t
73168	RENO	230	66725	WYODAK	230	1	-54.09	0.83	t
73170	RIVERTON	115	66305	RIVERTON	230	1	-4.60	-5.21	t
73190	STEGALL	230	65420	DAVEJOHN	230	1	-88.41	18.23	t
73197	THERMOPL	115	66540	THERPACE	115	1	-6.82	-4.38	f
73197	THERMOPL	115	66535	THERMOPL	230	1	-2.59	-5.93	f
73222	WORLANTP	115	66720	WORLAND	115	1	5.56	-4.25	f
73229	YELLOWBR	230	66750	YELOWTLP	230	1	166.68	-12.77	f
73276	TEKLA	230	65060	ANT MINE	230	1	-36.54	-12.75	t
73282	WYODAK	69	66725	WYODAK	230	1	-11.61	-13.90	t
73282	WYODAK	69	66725	WYODAK	230	2	-7.85	-9.40	t
73294	HUGHES	230	66725	WYODAK	230	1	-107.11	2.53	t
79001	ARTESIA	138	66278	RANGELY	138	1	5.64	6.18	t
79005	BEARS	345	65193	BONANZA	345	1	187.44	11.13	t
79026	FLAMGORG	138	65565	FLAMGORG	230	1	52.19	-9.17	t
79026	FLAMGORG	138	65565	FLAMGORG	230	2	52.19	-9.17	t
79046	MEEKER	138	66278	RANGELY	138	1	-18.46	4.80	t
79067	VERNAL	138	65085	ASHLEY	138	1	47.98	-5.37	f
79067	VERNAL	138	65192	BONANZA	138	1	-48.34	2.78	f
74016	WYGEN	14	66725	WYODAK	230	1	0.00	0.00	t
from area 73 to area 65 PACE							-168.39	-2.27	
73011	AULT	230	70474	WINDSOR	230	1	223.63	11.97	f
73013	B.CK PS	115	70005	BRUSHCPP	115	1	-42.00	-2.48	t
73013	B.CK PS	115	70005	BRUSHCPP	115	2	-44.57	-4.60	t
73044	COBBLKTP	115	70116	COBBLAKE	115	1	11.50	1.10	t
73072	GOREPASS	138	79033	GOREPASS	230	1	3.11	-5.45	t
73105	LAPORTE	115	70256	LAPORTPS	115	1	13.32	5.91	f
73116	LONGPEAK	230	70410	ST.VRAIN	230	1	30.82	-32.07	t
73138	MT.ELBRT	230	70274	MALTA	230	1	69.85	-6.78	t
73165	RAWHIDE	230	70350	RAWHIDE	24	1	-262.21	-33.58	f
73165	RAWHIDE	230	70351	RAWHIDEA	14	1	-0.00	-0.00	f
73192	STORY	230	70311	PAWNEE	230	1	88.07	29.76	f
73211	WELD LM	115	70470	WELD PS	115	1	16.11	-122.25	t
73212	WELD LM	230	70471	WELD PS	230	1	272.04	84.74	t
73296	FRASER	115	70287	MILL	115	1	35.27	-5.40	t
73400	EMIL AND	115	70476	WOODLAND	115	1	-11.49	0.05	t

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   73412 MIDWAYBR  115        70193 FTN VALL  115  1            -11.71      5.84   f
   73412 MIDWAYBR  115        70285 MIDWAYPS  115  1            -20.22     43.14   t
   73413 MIDWAYBR  230        70286 MIDWAYPS  230  1           -152.43    -51.05   f
   73414 MONUMENT  115        70308 PALMER    115  1             14.44     -3.39   f
   73477 FULLER    230        70122 COMANCHE  230  1            -85.18    -16.97   f
   73477 FULLER    230        70139 DANIELPK  230  1             23.06     -2.09   f
   79014 CRAIG     345        79058 RIFLE CU  345  1            399.54     18.61   t
   79036 GRANDJCT  345        79058 RIFLE CU  345  1           -393.86    -18.81   t
   79036 GRANDJCT  345        70205 GRANDJCT  230  1             21.68     12.02   t
   79037 GUNNISON  115        70327 PONCHA    115  1              3.83     -4.19   t
   79038 HAYDEN    138        70525 MTHARRIS  138  1              5.59      1.05   f
   79039 HAYDEN    230        79033 GOREPASS  230  1            188.03      0.69   f
   79039 HAYDEN    230        79091 WOLCOTTP  230  1            151.73     -6.59   t
   79046 MEEKER    138        79056 RIFLE CU  138  1             44.03     -0.67   t
   79048 MONTROSE  115        79034 GRANDJCT  115  1            -29.82      6.64   f
   79054 PONCHABR  230        70375 SAN LUIS  230  1             60.01    -13.25   f
   79059 RIFLE WA  230        70358 RIFLE PS  230  1             67.89    -27.21   t
   79059 RIFLE WA  230        79057 RIFLE CU  230  1             -1.18     52.22   f
   79174 MOLINA-L  115        79173 COLBRAN   115  1             -0.00      0.53   t
   79250 AMATLAS   230        70358 RIFLE PS  230  1             49.95     13.05   t
   73551 W CANON   230        70550 W CANON   115  1              5.58     19.68   f
from area  73 to area  70 PSCOLORADO                            744.38    -49.82

   79061 SHIP PS   230        79063 SHIPROCK  230  1            149.59    -43.11   t
   79260 ELPASOTP  115        79105 GLADETAP  115  1             25.56    -21.05   t
from area  73 to area  19 WAPA L.C.                             175.14    -64.16

   73229 YELLOWBR  230        63001 CROS PHA  230  1            -35.48      3.23   f
from area  73 to area  63 WAPA U.M.                             -35.48      3.23

Total from area  73 WAPA R.M.                                  1050.44   -205.95

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   63002 CRSOVRUM  230        62051 HARDIN    230  1            -69.16    -16.54   f
   63002 CRSOVRUM  230        62056 HUNTLEY   230  1            211.84     -7.35   f
   63008 HAVRE     161        62023 GT FALLS  161  1            -18.48     10.61   t
   63014 TIBERTAP  115        62027 SHELBY    115  1             -2.16     -0.14   t
   63015 VERONA    161        62024 RAINBOW   161  1            -16.74     10.83   t
from area  63 to area  62 MONTANA                               105.30     -2.58

   63001 CROS PHA  230        73229 YELLOWBR  230  1             35.48     -3.23   t
from area  63 to area  73 WAPA R.M.                              35.48     -3.23

Total from area  63 WAPA U.M.                                   140.78     -5.81
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WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Summation of selected system

	-----MW----	----MVAR---		
Generation	54128.789	3025.492	Generators	2550
Actual Load	45957.066	15412.540	Loads	6811
Net actual shunt	0.405	-185.823	Shunts	1294
Net actual svd	0.000	2107.439	Svd	587
Loss	2150.197	-13922.676	Buses	13159
			Lines	10964
			Transformers	5120
MVA-miles	4534994.0	1050228.6	DC buses	6
Miles	46968.402		DC converters	10
			DC lines	3

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area 54 [ALBERTA]

	-----MW----	----MVAR---		
Generation	6887.254	852.430	Generators	136
Actual Load	6274.402	1997.100	Loads	517
Net actual shunt	0.000	-21.744	Shunts	9
Net actual svd	0.000	-1195.581	Svd	76
Net Interchange	200.408	-19.199	Buses	989
Sched Interchange	200.000		Lines	782
Loss	412.444	91.859	Transformers	406
MVA-miles	1164695.4	291562.3	DC buses	0
Miles	18668.695		DC converters	0
			DC lines	0
Loss at 13.20 Kv	1.466	19.090		
Loss at 13.80 Kv	3.240	76.348		
Loss at 14.40 Kv	0.440	14.459		
Loss at 25.00 Kv	1.465	16.921		
Loss at 34.00 Kv	0.046	0.759		
Loss at 69.00 Kv	14.504	-22.349		
Loss at 138.00 Kv	157.645	-309.209		
Loss at 240.00 Kv	217.491	-426.238		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	16.147	722.078		
Largest mismatch MVA	0.0084	0.0499		

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area 50 [B.C.HYDRO]

	-----MW----	----MVAR---		
Generation	8254.719	225.159	Generators	106
Actual Load	6035.052	2359.838	Loads	395
Net actual shunt	0.000	2924.022	Shunts	104
Net actual svd	0.000	2703.485	Svd	125
Net Interchange	1799.825	-386.142	Buses	1054
Sched Interchange	1800.000		Lines	719
Loss	419.843	-7376.047	Transformers	644
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.045	1.966		
Loss at 13.80 Kv	6.690	399.883		
Loss at 34.00 Kv	0.000	0.002		
Loss at 46.00 Kv	0.301	0.082		
Loss at 132.00 Kv	25.089	36.375		
Loss at 138.00 Kv	11.037	-136.497		
Loss at 230.00 Kv	39.633	-770.071		
Loss at 500.00 Kv	290.678	-7381.497		
Loss at other Kv	46.369	473.712		
Largest mismatch MVA	0.0337	0.0390		

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area 60 [IDAHO]

-----MW---- ----MVAR---

Generation	3192.674	558.774	Generators	49
Actual Load	1955.000	501.300	Loads	64
Net actual shunt	0.000	-96.193	Shunts	2
Net actual svd	0.000	0.000	Svd	0
Net Interchange	1066.273	-377.224	Buses	156
Sched Interchange	1066.000		Lines	120
Loss	171.401	530.889	Transformers	96
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.271	5.817		
Loss at 13.80 Kv	1.166	43.754		
Loss at 14.40 Kv	0.390	15.211		
Loss at 34.50 Kv	0.000	0.000		
Loss at 100.00 Kv	0.913	81.895		
Loss at 115.00 Kv	0.434	0.343		
Loss at 138.00 Kv	14.241	-58.646		
Loss at 161.00 Kv	1.197	0.908		
Loss at 230.00 Kv	15.301	-301.093		
Loss at 345.00 Kv	132.482	579.176		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	5.007	163.526		
Largest mismatch MVA	0.0071	0.0083		

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area 62 [MONTANA]

	-----MW----	----MVAR---		
Generation	3004.414	236.578	Generators	22
Actual Load	1207.745	524.807	Loads	200
Net actual shunt	0.405	-121.249	Shunts	56
Net actual svd	0.000	26.439	Svd	11
Net Interchange	1700.345	-448.191	Buses	310
Sched Interchange	1701.000		Lines	317
Loss	95.919	254.774	Transformers	89
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.000	39.319		
Loss at 69.00 Kv	0.539	1.671		
Loss at 100.00 Kv	12.469	-55.300		
Loss at 115.00 Kv	2.839	-16.732		
Loss at 161.00 Kv	9.961	-96.772		
Loss at 230.00 Kv	12.995	-182.797		
Loss at 500.00 Kv	56.492	381.151		
Loss at other Kv	0.625	184.233		
Largest mismatch MVA	0.0038	0.0158		

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area 40 [NORTHWEST]

	-----MW----	----MVAR---		
Generation	17473.885	199.058	Generators	290
Actual Load	16651.566	5157.048	Loads	1663
Net actual shunt	0.000	-1726.490	Shunts	46
Net actual svd	0.000	2143.414	Svd	163
Net Interchange	253.510	1169.405	Buses	2740
Sched Interchange	253.000		Lines	2709
Loss	568.792	-6544.327	Transformers	632
MVA-miles	2866149.5	635845.3	DC buses	4
Miles	18402.309		DC converters	4
			DC lines	2
Loss at 11.00 Kv	-0.000	0.223		
Loss at 13.20 Kv	0.000	2.267		
Loss at 13.80 Kv	4.466	150.383		
Loss at 14.40 Kv	-0.000	0.000		
Loss at 25.00 Kv	3.293	174.030		
Loss at 34.50 Kv	0.069	-0.965		
Loss at 69.00 Kv	7.427	2.567		
Loss at 100.00 Kv	0.120	-0.323		
Loss at 115.00 Kv	126.826	-36.380		
Loss at 230.00 Kv	137.422	-744.993		
Loss at 345.00 Kv	7.065	-312.695		

```
Loss at 500.00 Kv         221.623    -6635.248
Loss at other Kv           60.479      856.816

Largest mismatch MVA       0.0240       0.0529

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area  65 [PACE                           ]

                      -----MW----  ----MVAR---
Generation               5528.244      530.654        Generators           53
Actual Load              4749.998     1528.040        Loads               273
Net actual shunt            0.000     -528.263        Shunts               51
Net actual svd              0.000        0.000        Svd                   2
Net Interchange           589.741     -173.419        Buses               564
Sched Interchange         590.300                     Lines               408
Loss                      188.505     -295.706        Transformers        336

MVA-miles                     3.4          1.1        DC buses              0
Miles                       1.900                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           0.819       22.935
Loss at  34.50 Kv           1.010        7.109
Loss at  46.00 Kv           3.908       70.489
Loss at  69.00 Kv           0.728        8.212
Loss at 100.00 Kv           0.017        0.583
Loss at 115.00 Kv           2.786       -8.588
Loss at 138.00 Kv          40.604       35.466
Loss at 161.00 Kv           7.688      -26.374
Loss at 230.00 Kv          63.918     -105.762
Loss at 345.00 Kv          64.589     -358.180
Loss at other Kv            2.440       58.404

Largest mismatch MVA       0.0273       0.0779

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area  70 [PSCOLORADO                     ]

                      -----MW----  ----MVAR---
Generation               4234.680      621.565        Generators           46
Actual Load              4858.050     1835.016        Loads               358
Net actual shunt            0.000        0.000        Shunts                0
Net actual svd              0.000    -1397.656        Svd                  43
Net Interchange          -744.395       49.817        Buses               500
Sched Interchange        -743.800                     Lines               461
Loss                      121.026      134.431        Transformers        147

MVA-miles                 22717.3       6310.8        DC buses              0
Miles                     564.500                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           2.115       74.404
Loss at  14.40 Kv           0.081        0.808
Loss at  25.00 Kv           0.013        0.166
Loss at  46.00 Kv           0.190        0.001
Loss at  69.00 Kv           3.820      -11.984
Loss at 100.00 Kv           0.007       -0.105
Loss at 115.00 Kv          21.169     -103.917
Loss at 138.00 Kv           0.647       -3.754
Loss at 230.00 Kv          85.921      -46.552
Loss at 345.00 Kv           0.000        0.004
Loss at other Kv            7.063      225.361

Largest mismatch MVA       0.0098       0.0537

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area  64 [SIERRA                         ]

                      -----MW----  ----MVAR---
Generation               1069.690      -25.558        Generators           19
Actual Load              1075.167      280.355        Loads               115
Net actual shunt            0.000     -158.467        Shunts               23
Net actual svd              0.000       73.889        Svd                   5
Net Interchange           -36.245       16.165        Buses               275
Sched Interchange         -36.000                     Lines               197
Loss                       30.770     -237.521        Transformers        117

MVA-miles                 51756.4      28302.4        DC buses              0
```

Miles	1042.600		DC converters	0
			DC lines	0
Loss at 13.80 Kv	1.784	32.653		
Loss at 69.00 Kv	0.000	0.000		
Loss at 115.00 Kv	0.298	-7.513		
Loss at 230.00 Kv	0.902	-112.910		
Loss at 345.00 Kv	7.224	-180.866		
Loss at other Kv	20.563	31.115		
Largest mismatch MVA	0.0106	0.0203		

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area 52 [W KOOTENAY]

	-----MW----	----MVAR---		
Generation	498.040	8.446	Generators	18
Actual Load	486.100	160.700	Loads	65
Net actual shunt	0.000	-79.194	Shunts	27
Net actual svd	0.000	-71.873	Svd	4
Net Interchange	0.430	-8.836	Buses	260
Sched Interchange	0.000		Lines	166
Loss	11.510	7.649	Transformers	116
MVA-miles	18675.5	6123.0	DC buses	0
Miles	1005.200		DC converters	0
			DC lines	0
Loss at 13.20 Kv	-0.000	9.145		
Loss at 13.80 Kv	0.000	0.000		
Loss at 14.40 Kv	0.000	21.896		
Loss at 25.00 Kv	0.000	0.000		
Loss at 138.00 Kv	0.104	-8.447		
Loss at 161.00 Kv	2.006	-19.726		
Loss at 230.00 Kv	0.710	-19.318		
Loss at other Kv	8.690	24.098		
Largest mismatch MVA	0.0025	0.0087		

WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area 73 [WAPA R.M.]

	-----MW----	----MVAR---		
Generation	3956.307	-183.442	Generators	74
Actual Load	2784.180	950.836	Loads	356
Net actual shunt	0.000	-299.295	Shunts	4
Net actual svd	0.000	-177.105	Svd	53
Net Interchange	1050.453	-204.383	Buses	620
Sched Interchange	1050.700		Lines	567
Loss	121.673	-453.515	Transformers	174
MVA-miles	410996.3	82083.9	DC buses	0
Miles	7283.200		DC converters	0
			DC lines	0
Loss at 13.80 Kv	3.825	48.729		
Loss at 34.50 Kv	0.149	2.098		
Loss at 69.00 Kv	3.015	-20.123		
Loss at 115.00 Kv	43.509	-234.484		
Loss at 138.00 Kv	3.351	-37.193		
Loss at 230.00 Kv	29.696	-352.339		
Loss at 345.00 Kv	33.755	-54.281		
Loss at other Kv	4.373	194.078		
Largest mismatch MVA	0.0128	0.0823		

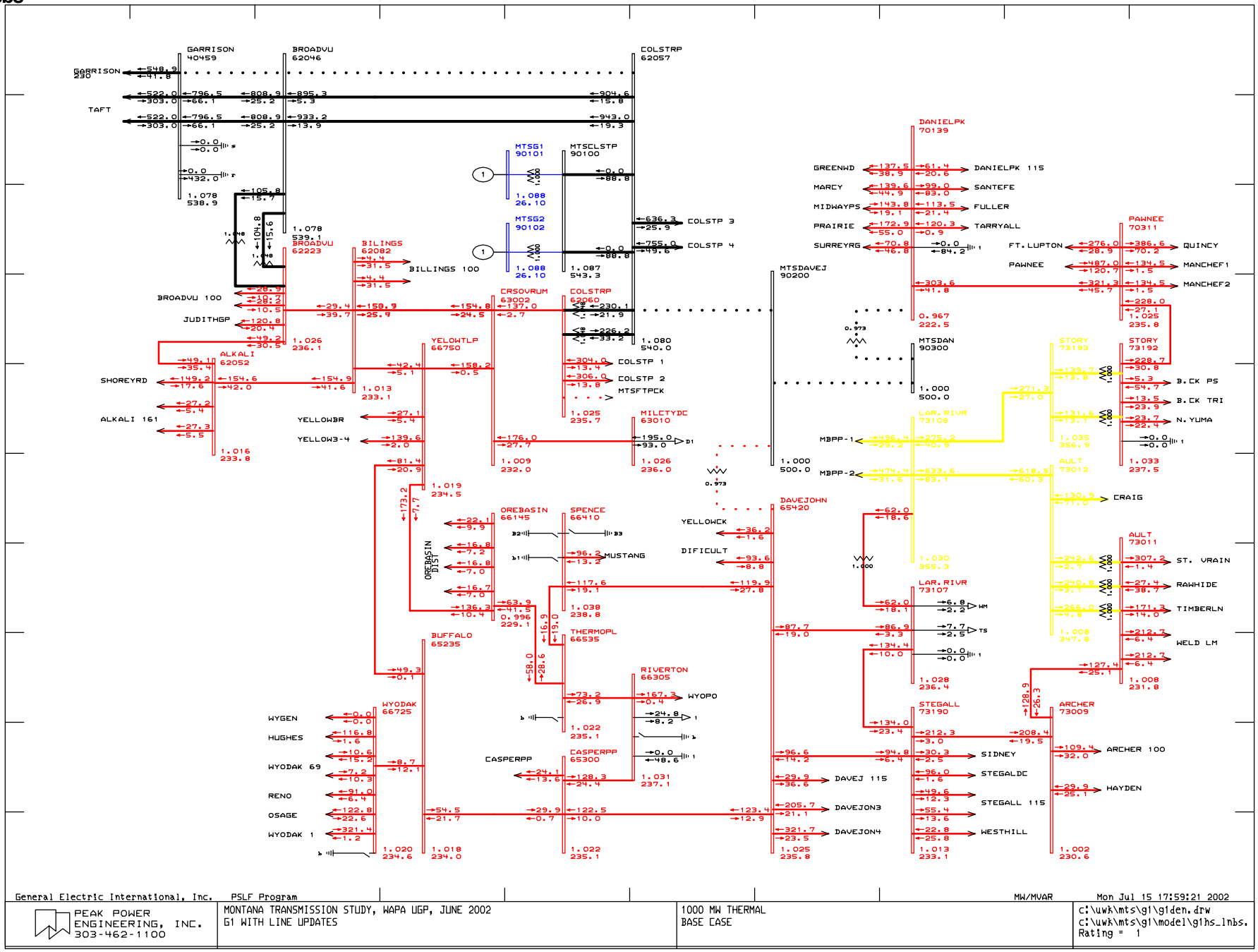
WESTERN SYSTEMS COORDINATING COUNCIL, WAPA UGP, JUNE 2002
G1

Area 63 [WAPA U.M.]

	-----MW----	----MVAR---		
Generation	28.882	1.828	Generators	1
Actual Load	-120.200	117.500	Loads	17
Net actual shunt	0.000	-78.951	Shunts	1
Net actual svd	0.000	2.427	Svd	4
Net Interchange	140.768	-3.986	Buses	15
Sched Interchange	141.000		Lines	12
Loss	8.314	-35.163	Transformers	3
MVA-miles	0.0	0.0	DC buses	0

Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.041	1.533		
Loss at 115.00 Kv	0.038	-6.833		
Loss at 161.00 Kv	0.580	-50.345		
Loss at 230.00 Kv	7.654	20.481		
Largest mismatch MVA	0.0001	0.0007		

B.2 hsbs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BROADVU 62046
COLSTRP 62057
GARRISON 230
TAFT
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COLSTP 4
BROADVU 62223
BILLINGS 62082
BILLINGS 100
BROADVU 100
JUDITHGP
ALKALI 62052
SHOREYRD
ALKALI 161
YELLOWBR
YELLOW3-4
CRSOVRUM 63002
COLSTRP 62060
COLSTP 1
COLSTP 2
MTSFTPCK
YELOWTLP 66750
MILCTYDC 63010
MTSDAVEJ 90200
MTSDAN 90300
DANIELPK 70139
GREENWD
MARCY
MIDWAYPS
PRAIRIE
SURREYRG
DANIELPK 115
SANTEFE
FULLER
TARRYALL
FT. LUPTON
PAWNEE
PAWNEE 70311
QUINCY
MANCHEF1
MANCHEF2
STORY 73193
STORY 73192
B.CK PS
B.CK TRI
N.YUMA
LAR.RIVR 73108
MBPP-1
MBPP-2
AULT 73012
CRAIG
AULT 73011
ST. VRAIN
RAWHIDE
TIMBERLN
WELD LM
OREBASIN 66145
SPENCE 66410
MUSTANG
OREBASIN DIST
YELLOWCK
DIFICULT
DAVEJOHN 65420
LAR.RIVR 73107
THERMOPL 66535
BUFFALO 65235
RIVERTON 66305
WYOPO
WYODAK 66725
WYGEN
HUGHES
WYODAK 69
RENO
OSAGE
WYODAK 1
CASPERPP
CASPERPP 65300
STEGALL 73190
SIDNEY
STEGALDC
STEGALL 115
WESTHILL
DAVEJ 115
DAVEJON3
DAVEJON4
ARCHER 73009
ARCHER 100
HAYDEN
General Electric International, Inc.
PSLF Program
MW/MVAR
Mon Jul 15 17:59:21 2002
PEAK POWER ENGINEERING, INC.
303-462-1100
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 WITH LINE UPDATES
1000 MW THERMAL
BASE CASE
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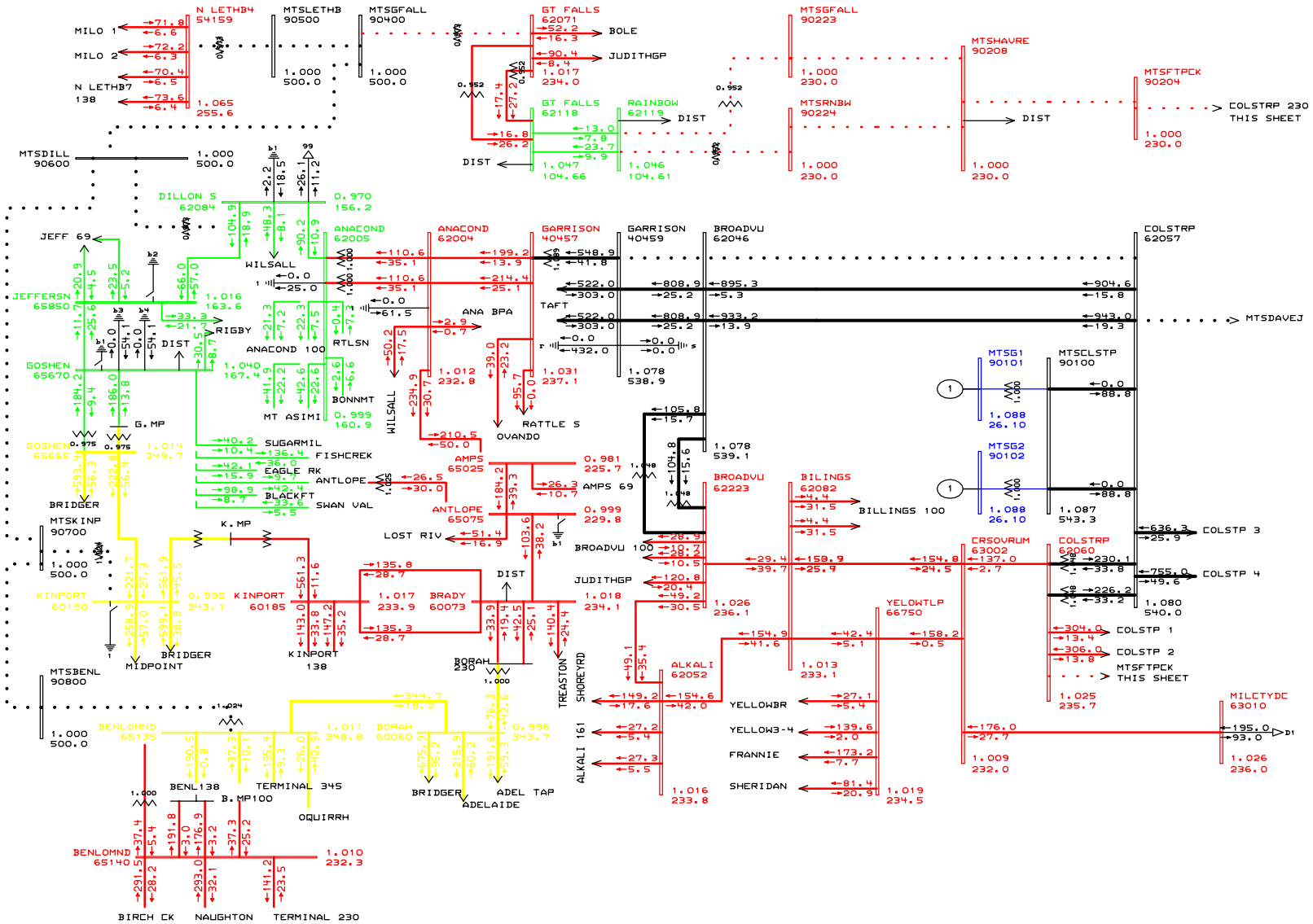
Rating = 1



General Electric International, Inc. PSLF Program MW/MVAR Mon Jul 15 17:59:33 2002

PEAK POWER ENGINEERING, INC. 303-462-1100

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 WITH LINE UPDATES

1000 MW THERMAL
BASE CASE

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Rating = 1

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002

Percent Loading Summary -- using rating 1 - 100.0 percent of rating

----------from----------				---------- to ----------									rate	per cent	
--no.--	--name--	-kv-	-ar-	--no.--	--name--	-kv-	-ar-	ck	---mw---	-mvar-	-mva--	------	loading		
54611	RUTH LK8	69	54	54839	RUTH LK1	138	54	1	57.9	13.8	59.5	45.0M	132.3	T	
64026	CARSON	120	64	64027	CARSON T	120	64	1	-55.6	-6.6	56.0	216.5A	130.5	F	
55015	DOME EA9	14	54	55525	163ST2	240	54	T2	-57.3	-4.6	57.5	45.0M	128.6	T	
64194	DAYTON	120	64	64254	DAYTON	25	64	1	16.6	6.5	17.8	14.0M	127.5	F	
79026	FLAMGORG	138	73	79029	FLAMGORG	69	73	1	22.1	6.0	22.9	19.0M	120.4	F	
64099	SPAN SPG	120	64	64114	TRACY	120	64	1	-128.2	-2.8	128.2	514.8A	118.8	F	
64091	RENO	120	64	64263	RENO	25	64	1	50.3	20.5	54.3	46.7M	116.3	F	
70249	LAJUNTAW	115	70	70250	LAJUNTAW	69	70	1	26.2	12.4	29.0	25.0M	116.0	F	
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	1	50.2	20.3	54.2	46.7M	116.0	F	
64091	RENO	120	64	64263	RENO	25	64	2	50.2	20.3	54.2	46.7M	116.0	F	
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	2	47.8	19.3	51.6	46.7M	110.4	F	
64202	HAN CRTP	120	64	64203	TWN CRTP	120	64	1	74.2	19.8	76.8	356.0A	109.1	F	
64201	PINSN TP	120	64	64202	HAN CRTP	120	64	1	74.6	20.6	77.4	356.0A	109.1	F	
64200	REDHOUSE	120	64	64201	PINSN TP	120	64	1	75.9	23.6	79.5	356.0A	109.0	T	
64129	VALMY	120	64	64200	REDHOUSE	120	64	1	77.0	26.3	81.4	356.0A	108.6	T	
54234	CASTLE R	138	54	55972	CASTLE-1	25	54	1	-50.0	21.0	54.2	50.0M	108.4	F	
50459	KIT287	287	50	51075	KIT B5	13	50	5	80.3	24.1	83.8	79.0M	106.1	F	
54232	PANCAN 9	138	54	55386	EMPRESS9	25	54	T1	15.7	1.0	15.7	15.0M	104.7	F	
64114	TRACY	120	64	64118	TRACY G2	14	64	1	-82.5	-4.0	82.6	81.0M	104.0	T	
48319	PLEASANT	115	40	48355	RATHDRUM	115	40	1	-84.1	-16.2	85.6	430.8A	103.3	F	
43017	BEAVER	14	40	43021	BEAVER	230	40	1	356.8	44.1	359.6	348.0M	103.3	F	
54052	BLUERIDG	138	54	55281	BLUERDGE	14	54	T1	20.8	15.2	25.7	25.0M	102.9	F	
54154	E CALGAR	240	54	54189	ENMX2SD9	138	54	T1	234.1	-169.4	289.0	300.0M	102.8	T	
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	9A	155.0	-10.5	155.4	155.0M	101.9	T	
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	BC	155.0	-10.5	155.4	155.0M	101.9	T	
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	78	155.0	-10.5	155.4	155.0M	101.9	T	
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	56	155.0	-10.5	155.4	155.0M	101.9	T	
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	34	155.0	-10.5	155.4	155.0M	101.9	T	
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	DE	155.0	-10.5	155.4	155.0M	101.9	T	
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	12	155.0	-10.5	155.4	155.0M	101.9	T	
41304	COUGAR T	7	40	46211	COUGAR T	115	40	1	28.0	-8.7	29.3	30.0M	101.9	T	
46733	LAGRND5	14	40	46735	LGBK5	115	40	1	40.0	6.8	40.6	40.0M	101.4	F	

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V12.0
WESTERN SYSTEMS COORDINATING COUNCIL
2002 HS3A APPROVED OPERATING CASE

overvoltage summary > 1.100000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54090	BICKERD4	240	1.1047	54153	BRAZEAU4	240	1.1053	54329	KEEPHIL4	240	1.1117
54524	GENESEE4	240	1.1086	54681	NEVIS 7	138	1.1101	54802	STURGEO9	138	1.1003
55969	770S701T	138	1.1052	51017	KMS230	230	1.1081	62012	TOWN2	500	1.1014
62013	TOWN1	500	1.1014								

overvoltage summary > 1.050000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54012	FOX CREE	138	1.0510	54013	KAYBOB 9	138	1.0517	54014	GULF RO9	138	1.0592
54021	WESGEN 7	138	1.0507	54050	RBCUPIL7	138	1.0507	54054	LAMOURE4	240	1.0795
54073	IPPL ST9	138	1.0575	54077	BIGSTON4	240	1.0600	54078	CHEVRON7	138	1.0515
54081	METIS644	240	1.0853	54082	BICKERD7	138	1.0557	54090	BICKERD4	240	1.1047
54097	BIG HOR9	138	1.0817	54098	STRACHA9	138	1.0577	54103	DEERLAN4	240	1.0820
54121	ELLERSLI	240	1.0759	54125	SUNDANL9	138	1.0543	54126	WABAMUN4	240	1.0869
54128	SUNDANM9	240	1.0965	54129	E EDMON4	240	1.0709	54130	N CALDE4	240	1.0645
54131	N BARRH4	240	1.0836	54139	GAETZ 4	240	1.0597	54141	HIGHVAL9	138	1.0538
54142	WILLESD4	240	1.0961	54144	RED DEE4	240	1.0636	54147	BENALTO4	240	1.0767
54148	E CROSS4	240	1.0586	54150	LANGDON2	500	1.0533	54152	JANET 4	240	1.0533
54153	BRAZEAU4	240	1.1053	54157	PEIGAN 4	240	1.0748	54159	N LETHB4	240	1.0648
54184	SARCEE 7	138	1.0530	54195	RUNDLE S	138	1.0504	54223	WARE JCT	240	1.0511
54249	RP05103S	138	1.0669	54261	SPRAY S	138	1.0508	54269	COALSPU7	138	1.0609
54281	MILO 2	240	1.0605	54285	LEISMER9	240	1.0749	54287	GREGG R9	138	1.0701
54302	MARIONA9	138	1.0540	54325	CHEV KG9	138	1.0515	54326	COAL VA9	138	1.0582
54329	KEEPHIL4	240	1.1117	54335	W BROOK4	240	1.0550	54384	ENMX28S9	138	1.0523
54412	BENBOW 9	138	1.0518	54441	946/947X	240	1.0759	54444	SPRINGB9	138	1.0505
54505	JASPER 4	240	1.0658	54506	BELLAMY4	240	1.0757	54509	ARGYLL W	240	1.0758
54512	DOME T29	240	1.0764	54513	LAMBTON4	240	1.0705	54514	CLOVERB4	240	1.0694
54518	ARGYLL E	240	1.0760	54519	CASTLTX2	240	1.0705	54521	PETROLIA	240	1.0746
54524	GENESEE4	240	1.1086	54542	RBW LAK7	138	1.0505	54546	CHINCHA7	138	1.0575
54547	KEG RVR7	138	1.0561	54548	KEMP RV9	138	1.0578	54549	HOTCHKS7	138	1.0596
54552	CADOTTE9	138	1.0585	54553	NORCEN 9	138	1.0552	54554	LUBICON7	138	1.0582
54555	CRANBER9	138	1.0591	54558	WESLY C7	138	1.0791	54559	CARMON 9	138	1.0767
54560	PEACE/29	138	1.0753	54561	DIASHOW7	138	1.0736	54589	DOME CU7	138	1.0672
54593	DONNELL9	138	1.0669	54594	TAP7L487	138	1.0686	54595	TRIANGL7	138	1.0619
54596	VALLEYV9	138	1.0782	54600	L.SMOKY7	138	1.0848	54601	STURGEO7	138	1.0844
54606	SIMONET9	138	1.0846	54607	FOXCRK/2	138	1.0515	54608	GOOSE R9	138	1.0666
54612	RUTH LA7	138	1.0600	54613	RUTH LK7	138	1.0603	54618	PARS CR7	138	1.0508
54621	MITS E.4	240	1.0565	54622	MITS E.7	138	1.0892	54623	AEC MILL	138	1.0881
54624	OTAUWAU7	138	1.0890	54633	LOU CR.7	138	1.0570	54634	SARHLK/2	138	1.0511
54636	ESSO JU7	138	1.0519	54637	MORSE RV	138	1.0524	54639	VIRGINI9	138	1.0529
54643	WOLF LK9	138	1.0709	54646	MARG LK4	240	1.0740	54647	MARG LK7	138	1.0861
54648	LACOREY9	138	1.0683	54652	BONNY 9	138	1.0544	54654	BONN SVC	138	1.0544
54655	WHITFISH	240	1.0857	54675	PAINTRT7	240	1.0896	54680	NEVIS 4	240	1.0748
54681	NEVIS 7	138	1.1101	54685	3HILLS/3	138	1.0581	54691	MICH. C9	138	1.0735
54693	WINT HI9	138	1.0749	54694	BULLPON9	138	1.0750	54707	SHEER 14	240	1.0625
54709	ANDERSO4	240	1.0630	54710	ANDERSON	138	1.0850	54711	SHEER 24	240	1.0625
54715	BAT. RV7	138	1.0821	54721	BAT RV79	240	1.0926	54723	CORDEL 4	240	1.0926
54729	PRIM TAP	138	1.0652	54730	PRIMROSE	138	1.0712	54796	791S701T	138	1.0628
54802	STURGEO9	138	1.1003	54806	946/947N	240	1.0709	54809	732S901T	240	1.0667
54818	VERMILA9	138	1.0798	54822	766S901T	240	1.0628	54823	NEVIS 9	138	1.0878
54835	791S702T	138	1.0631	54836	MILNERB9	138	1.0779	54844	709S702T	138	1.0732
54847	BAT RV80	240	1.0926	54848	791S703T	138	1.0530	54962	KAYBOBTP	138	1.0517
54963	CANMORE9	138	1.0506	54978	EAST IN4	240	1.0705	54983	MARION T	138	1.0541
54984	HIGHVL T	138	1.0538	54988	CROSSF T	240	1.0586	54995	W.GRN TP	240	1.0962
55012	BASSET 7	138	1.0562	55013	HAIGRIVE	138	1.0572	55067	FTNELSON	138	1.0665
55072	SYNC_D04	240	1.0563	55073	AURORA 4	240	1.0619	55075	SEAL LK9	138	1.0643
55147	MILNERC9	138	1.0880	55226	WABASCA9	240	1.0532	55272	FIELDGA9	138	1.0513
55280	BRINTNEL	240	1.0504	55515	PRIMROSE	138	1.0565	55763	BC BORDE	138	1.0627
55891	904AL TP	240	1.0705	55894	SARCEE M	138	1.0512	55912	740L JNC	138	1.0609
55913	G.ROBB T	138	1.0600	55924	CH KGT T	138	1.0515	55943	MILO 1	240	1.0605
55969	770S701T	138	1.1052	50010	COM132	132	1.0725	50020	CMS230	230	1.0500
50036	RBW230	230	1.0549	50037	PEM230	230	1.0586	50038	RBW230-1	230	1.0534
50182	ARN132	132	1.0822	50185	ALZ230	230	1.0521	50186	ROS230	230	1.0620
50187	BRT230	230	1.0698	50188	BUT230	230	1.0500	50193	BRT360	360	1.0500
50313	VIT132	132	1.0518	50314	PVO133	132	1.0507	50315	PVO132	132	1.0512
50323	DMR132	132	1.0557	50330	LDR132	132	1.0504	50331	GLD132	132	1.0518
50334	KGH132	132	1.0529	50335	UTA132	132	1.0531	50342	SCA132	132	1.0500
50343	KSH132-2	132	1.0501	50346	SHA2	132	1.0504	50347	GOW132	132	1.0518
50348	GTP132	132	1.0553	50349	CLD132	132	1.0571	50350	SOO132	132	1.0577
50351	JOR132	132	1.0614	50352	PML132	132	1.0518	50353	WOS132	132	1.0536
50354	GLSTP17	132	1.0562	50355	GLSTP18	132	1.0548	50356	DND132	132	1.0521
50391	KSHTP14	132	1.0504	50394	SHATP14	132	1.0504	50395	SALTP17	132	1.0547
50396	SALTP18	132	1.0549	50447	TKW138	138	1.0535	50463	SKA500	500	1.0632
50464	TKW500	500	1.0688	50540	GMS230	230	1.0548	50541	KDS230	230	1.0544

50545	BLW230	230	1.0657	50546	SCK230	230	1.0598	50547	HMH230	230	1.0581
50548	BLM230	230	1.0587	50549	QNT230	230	1.0579	50550	QRP230	230	1.0653
50551	TLR230	230	1.0585	50553	BCR230	230	1.0585	50554	RBF230	230	1.0665
50556	LAP230	230	1.0569	50557	SNK230	230	1.0589	50558	GMS500	500	1.0500
50560	KDS500	500	1.0620	50561	WSN500	500	1.0502	50562	GLN500	500	1.0681
50653	NIC138	138	1.0529	50655	VVW138	138	1.0510	50656	SVA138	138	1.0521
50659	BDM138	138	1.0513	50660	WGS138	138	1.0610	50661	MON138	138	1.0582
50672	BKL138	138	1.0520	50679	BLU138	138	1.0539	50680	VLM138	138	1.0591
50686	SCO138	138	1.0679	50687	ABA138	138	1.0586	50691	NIC230	230	1.0502
50700	MCA500	500	1.0500	50701	REV500	500	1.0500	50729	PRI138TP	138	1.0678
50776	NTL138	138	1.0539	50783	SEL230	230	1.0589	50785	SEV230	230	1.0580
50792	SEL500	500	1.0500	50899	ABA138TP	138	1.0586	50902	BDM138TP	138	1.0513
50922	DNDTAP	132	1.0529	50923	HSY-PH	132	1.0556	50924	ESQ-PH	132	1.0521
50928	SCG IPP	132	1.0684	50934	JULTP130	132	1.0529	51017	KMS230	230	1.1081
51045	ALH230	230	1.0578	60085	BRIDGER	345	1.0500	60240	MIDPOINT	500	1.0687
62012	TOWN2	500	1.1014	62013	TOWN1	500	1.1014	62033	ANA BPA	115	1.0568
62046	BROADVU	500	1.0783	62053	BROADV&2	500	1.0737	62054	BROADV&1	500	1.0745
62057	COLSTRP	500	1.0800	40045	ALLSTON	500	1.0726	40051	ALVEY	500	1.0801
40061	ASHE	500	1.0800	40091	BELL BPA	500	1.0665	40111	BIG EDDY	500	1.0768
43049	BOARD F	500	1.0840	40139	BONNVILE	115	1.0500	47013	BRIDGPRT	115	1.0540
40155	BUCKLEY	500	1.0780	45029	BURNS	500	1.0552	45035	CAPTJACK	500	1.0772
46209	CARMEN	115	1.0621	41311	CELILO1	500	1.0767	41312	CELILO2	500	1.0767
40233	CHIEF JO	500	1.0800	40287	COULEE	500	1.0810	40302	COVINGT4	500	1.0754
40306	COVINGT5	500	1.0759	43115	COYO M1	500	1.0557	43123	COYOTE	500	1.0848
45095	DIXONVLE	500	1.0806	40369	DWORSHAK	500	1.0749	40381	ECHOLAKE	500	1.0786
40451	GAR1EAST	500	1.0938	40453	GAR2EAST	500	1.0938	40459	GARRISON	500	1.0778
40485	GREEN PT	115	1.0520	40489	GRIZZLY	500	1.0747	40499	HANFORD	500	1.0816
40521	HATWAI	500	1.0720	45137	HERMIST	230	1.0509	41212	HILLS CR	115	1.0500
40553	HOT SPR	500	1.0778	40585	JOHN DAY	500	1.0850	40601	KEELER	500	1.0823
45262	KFALLS	500	1.0799	40629	LANE	500	1.0733	40665	LIT GOOS	500	1.0800
40679	LOW GRAN	500	1.0800	40683	LOW MON	500	1.0800	40687	MALIN	500	1.0758
40693	MAPLE VL	500	1.0776	40699	MARION	500	1.0809	40711	MCLOUGLN	500	1.0700
40721	MCNARY	345	1.0510	40723	MCNARY	500	1.0800	45197	MERIDINP	500	1.0785
40749	MONROE	500	1.0797	40797	OLYMPIA	500	1.0791	40809	OSTRNDER	500	1.0723
40821	PAUL	500	1.0800	40827	PEARL	500	1.0789	40837	PONDROSA	500	1.0798
40869	RAVER	500	1.0797	43485	ROUND BU	500	1.0713	40913	SACJAWEA	500	1.0755
40917	SACJWA T	500	1.0768	40941	SANTIAM	500	1.0802	40949	SATSOP	500	1.0799
40957	SCHULTZ	500	1.0843	40973	SICKLER	500	1.0795	40989	SLATT	500	1.0812
41043	SUMMER L	500	1.0785	45289	SWIFT	230	1.0500	41051	TACOMA	500	1.0794
41057	TAFT	500	1.0867	41095	TROUTDAL	500	1.0646	41113	VANTAGE	500	1.0749
45337	WEED JPS	115	1.0507	47099	WELLS	115	1.0630	66225	PINTO	345	1.0511
66235	PINTO PS	345	1.0501	52226	PRI138	138	1.0679	52229	KER138	138	1.0714
52230	HED138	138	1.0704	52426	MAS138	138	1.0703	52815	PRI-T2	138	1.0686

undervoltage summary < 0.900000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)

undervoltage summary < 0.950000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
50781	NTL VR	138	0.9499	48069	CHESTER	115	0.9447	48165	IRVIN	115	0.9489
48310	OPORTUNE	115	0.9494	48299	OPPORTUN	115	0.9468	48306	OTIS	230	0.9384
70249	LAJUNTAW	115	0.9285	64072	MEYERS	120	0.9484	64092	RND HILL	120	0.9466
64102	STATELIN	120	0.9457	64203	TWN CRTP	120	0.9452				

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		generation capacity	generation on-line	--- load categories ---- power	current	imped.	shunt	-- svd --	net inter	losses	slack bus
area name		ALBERTA									
	mw	10743.6	7862.7	7899.2	0.0	0.0	0.0	0.0	-399.4	363.0	59.3
54	mvar	4916.5	857.1	2641.0	0.0	0.0	-22.5	-1851.9	-37.0	127.6	11.7
area name		B.C.HYDRO									
	mw	14693.0	10251.1	6889.1	0.0	0.0	0.0	0.0	2850.1	511.8	197.5
50	mvar	6719.0	925.9	2565.8	0.0	0.0	2957.8	2143.6	-276.4	-6464.9	9.1
area name		IDAHO									
	mw	4676.4	4111.5	2984.0	0.0	0.0	0.0	0.0	919.9	207.6	144.1
60	mvar	2192.5	457.6	711.6	0.0	0.0	-595.5	0.0	-311.2	652.6	0.1
area name		MONTANA									
	mw	3502.2	2908.3	1422.9	0.0	0.0	0.3	0.0	1367.7	117.4	696.3
62	mvar	1309.0	313.5	610.2	0.0	0.0	-122.0	-90.5	-448.3	364.1	109.1
area name		NORTHWEST									
	mw	43502.3	27331.8	22671.3	0.0	0.0	0.0	0.0	3513.9	1146.6	664.7
40	mvar	15475.0	3752.3	6850.3	0.0	0.0	-1855.3	-4060.1	1035.8	1781.6	35.3
area name		PACE									
	mw	6212.0	5584.9	6293.7	0.0	0.0	0.0	0.0	-981.2	272.3	163.9
65	mvar	3201.9	755.6	1960.1	0.0	0.0	-1762.6	-48.6	36.6	569.9	32.1
area name		PSCOLORADO									
	mw	5806.0	5191.5	6332.7	0.0	0.0	0.0	0.0	-1332.4	191.1	112.5
70	mvar	3667.3	1771.8	2372.6	0.0	0.0	0.0	-1672.0	285.5	785.7	33.2
area name		SIERRA									
	mw	1901.7	1375.4	1719.1	0.0	0.0	0.0	0.0	-399.9	56.2	109.4
64	mvar	925.4	126.5	458.7	0.0	0.0	-188.1	69.0	57.3	-270.4	24.2
area name		W KOOTENAY									
	mw	763.5	596.5	722.4	0.0	0.0	0.0	0.0	-150.5	24.7	104.6
52	mvar	450.0	100.1	210.2	0.0	0.0	-77.8	-130.7	-8.1	106.5	25.3
area name		WAPA R.M.									
	mw	6091.6	5379.5	3608.3	0.0	0.0	0.0	0.0	1611.9	159.3	497.1
73	mvar	2883.8	217.9	1237.0	0.0	0.0	-296.1	-271.8	-388.5	-62.7	58.0
area name		WAPA U.M.									
	mw	61.8	55.5	-102.1	0.0	0.0	0.0	0.0	146.9	10.7	55.5
63	mvar	34.0	4.8	123.6	0.0	0.0	-79.0	-15.8	-28.2	4.2	4.8
TOTL	mw	97954.1	70648.6	60440.6	0.0	0.0	0.3	0.0	7147.1	3060.6	
	mvar	41774.4	9282.9	19741.2	0.0	0.0	-2041.1	-5929.0	-82.5	-2405.6	

Area Interchange Summary

		mw	mvar
FROM AREA	54 ALBERTA		
TO AREA	50 B.C.HYDRO	-399.4	-37.0
TOTAL		-399.4	-37.0

		mw	mvar
FROM AREA	50 B.C.HYDRO		

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  TO AREA   54 ALBERTA                          399.4       37.0
  TO AREA   40 NORTHWEST                       2300.2     -321.6
  TO AREA   52 W KOOTENAY                       150.5        8.1
  TOTAL                                        2850.1     -276.4

FROM AREA   60 IDAHO                             mw        mvar
  TO AREA   40 NORTHWEST                        -56.8     -295.4
  TO AREA   65 PACE                             843.9       36.2
  TO AREA   64 SIERRA                           132.8      -52.0
  TOTAL                                         919.9     -311.2

FROM AREA   62 MONTANA                           mw        mvar
  TO AREA   40 NORTHWEST                       1118.8     -362.7
  TO AREA   65 PACE                             239.2      -88.3
  TO AREA   63 WAPA U.M.                          9.7        2.8
  TOTAL                                        1367.7     -448.3

FROM AREA   40 NORTHWEST                         mw        mvar
  TO AREA   50 B.C.HYDRO                      -2300.2      321.6
  TO AREA   60 IDAHO                             56.8      295.4
  TO AREA   26 LADWP                           2806.7      607.1
  TO AREA   62 MONTANA                        -1118.8      362.7
  TO AREA   30 PG AND E                        3884.1     -501.7
  TO AREA   64 SIERRA                           185.3      -49.3
  TOTAL                                        3513.9     1035.8

FROM AREA   65 PACE                              mw        mvar
  TO AREA   14 ARIZONA                          -37.5       92.9
  TO AREA   60 IDAHO                           -843.9      -36.2
  TO AREA   26 LADWP                            -27.7     -168.6
  TO AREA   62 MONTANA                         -239.2       88.3
  TO AREA   18 NEVADA                           251.8      -58.1
  TO AREA   64 SIERRA                            36.2       13.4
  TO AREA   19 WAPA L.C.                         42.0       31.7
  TO AREA   73 WAPA R.M.                       -162.9       73.2
  TOTAL                                        -981.2       36.6

FROM AREA   70 PSCOLORADO                        mw        mvar
  TO AREA   73 WAPA R.M.                      -1332.4      285.5
  TOTAL                                       -1332.4      285.5

FROM AREA   64 SIERRA                            mw        mvar
  TO AREA   60 IDAHO                           -132.8       52.0
  TO AREA   26 LADWP                            -51.3        1.5
  TO AREA   40 NORTHWEST                       -185.3       49.3
  TO AREA   65 PACE                             -36.2      -13.4
  TO AREA   30 PG AND E                          -7.7      -29.1
  TO AREA   24 SOCALIF                           13.4       -2.9
  TOTAL                                        -399.9       57.3

FROM AREA   52 W KOOTENAY                        mw        mvar
  TO AREA   50 B.C.HYDRO                       -150.5       -8.1
  TOTAL                                        -150.5       -8.1

FROM AREA   73 WAPA R.M.                         mw        mvar
  TO AREA   10 NEW MEXICO                       186.5      -27.2
  TO AREA   65 PACE                             162.9      -73.2
  TO AREA   70 PSCOLORADO                      1332.4     -285.5
  TO AREA   19 WAPA L.C.                         86.8      -28.1
  TO AREA   63 WAPA U.M.                       -156.6       25.4
  TOTAL                                        1611.9     -388.5
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		mw	mvar
FROM AREA	63 WAPA U.M.		
TO AREA	62 MONTANA	-9.7	-2.8
TO AREA	73 WAPA R.M.	156.6	-25.4
TOTAL		146.9	-28.2

AREA TIE LINE SUMMARY

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V12.0
WESTERN SYSTEMS COORDINATING COUNCIL
2002 HS3A APPROVED OPERATING CASE

---------from--------			--------- to --------					---mw----	---mvar--	meter
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck				
54150	LANGDON2	500	50791	CBK500	500	1		-359.38	-36.30	f
54205	COLEMAN7	138	50776	NTL138	138	1		-14.09	-8.93	t
54273	POCATER7	138	50830	FRO T274	138	1		-25.95	8.19	t
from area 54 to area 50 B.C.HYDRO								-399.42	-37.04	
Total from area 54 ALBERTA								-399.42	-37.04	

---------from--------			--------- to --------					---mw----	---mvar--	meter
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck				
62004	ANACOND	230	40457	GARRISON	230	1		-196.40	-5.63	f
62004	ANACOND	230	40457	GARRISON	230	2		-212.29	-15.45	f
62009	RATTLE S	161	40867	RATTLE S	230	1		-122.28	-32.74	t
62012	TOWN2	500	40453	GAR2EAST	500	2		796.40	-152.91	t
62013	TOWN1	500	40451	GAR1EAST	500	1		796.40	-152.91	t
62066	KERR	115	40391	ELMO	115	1		5.85	-15.09	f
62072	OVANDO	230	40457	GARRISON	230	1		-39.03	23.15	t
62072	OVANDO	230	40551	HOT SPR	230	1		33.20	13.65	t
62085	CROWCR B	115	48055	BURKAVAB	115	1		25.37	-12.00	t
62086	THOMSON	115	48053	BURKAVAA	115	1		31.63	-12.79	t
from area 62 to area 40 NORTHWEST								1118.84	-362.73	
62030	PTRSNFLT	230	65025	AMPS	230	1		210.53	-50.02	t
62045	BLGS PHA	230	66750	YELOWTLP	230	1		-42.51	5.04	t
62061	RMRK PHA	161	66755	YELOWTLP	161	1		-22.35	-2.61	f
62084	DILLON S	161	65155	BIGGRASS	161	1		93.49	-40.75	t
from area 62 to area 65 PACE								239.16	-88.34	
62023	GT FALLS	161	63008	HAVRE	161	1		14.01	-12.26	f
62024	RAINBOW	161	63015	VERONA	161	1		12.92	-12.05	f
62027	SHELBY	115	63014	TIBERTAP	115	1		0.19	-2.50	f
62051	HARDIN	230	63002	CRSOVRUM	230	1		137.96	8.14	t
62056	HUNTLEY	230	63002	CRSOVRUM	230	1		-155.40	21.46	t
from area 62 to area 63 WAPA U.M.								9.68	2.79	
Total from area 62 MONTANA								1367.68	-448.28	

---------from--------			--------- to --------					---mw----	---mvar--	meter
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck				
40145	BOUNDARY	230	50822	NLYPHS	230	1		-306.33	-0.42	f
40323	CUSTER W	500	50194	ING500	500	1		-1005.27	161.80	t
40323	CUSTER W	500	50194	ING500	500	2		-988.60	160.18	t
from area 40 to area 50 B.C.HYDRO								-2300.20	321.56	
45029	BURNS	500	60240	MIDPOINT	500	1		-239.39	368.00	t
45103	ENTERPRS	230	60150	HELLSCYN	230	1		25.68	-34.46	f
40507	HARNEY	115	61826	HINES	115	1		-13.43	15.60	f
40621	LAGRANDE	230	60192	LADD	230	1		68.93	-28.95	f
48197	LOLO	230	60278	IMNAHA	230	1		215.04	-24.83	t
from area 40 to area 60 IDAHO								56.83	295.37	
41311	CELILO1	500	26097	SYLMAR1	230	1		529.60	58.88	f
41313	CELILO3	230	26098	SYLMAR3	230	1		873.73	244.48	f
41312	CELILO2	500	26099	SYLMAR2	230	1		529.60	58.81	f
41314	CELILO4	230	26100	SYLMAR4	230	1		873.73	244.92	f
from area 40 to area 26 LADWP								2806.66	607.09	
48053	BURKAVAA	115	62086	THOMSON	115	1		-31.63	12.79	f
48055	BURKAVAB	115	62085	CROWCR B	115	1		-25.37	12.00	f
40391	ELMO	115	62066	KERR	115	1		-5.85	15.09	t
40451	GAR1EAST	500	62013	TOWN1	500	1		-796.40	152.91	f
40453	GAR2EAST	500	62012	TOWN2	500	2		-796.40	152.91	f
40457	GARRISON	230	62072	OVANDO	230	1		39.03	-23.15	f
40457	GARRISON	230	62004	ANACOND	230	1		196.40	5.63	t
40457	GARRISON	230	62004	ANACOND	230	2		212.29	15.45	t
40551	HOT SPR	230	62072	OVANDO	230	1		-33.20	-13.65	f
40867	RATTLE S	230	62009	RATTLE S	161	1		122.28	32.74	f
from area 40 to area 62 MONTANA								-1118.84	362.73	
45035	CAPTJACK	500	30020	OLINDA	500	1		1373.16	-223.88	f
45087	DELTA	115	31468	CASCADE	115	1		71.53	-15.41	f

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   40687 MALIN     500        30005 ROUND MT  500  1            1214.33   -122.22   f
   40687 MALIN     500        30005 ROUND MT  500  2            1225.10   -140.17   f
from area  40 to area  30 PG AND E                              3884.11   -501.68

   40537 HIL TOP   230        64058 HIL TOP   345  1             185.34    -49.27   f
from area  40 to area  64 SIERRA                                 185.34    -49.27

Total from area  40 NORTHWEST                                   3513.89   1035.81

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   66235 PINTO PS  345        14101 FOURCORN  345  1             -37.50     92.91   t
from area  65 to area  14 ARIZONA                                -37.50     92.91

   65075 ANTLOPE   230        60073 BRADY     230  1             103.66    -38.16   f
   65135 BENLOMND  345        60060 BORAH     345  1            -344.66     18.24   t
   65220 BRIDGER   230        60085 BRIDGER   345  1             -41.56     -8.45   t
   65220 BRIDGER   230        60085 BRIDGER   345  2             -42.24     -8.57   t
   65220 BRIDGER   230        60085 BRIDGER   345  3             -41.56     -8.45   t
   65665 GOSHEN    345        60085 BRIDGER   345  1            -593.41    -56.31   f
   65665 GOSHEN    345        60190 KINPORT   345  1             221.69     27.34   t
   65670 GOSHEN    161        60030 BLACKFT   161  1             100.67     11.42   f
   65920 MALAD     138        60020 AMFLS     138  1             -66.06      2.40   t
   66565 TREASTON  230        60073 BRADY     230  1            -140.43     24.37   t
from area  65 to area  60 IDAHO                                 -843.90    -36.18

   65995 MONA      345        26043 INTERMT   345  1             -13.85    -84.32   f
   65995 MONA      345        26043 INTERMT   345  2             -13.85    -84.32   f
from area  65 to area  26 LADWP                                  -27.71   -168.65

   65025 AMPS      230        62030 PTRSNFLT  230  1            -210.53     50.02   f
   65155 BIGGRASS  161        62084 DILLON S  161  1             -93.49     40.75   f
   66750 YELOWTLP  230        62045 BLGS PHA  230  1              42.51     -5.04   f
   66755 YELOWTLP  161        62061 RMRK PHA  161  1              22.35      2.61   t
from area  65 to area  62 MONTANA                               -239.16     88.34

   66280 REDBUTTE  345        18002 HA PS     345  1             251.84    -58.11   f
from area  65 to area  18 NEVADA                                 251.84    -58.11

   66210 PAVANT    230        64124 UTAH-NEV  230  1              36.17     13.41   t
from area  65 to area  64 SIERRA                                  36.17     13.41

   66355 SIGURDPS  230        79031 GLENCANY  230  1              41.97     31.68   t
from area  65 to area  19 WAPA L.C.                               41.97     31.68

   65060 ANT MINE  230        73276 TEKLA     230  1              30.13     18.58   f
   65085 ASHLEY    138        79067 VERNAL    138  1             -80.81      5.97   t
   65192 BONANZA   138        79067 VERNAL    138  1              49.69      6.29   t
   65193 BONANZA   345        79005 BEARS     345  1            -351.43      0.36   f
   65305 CASPERPP  115        73167 REFNRYTP  115  1             -35.74     -4.03   f
   65305 CASPERPP  115        73042 CASPERLM  115  1              -4.99     -5.24   t
   65420 DAVEJOHN  230        73107 LAR.RIVR  230  1              87.72    -19.04   f
   65420 DAVEJOHN  230        73190 STEGALL   230  1              96.56    -14.22   f
   65425 DAVEJOHN  115        73070 GLENRCKN  115  1              73.50      2.46   f
   65425 DAVEJOHN  115        73071 GLENRCKS  115  1              85.03      6.33   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  1             -45.92      5.94   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  2             -45.92      5.94   f
   66278 RANGELY   138        79001 ARTESIA   138  1              -6.99     -5.16   f
   66278 RANGELY   138        79046 MEEKER    138  1              -7.98     -0.75   f
   66305 RIVERTON  230        73170 RIVERTON  115  1               6.22     10.15   f
   66535 THERMOPL  230        73197 THERMOPL  115  1               0.84      8.85   t
   66540 THERPACE  115        73197 THERMOPL  115  1              11.47      9.05   t
   66720 WORLAND   115        73222 WORLANTP  115  1             -12.52      9.03   t
   66725 WYODAK    230        73148 OSAGE     230  1             121.55    -16.48   t
   66725 WYODAK    230        73168 RENO      230  1              91.00      6.36   f
   66725 WYODAK    230        73294 HUGHES    230  1             116.77     -1.57   f
   66725 WYODAK    230        73282 WYODAK     69  1             -10.63     15.21   f
   66725 WYODAK    230        73282 WYODAK     69  2              -7.19     10.28   f
   66725 WYODAK    230        74016 WYGEN      14  1               0.00      0.00   f
   66750 YELOWTLP  230        73229 YELLOWBR  230  1            -323.22     18.92   t
from area  65 to area  73 WAPA R.M.                             -162.88     73.22

Total from area  65 PACE                                        -981.16     36.63

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   70005 BRUSHCPP  115        73013 B.CK PS   115  1             118.30     23.01   f
   70005 BRUSHCPP  115        73013 B.CK PS   115  2             124.81     30.01   f
   70116 COBBLAKE  115        73044 COBBLKTP  115  1             -15.34     -1.44   f
   70122 COMANCHE  230        73477 FULLER    230  1              95.49     31.36   t
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70139	DANIELPK	230	73477	FULLER	230	1	-115.06	-18.30	t
70193	FTN VALL	115	73412	MIDWAYBR	115	1	4.47	-0.15	t
70205	GRANDJCT	230	79036	GRANDJCT	345	1	-46.91	-23.06	f
70256	LAPORTPS	115	73105	LAPORTE	115	1	-14.74	-6.25	t
70274	MALTA	230	73138	MT.ELBRT	230	1	-145.52	-6.88	f
70285	MIDWAYPS	115	73412	MIDWAYBR	115	1	18.43	-22.63	f
70286	MIDWAYPS	230	73413	MIDWAYBR	230	1	132.07	79.33	t
70287	MILL	115	73296	FRASER	115	1	-41.68	9.51	f
70308	PALMER	115	73414	MONUMENT	115	1	-47.42	17.72	t
70311	PAWNEE	230	73192	STORY	230	1	-228.76	-30.81	t
70327	PONCHA	115	79037	GUNNISON	115	1	-23.83	10.86	f
70350	RAWHIDE	24	73165	RAWHIDE	230	1	262.16	80.95	t
70358	RIFLE PS	230	79059	RIFLE WA	230	1	-90.98	11.09	f
70358	RIFLE PS	230	79250	AMATLAS	230	1	-75.90	-3.66	f
70375	SAN LUIS	230	79054	PONCHABR	230	1	-80.57	6.69	t
70410	ST.VRAIN	230	73116	LONGPEAK	230	1	-51.99	66.34	f
70470	WELD PS	115	73211	WELD LM	115	1	-20.39	61.43	f
70471	WELD PS	230	73212	WELD LM	230	1	-369.21	1.17	f
70474	WINDSOR	230	73011	AULT	230	1	-307.19	1.38	t
70476	WOODLAND	115	73400	EMIL AND	115	1	14.70	2.51	f
70525	MTHARRIS	138	79038	HAYDEN	138	1	-7.21	-1.37	t
79033	GOREPASS	230	79039	HAYDEN	230	1	-250.97	-22.33	t
79033	GOREPASS	230	73072	GOREPASS	138	1	2.66	3.44	f
79034	GRANDJCT	115	79048	MONTROSE	115	1	22.95	-4.66	t
79056	RIFLE CU	138	79046	MEEKER	138	1	-18.96	-2.19	f
79057	RIFLE CU	230	79059	RIFLE WA	230	1	9.38	-24.09	t
79058	RIFLE CU	345	79014	CRAIG	345	1	-336.13	-1.45	f
79058	RIFLE CU	345	79036	GRANDJCT	345	1	306.73	-2.71	f
79091	WOLCOTTP	230	79039	HAYDEN	230	1	-183.00	0.02	f
79173	COLBRAN	115	79174	MOLINA-L	115	1	-0.00	-0.53	f
70351	RAWHIDEA	14	73165	RAWHIDE	230	1	50.81	40.24	t
70550	W CANON	115	73551	W CANON	230	1	-23.57	-19.05	t

from area 70 to area 73 WAPA R.M. -1332.36 285.47

Total from area 70 PSCOLORADO -1332.36 285.47

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
79060	SANJN PS	345	10292	SAN_JUAN	345	1	186.46	-27.16	t

from area 73 to area 10 NEW MEXICO 186.46 -27.16

73042	CASPERLM	115	65305	CASPERPP	115	1	4.99	5.24	f
73070	GLENRCKN	115	65425	DAVEJOHN	115	1	-73.50	-2.46	t
73071	GLENRCKS	115	65425	DAVEJOHN	115	1	-85.03	-6.33	t
73107	LAR.RIVR	230	65420	DAVEJOHN	230	1	-87.72	19.04	t
73148	OSAGE	230	66725	WYODAK	230	1	-121.55	16.48	f
73167	REFNRYTP	115	65305	CASPERPP	115	1	35.74	4.03	t
73168	RENO	230	66725	WYODAK	230	1	-91.00	-6.36	t
73170	RIVERTON	115	66305	RIVERTON	230	1	-6.22	-10.15	t
73190	STEGALL	230	65420	DAVEJOHN	230	1	-96.56	14.22	t
73197	THERMOPL	115	66540	THERPACE	115	1	-11.47	-9.05	f
73197	THERMOPL	115	66535	THERMOPL	230	1	-0.84	-8.85	f
73222	WORLANTP	115	66720	WORLAND	115	1	12.52	-9.03	f
73229	YELLOWBR	230	66750	YELOWTLP	230	1	323.22	-18.92	f
73276	TEKLA	230	65060	ANT MINE	230	1	-30.13	-18.58	t
73282	WYODAK	69	66725	WYODAK	230	1	10.63	-15.21	t
73282	WYODAK	69	66725	WYODAK	230	2	7.19	-10.28	t
73294	HUGHES	230	66725	WYODAK	230	1	-116.77	1.57	t
79001	ARTESIA	138	66278	RANGELY	138	1	6.99	5.16	t
79005	BEARS	345	65193	BONANZA	345	1	351.43	-0.36	t
79026	FLAMGORG	138	65565	FLAMGORG	230	1	45.92	-5.94	t
79026	FLAMGORG	138	65565	FLAMGORG	230	2	45.92	-5.94	t
79046	MEEKER	138	66278	RANGELY	138	1	7.98	0.75	t
79067	VERNAL	138	65085	ASHLEY	138	1	80.81	-5.97	f
79067	VERNAL	138	65192	BONANZA	138	1	-49.69	-6.29	f
74016	WYGEN	14	66725	WYODAK	230	1	0.00	0.00	t

from area 73 to area 65 PACE 162.88 -73.22

73011	AULT	230	70474	WINDSOR	230	1	307.19	-1.38	f
73013	B.CK PS	115	70005	BRUSHCPP	115	1	-118.30	-23.01	t
73013	B.CK PS	115	70005	BRUSHCPP	115	2	-124.81	-30.01	t
73044	COBBLKTP	115	70116	COBBLAKE	115	1	15.34	1.44	t
73072	GOREPASS	138	79033	GOREPASS	230	1	-2.66	-3.44	t
73105	LAPORTE	115	70256	LAPORTPS	115	1	14.74	6.25	f
73116	LONGPEAK	230	70410	ST.VRAIN	230	1	51.99	-66.34	t
73138	MT.ELBRT	230	70274	MALTA	230	1	145.52	6.88	t
73165	RAWHIDE	230	70350	RAWHIDE	24	1	-262.16	-80.95	f
73165	RAWHIDE	230	70351	RAWHIDEA	14	1	-50.81	-40.24	f
73192	STORY	230	70311	PAWNEE	230	1	228.76	30.81	f
73211	WELD LM	115	70470	WELD PS	115	1	20.39	-61.43	t
73212	WELD LM	230	70471	WELD PS	230	1	369.21	-1.17	t

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   73296 FRASER    115        70287 MILL      115  1             41.68     -9.51   t
   73400 EMIL AND  115        70476 WOODLAND  115  1            -14.70     -2.51   t
   73412 MIDWAYBR  115        70193 FTN VALL  115  1             -4.47      0.15   f
   73412 MIDWAYBR  115        70285 MIDWAYPS  115  1            -18.43     22.63   t
   73413 MIDWAYBR  230        70286 MIDWAYPS  230  1           -132.07    -79.33   f
   73414 MONUMENT  115        70308 PALMER    115  1             47.42    -17.72   f
   73477 FULLER    230        70122 COMANCHE  230  1            -95.49    -31.36   f
   73477 FULLER    230        70139 DANIELPK  230  1            115.06     18.30   f
   79014 CRAIG     345        79058 RIFLE CU  345  1            336.13      1.45   t
   79036 GRANDJCT  345        79058 RIFLE CU  345  1           -306.73      2.71   t
   79036 GRANDJCT  345        70205 GRANDJCT  230  1             46.91     23.06   t
   79037 GUNNISON  115        70327 PONCHA    115  1             23.83    -10.86   t
   79038 HAYDEN    138        70525 MTHARRIS  138  1              7.21      1.37   f
   79039 HAYDEN    230        79033 GOREPASS  230  1            250.97     22.33   f
   79039 HAYDEN    230        79091 WOLCOTTP  230  1            183.00     -0.02   t
   79046 MEEKER    138        79056 RIFLE CU  138  1             18.96      2.19   t
   79048 MONTROSE  115        79034 GRANDJCT  115  1            -22.95      4.66   f
   79054 PONCHABR  230        70375 SAN LUIS  230  1             80.57     -6.69   f
   79059 RIFLE WA  230        70358 RIFLE PS  230  1             90.98    -11.09   t
   79059 RIFLE WA  230        79057 RIFLE CU  230  1             -9.38     24.09   f
   79174 MOLINA-L  115        79173 COLBRAN   115  1              0.00      0.53   t
   79250 AMATLAS   230        70358 RIFLE PS  230  1             75.90      3.66   t
   73551 W CANON   230        70550 W CANON   115  1             23.57     19.05   f
from area  73 to area  70 PSCOLORADO                           1332.36   -285.47

   79061 SHIP PS   230        79063 SHIPROCK  230  1             87.43    -14.92   t
   79260 ELPASOTP  115        79105 GLADETAP  115  1             -0.61    -13.17   t
from area  73 to area  19 WAPA L.C.                              86.82    -28.08

   73229 YELLOWBR  230        63001 CROS PHA  230  1           -156.57     25.41   f
from area  73 to area  63 WAPA U.M.                            -156.57     25.41

Total from area  73 WAPA R.M.                                  1611.95   -388.52

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   63002 CRSOVRUM  230        62051 HARDIN    230  1           -137.96     -8.14   f
   63002 CRSOVRUM  230        62056 HUNTLEY   230  1            155.40    -21.46   f
   63008 HAVRE     161        62023 GT FALLS  161  1            -14.01     12.26   t
   63014 TIBERTAP  115        62027 SHELBY    115  1             -0.19      2.50   t
   63015 VERONA    161        62024 RAINBOW   161  1            -12.92     12.05   t
from area  63 to area  62 MONTANA                                -9.68     -2.79

   63001 CROS PHA  230        73229 YELLOWBR  230  1            156.57    -25.41   t
from area  63 to area  73 WAPA R.M.                             156.57    -25.41

Total from area  63 WAPA U.M.                                   146.89    -28.20
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MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Summation of selected system

	-----MW----	----MVAR---		
Generation	70648.648	9117.936	Generators	2564
Actual Load	60440.602	19741.215	Loads	6813
Net actual shunt	0.321	-2041.117	Shunts	1297
Net actual svd	0.000	-5930.230	Svd	585
Loss	3060.728	-2569.394	Buses	13183
			Lines	10961
			Transformers	5140
MVA-miles	6287675.5	972363.3	DC buses	6
Miles	46985.316		DC converters	10
			DC lines	3

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area 54 [ALBERTA]

	-----MW----	----MVAR---		
Generation	7862.734	857.197	Generators	142
Actual Load	7899.199	2641.000	Loads	512
Net actual shunt	0.000	-22.487	Shunts	9
Net actual svd	0.000	-1851.936	Svd	76
Net Interchange	-399.428	-37.039	Buses	991
Sched Interchange	-400.000		Lines	781
Loss	362.961	127.660	Transformers	406
MVA-miles	1111698.0	226120.4	DC buses	0
Miles	18637.697		DC converters	0
			DC lines	0
Loss at 13.20 Kv	1.733	25.322		
Loss at 13.80 Kv	3.367	88.111		
Loss at 14.40 Kv	0.019	2.275		
Loss at 25.00 Kv	1.931	27.273		
Loss at 34.00 Kv	0.053	0.877		
Loss at 69.00 Kv	18.964	-3.364		
Loss at 138.00 Kv	151.490	-263.415		
Loss at 240.00 Kv	167.689	-572.756		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	17.714	823.337		
Largest mismatch MVA	0.0121	0.1179		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area 50 [B.C.HYDRO]

	-----MW----	----MVAR---		
Generation	10251.102	925.883	Generators	112
Actual Load	6889.125	2565.790	Loads	395
Net actual shunt	0.000	2957.812	Shunts	104
Net actual svd	0.000	2143.605	Svd	125
Net Interchange	2850.135	-276.386	Buses	1054
Sched Interchange	2849.900		Lines	718
Loss	511.839	-6464.939	Transformers	645
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.307	7.922		
Loss at 13.80 Kv	10.057	491.737		
Loss at 34.00 Kv	0.000	0.002		
Loss at 46.00 Kv	0.302	0.084		
Loss at 132.00 Kv	36.981	105.857		
Loss at 138.00 Kv	15.076	-120.952		
Loss at 230.00 Kv	53.123	-614.115		
Loss at 500.00 Kv	338.766	-7000.631		
Loss at other Kv	57.226	665.161		
Largest mismatch MVA	0.0312	0.0351		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area 60 [IDAHO]

	-----MW----	----MVAR---

Generation	4111.463	457.600	Generators	62
Actual Load	2984.000	711.600	Loads	64
Net actual shunt	0.000	-595.478	Shunts	15
Net actual svd	0.000	0.000	Svd	0
Net Interchange	919.864	-311.091	Buses	156
Sched Interchange	920.000		Lines	120
Loss	207.600	652.570	Transformers	96
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.272	5.839		
Loss at 13.80 Kv	3.375	116.064		
Loss at 14.40 Kv	0.878	34.174		
Loss at 34.50 Kv	0.000	0.000		
Loss at 100.00 Kv	0.590	27.429		
Loss at 115.00 Kv	0.438	0.380		
Loss at 138.00 Kv	19.680	-4.774		
Loss at 161.00 Kv	1.800	2.733		
Loss at 230.00 Kv	72.395	-34.598		
Loss at 345.00 Kv	102.916	335.740		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	5.255	169.583		
Largest mismatch MVA	0.0024	0.0082		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area 62 [MONTANA]

	-----MW----	----MVAR---		
Generation	2908.334	146.846	Generators	22
Actual Load	1422.895	610.184	Loads	200
Net actual shunt	0.321	-121.986	Shunts	56
Net actual svd	0.000	-90.512	Svd	11
Net Interchange	1367.597	-450.856	Buses	310
Sched Interchange	1368.000		Lines	317
Loss	117.521	200.016	Transformers	89
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.000	36.356		
Loss at 69.00 Kv	0.538	2.554		
Loss at 100.00 Kv	15.820	-45.784		
Loss at 115.00 Kv	2.234	-18.339		
Loss at 161.00 Kv	30.178	-13.233		
Loss at 230.00 Kv	24.146	-80.848		
Loss at 500.00 Kv	43.958	143.897		
Loss at other Kv	0.648	175.413		
Largest mismatch MVA	0.0045	0.0081		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area 40 [NORTHWEST]

	-----MW----	----MVAR---		
Generation	27331.773	3752.767	Generators	383
Actual Load	22671.295	6850.328	Loads	1652
Net actual shunt	0.000	-1855.398	Shunts	43
Net actual svd	0.000	-4060.109	Svd	159
Net Interchange	3513.902	1036.054	Buses	2740
Sched Interchange	3514.000		Lines	2710
Loss	1146.586	1781.908	Transformers	654
MVA-miles	4582896.5	611580.2	DC buses	4
Miles	18469.418		DC converters	4
			DC lines	2
Loss at 11.00 Kv	-0.000	0.606		
Loss at 13.20 Kv	0.000	4.928		
Loss at 13.80 Kv	4.807	207.596		
Loss at 14.40 Kv	0.284	13.035		
Loss at 25.00 Kv	3.168	165.818		
Loss at 34.50 Kv	0.345	6.193		
Loss at 69.00 Kv	14.912	42.575		
Loss at 100.00 Kv	0.121	-0.183		
Loss at 115.00 Kv	218.081	502.353		
Loss at 230.00 Kv	338.233	1624.930		
Loss at 345.00 Kv	16.041	-175.694		

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Loss at 500.00 Kv         425.745    -1920.996
Loss at other Kv          124.848     1310.747

Largest mismatch MVA       0.0286       0.0790

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area  65 [PACE                           ]

                      -----MW----  ----MVAR---
Generation               5584.900      755.788        Generators           52
Actual Load              6293.716     1960.150        Loads               274
Net actual shunt            0.000    -1762.570        Shunts               74
Net actual svd              0.000      -48.571        Svd                   2
Net Interchange          -981.147       36.871        Buses               564
Sched Interchange        -981.200                     Lines               407
Loss                      272.334      569.904        Transformers        337

MVA-miles                     5.0          1.6        DC buses              0
Miles                       1.900                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           0.868       28.077
Loss at  34.50 Kv           0.990        7.429
Loss at  46.00 Kv           6.339      137.414
Loss at  69.00 Kv           1.672       22.771
Loss at 100.00 Kv           0.056        1.037
Loss at 115.00 Kv           3.001       -9.332
Loss at 138.00 Kv          71.155      198.499
Loss at 161.00 Kv          15.087        2.871
Loss at 230.00 Kv          80.593       61.975
Loss at 345.00 Kv          88.501       20.527
Loss at other Kv            4.074       98.636

Largest mismatch MVA       0.0031       0.0248

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area  70 [PSCOLORADO                     ]

                      -----MW----  ----MVAR---
Generation               5191.508     1771.750        Generators           66
Actual Load              6332.696     2372.604        Loads               362
Net actual shunt            0.000        0.000        Shunts                0
Net actual svd              0.000    -1672.031        Svd                  43
Net Interchange         -1332.337      285.456        Buses               500
Sched Interchange       -1332.800                     Lines               461
Loss                      191.144      785.742        Transformers        147

MVA-miles                 30598.7       6263.1        DC buses              0
Miles                     564.500                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           4.007      136.179
Loss at  14.40 Kv           0.080        0.798
Loss at  25.00 Kv           0.010        0.140
Loss at  46.00 Kv           0.196        0.009
Loss at  69.00 Kv           7.173        1.660
Loss at 100.00 Kv           0.032       -0.501
Loss at 115.00 Kv          33.096      -37.718
Loss at 138.00 Kv           0.225       -5.718
Loss at 230.00 Kv         138.902      449.863
Loss at 345.00 Kv           0.002        0.112
Loss at other Kv            7.423      240.917

Largest mismatch MVA       0.0243       0.0264

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area  64 [SIERRA                         ]

                      -----MW----  ----MVAR---
Generation               1375.351      126.528        Generators           22
Actual Load              1719.091      458.744        Loads               121
Net actual shunt            0.000     -188.116        Shunts               30
Net actual svd              0.000       68.967        Svd                   5
Net Interchange          -399.899       57.299        Buses               275
Sched Interchange        -399.000                     Lines               197
Loss                       56.159     -270.358        Transformers        117

MVA-miles                 66649.6      38456.5        DC buses              0
```

Miles	1042.600		DC converters	0
			DC lines	0
Loss at 13.80 Kv	2.542	51.449		
Loss at 69.00 Kv	0.000	0.000		
Loss at 115.00 Kv	0.479	-6.145		
Loss at 230.00 Kv	1.908	-99.624		
Loss at 345.00 Kv	9.075	-441.238		
Loss at other Kv	42.154	225.200		
Largest mismatch MVA	0.0067	0.0424		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area 52 [W KOOTENAY]

	-----MW----	----MVAR---		
Generation	596.550	100.091	Generators	20
Actual Load	722.400	210.200	Loads	64
Net actual shunt	0.000	-77.820	Shunts	27
Net actual svd	0.000	-130.690	Svd	4
Net Interchange	-150.510	-8.137	Buses	260
Sched Interchange	-149.900		Lines	165
Loss	24.660	106.536	Transformers	117
MVA-miles	30835.6	4863.4	DC buses	0
Miles	986.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.000	8.258		
Loss at 13.80 Kv	0.000	0.000		
Loss at 14.40 Kv	0.000	29.986		
Loss at 25.00 Kv	0.000	0.000		
Loss at 138.00 Kv	0.396	-0.490		
Loss at 161.00 Kv	9.043	11.279		
Loss at 230.00 Kv	1.525	-8.685		
Loss at other Kv	13.696	66.188		
Largest mismatch MVA	0.0008	0.0060		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area 73 [WAPA R.M.]

	-----MW----	----MVAR---		
Generation	5379.477	218.708	Generators	80
Actual Load	3608.290	1237.018	Loads	355
Net actual shunt	0.000	-296.124	Shunts	4
Net actual svd	0.000	-271.844	Svd	53
Net Interchange	1611.933	-387.598	Buses	620
Sched Interchange	1612.000		Lines	567
Loss	159.255	-62.738	Transformers	174
MVA-miles	464992.6	85078.0	DC buses	0
Miles	7283.200		DC converters	0
			DC lines	0
Loss at 13.80 Kv	6.221	91.895		
Loss at 34.50 Kv	0.315	4.024		
Loss at 69.00 Kv	5.364	-11.099		
Loss at 115.00 Kv	64.437	-116.586		
Loss at 138.00 Kv	4.687	-30.251		
Loss at 230.00 Kv	36.118	-278.216		
Loss at 345.00 Kv	34.875	-45.982		
Loss at other Kv	7.239	323.477		
Largest mismatch MVA	0.0228	0.0342		

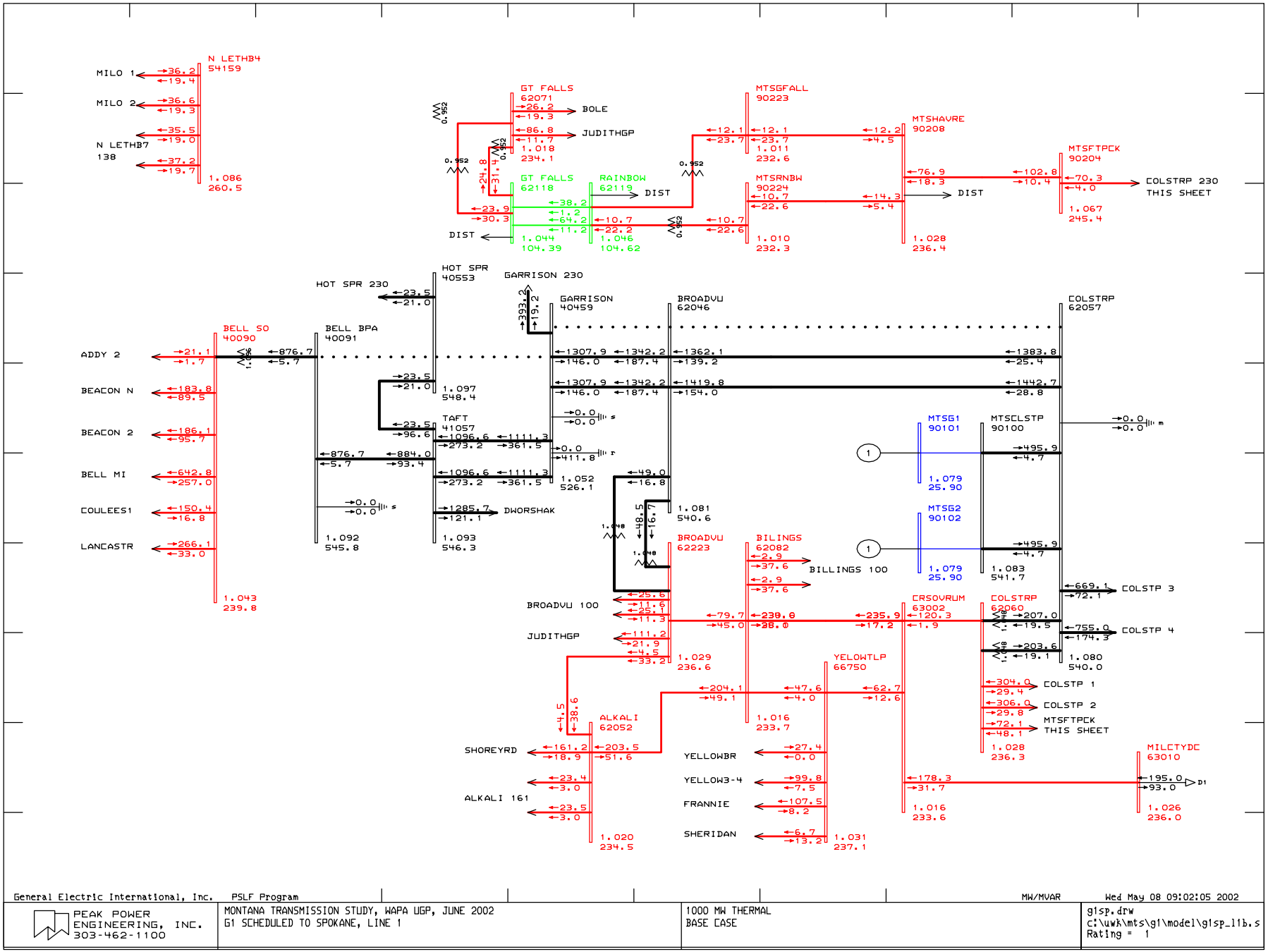
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1

Area 63 [WAPA U.M.]

	-----MW----	----MVAR---		
Generation	55.454	4.779	Generators	1
Actual Load	-102.100	123.600	Loads	17
Net actual shunt	0.000	-78.951	Shunts	1
Net actual svd	0.000	-17.109	Svd	4
Net Interchange	146.885	-27.065	Buses	15
Sched Interchange	147.000		Lines	12
Loss	10.669	4.305	Transformers	3
MVA-miles	0.0	0.0	DC buses	0

Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.219	6.218		
Loss at 115.00 Kv	0.025	-7.077		
Loss at 161.00 Kv	0.926	-47.969		
Loss at 230.00 Kv	9.498	53.134		
Largest mismatch MVA	0.0001	0.0010		

B.3 spl1



General Electric International, Inc. PSLF Program MW/MVAR Wed May 08 09:02:05 2002

PEAK POWER ENGINEERING, INC. 303-462-1100

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

1000 MW THERMAL
BASE CASE

g1sp.drw
c:\uwk\mts\g1\model\g1sp_11b.s
Rating = 1

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Percent Loading Summary -- using rating 1 - 100.0 percent of rating

----------from----------				---------- to ----------								rate	per cent	
--no.--	--name--	-kv-	-ar-	--no.--	--name--	-kv-	-ar-	ck	---mw---	-mvar-	-mva--	------	loading	
54083	E EDMON9	138	54	55938	STEL TAP	138	54	22	197.9	1.5	197.9	468.6A	169.9	F
54503	STELCOA9	138	54	55938	STEL TAP	138	54	22	-197.3	-0.1	197.3	497.9A	159.8	F
55015	DOME EA9	14	54	55525	163ST2	240	54	T2	-66.0	-5.3	66.2	45.0M	148.3	T
54506	BELLAMY4	240	54	54518	ARGYLL E	240	54	04	81.2	84.2	117.0	240.6A	134.0	T
40459	GARRISON	500	40	41057	TAFT	500	40	1	1111.1	-361.7	1168.5	1090.0A	117.6	F
40459	GARRISON	500	40	41057	TAFT	500	40	2	1111.1	-361.7	1168.5	1090.0A	117.6	F
54062	BARDO 7	138	54	54065	N HOLDE9	138	54	74	82.0	-53.0	97.7	355.6A	111.9	F
54154	E CALGAR	240	54	54161	SARCEE 4	240	54	16	-91.2	365.6	376.8	801.1A	110.9	T
54681	NEVIS 7	138	54	54823	NEVIS 9	138	54	1	33.2	15.6	36.7	33.3M	110.2	F
50459	KIT287	287	50	51075	KIT B5	13	50	5	80.3	23.6	83.7	79.0M	106.0	F
62047	COLSTP 4	26	62	62057	COLSTRP	500	62	1	755.0	241.6	792.7	770.0M	103.0	F
54290	BALZAC G	138	54	55290	BALZAC 1	14	54	T1	107.1	13.1	107.9	105.0M	102.8	F
41304	COUGAR T	7	40	46211	COUGAR T	115	40	1	27.9	-8.0	29.0	30.0M	100.5	T
54079	MILLAR 7	138	54	55102	MILLARA9	14	54	T2	55.6	29.0	62.7	62.5M	100.4	F

```
Processing file ..\base\rvoltlsbs.out
Processing file rvoltspl1b.out

Compvolt found the following for comparisons:
     477 Voltage Violations read from ..\base\rvoltlsbs.out
     484 Voltage Violations read from rvoltspl1b.out


**** VOLTS:  NEW ****
Component                   w/o Prj         w/ Prj  Rating
90204 MTSFTPCK  230   0.95 <= pu <= 1.05    1.0669  1.00 pu kV
90209 MTSMALTA  230   0.95 <= pu <= 1.05    1.0580  1.00 pu kV
90211 MTSRICHC  230   0.95 <= pu <= 1.05    1.0648  1.00 pu kV
50464 TKW500    500   0.95 <= pu <= 1.05    1.0529  1.00 pu kV
50541 KDS230    230   0.95 <= pu <= 1.05    1.0506  1.00 pu kV
50561 WSN500    500   0.95 <= pu <= 1.05    1.0507  1.00 pu kV
42312 CASCADEP  230   0.95 <= pu <= 1.05    1.0506  1.00 pu kV
40729 MESA      115   0.95 <= pu <= 1.05    1.0508  1.00 pu kV

**** VOLTS: WORSE ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS: BETTER ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS:  AWAY ****
Component             w/o Prj      w/ Prj          Rating
47165 HANLY R1  115   1.0509  0.95 <= pu <= 1.05   1.00 pu kV
```

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

overvoltage summary > 1.100000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54054	LAMOURE4	240	1.1046	54081	METIS644	240	1.1120	54090	BICKERD4	240	1.1205
54103	DEERLAN4	240	1.1029	54121	ELLERSLI	240	1.1124	54126	WABAMUN4	240	1.1072
54128	SUNDANM9	240	1.1080	54129	E EDMON4	240	1.1083	54130	N CALDE4	240	1.1056
54131	N BARRH4	240	1.1049	54150	LANGDON2	500	1.1250	54329	KEEPHIL4	240	1.1222
54441	946/947X	240	1.1124	54505	JASPER 4	240	1.1078	54506	BELLAMY4	240	1.1213
54509	ARGYLL W	240	1.1206	54512	DOME T29	240	1.1119	54513	LAMBTON4	240	1.1090
54514	CLOVERB4	240	1.1050	54518	ARGYLL E	240	1.1201	54519	CASTLTX2	240	1.1045
54521	PETROLIA	240	1.1140	54524	GENESEE4	240	1.1210	54675	PAINTRT7	240	1.1015
54681	NEVIS 7	138	1.1099	54806	946/947N	240	1.1083	54844	709S702T	138	1.1092
54978	EAST IN4	240	1.1085	55891	904AL TP	240	1.1085	55969	770S701T	138	1.1087
51017	KMS230	230	1.1122								

overvoltage summary > 1.050000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
90100	MTSCLSTP	500	1.0834	90204	MTSFTPCK	230	1.0669	90209	MTSMALTA	230	1.0580
90211	MTSRICHC	230	1.0648	54003	COLINTO9	138	1.0523	54007	BOYLE 9	138	1.0564
54012	FOX CREE	138	1.0666	54013	KAYBOB 9	138	1.0717	54014	GULF RO9	138	1.0819
54015	MTN COA9	138	1.0653	54016	FLATBUS9	138	1.0542	54017	COLD CR7	138	1.0666
54019	WESGEN T	138	1.0531	54020	EDSON A9	138	1.0624	54021	WESGEN 7	138	1.0556
54054	LAMOURE4	240	1.1046	54069	JARROW 9	138	1.0542	54073	IPPL ST9	138	1.0585
54075	SEDGEWI9	138	1.0508	54076	BUFFALO9	138	1.0545	54077	BIGSTON4	240	1.0949
54078	CHEVRON7	138	1.0717	54081	METIS644	240	1.1120	54082	BICKERD7	138	1.0718
54090	BICKERD4	240	1.1205	54097	BIG HOR9	138	1.0675	54103	DEERLAN4	240	1.1029
54111	SANDHIL7	138	1.0794	54121	ELLERSLI	240	1.1124	54125	SUNDANL9	138	1.0654
54126	WABAMUN4	240	1.1072	54128	SUNDANM9	240	1.1080	54129	E EDMON4	240	1.1083
54130	N CALDE4	240	1.1056	54131	N BARRH4	240	1.1049	54134	DALEHUR9	138	1.0656
54139	GAETZ 4	240	1.0751	54141	HIGHVAL9	138	1.0652	54142	WILLESD4	240	1.0883
54144	RED DEE4	240	1.0671	54147	BENALTO4	240	1.0665	54148	E CROSS4	240	1.0574
54150	LANGDON2	500	1.1250	54153	BRAZEAU4	240	1.0977	54155	SAGITAW4	240	1.0591
54157	PEIGAN 4	240	1.0705	54159	N LETHB4	240	1.0856	54200	848S901T	240	1.0730
54232	PANCAN 9	138	1.0792	54233	DOME EM7	138	1.0794	54258	PLAMOND9	138	1.0551
54259	LAC LA 9	138	1.0996	54260	WINEFRE9	138	1.0966	54269	COALSPU7	138	1.0846
54281	MILO 2	240	1.0684	54285	LEISMER9	240	1.0825	54287	GREGG R9	138	1.0959
54298	ALB NEWS	240	1.0502	54302	MARIONA9	138	1.0652	54308	FLATLK-3	138	1.0559
54325	CHEV KG9	138	1.0717	54326	COAL VA9	138	1.0834	54329	KEEPHIL4	240	1.1222
54335	W BROOK4	240	1.0589	54362	EDGERTO7	138	1.0548	54381	FLATLK-1	138	1.0558
54412	BENBOW 9	138	1.0717	54441	946/947X	240	1.1124	54505	JASPER 4	240	1.1078
54506	BELLAMY4	240	1.1213	54509	ARGYLL W	240	1.1206	54512	DOME T29	240	1.1119
54513	LAMBTON4	240	1.1090	54514	CLOVERB4	240	1.1050	54518	ARGYLL E	240	1.1201
54519	CASTLTX2	240	1.1045	54521	PETROLIA	240	1.1140	54524	GENESEE4	240	1.1210
54557	WESLY C4	240	1.0613	54558	WESLY C7	138	1.0651	54559	CARMON 9	138	1.0630
54560	PEACE/29	138	1.0623	54561	DIASHOW7	138	1.0623	54567	FRIEDEN7	138	1.0537
54571	MERCER 9	138	1.0735	54572	MERC TAP	138	1.0738	54576	CRYST L7	138	1.0749
54578	SADHL TP	138	1.0598	54579	SADDLE 9	138	1.0529	54580	FLYSHT/2	138	1.0630
54581	WAP JCT7	138	1.0513	54584	ALBRIGHT	138	1.0569	54585	P&G 7	138	1.0570
54588	BIG MTN7	138	1.0614	54589	DOME CU7	138	1.0736	54590	BRDGE C7	138	1.0619
54593	DONNELL9	138	1.0661	54594	TAP7L487	138	1.0690	54595	TRIANGL7	138	1.0645
54596	VALLEYV9	138	1.0777	54598	BEZANSON	138	1.0756	54599	L. SMOKY	240	1.0645
54600	L.SMOKY7	138	1.0840	54601	STURGEO7	138	1.0838	54606	SIMONET9	138	1.0843

54607	FOXCRK/2	138	1.0643	54608	GOOSE R9	138	1.0662	54612	RUTH LA7	138	1.0925
54613	RUTH LK7	138	1.0929	54618	PARS CR7	138	1.0897	54619	HANGSTO9	138	1.0871
54621	MITS E.4	240	1.0748	54622	MITS E.7	138	1.0980	54623	AEC MILL	138	1.0970
54624	OTAUWAU7	138	1.0978	54632	LOU CR.4	240	1.0638	54633	LOU CR.7	138	1.0596
54634	SARHLK/2	138	1.0532	54636	ESSO JU7	138	1.0543	54637	MORSE RV	138	1.0548
54639	VIRGINI9	138	1.0521	54643	WOLF LK9	138	1.0698	54646	MARG LK4	240	1.0781
54647	MARG LK7	138	1.0829	54648	LACOREY9	138	1.0806	54649	ETHEL L7	138	1.0671
54652	BONNY 9	138	1.0838	54654	BONN SVC	138	1.0838	54655	WHITFISH	240	1.0951
54656	WHITBY 7	138	1.0841	54657	VILNA 9	138	1.0819	54663	IRISH C9	138	1.0616
54665	BUFALOTP	138	1.0545	54666	VERMILO7	138	1.0596	54670	HILL 9	138	1.0685
54675	PAINTRT7	240	1.1015	54680	NEVIS 4	240	1.0776	54681	NEVIS 7	138	1.1099
54685	3HILLS/3	138	1.0615	54691	MICH. C9	138	1.0997	54693	WINT HI9	138	1.0934
54694	BULLPON9	138	1.0872	54700	MCNEILL	138	1.0795	54701	OYEN 7	138	1.0600
54707	SHEER 14	240	1.0545	54709	ANDERSO4	240	1.0547	54710	ANDERSON	138	1.0846
54711	SHEER 24	240	1.0535	54714	JAROW TP	138	1.0542	54715	BAT. RV7	138	1.0809
54721	BAT RV79	240	1.0990	54723	CORDEL 4	240	1.0990	54729	PRIM TAP	138	1.0650
54730	PRIMROSE	138	1.0710	54798	800S701T	138	1.0612	54802	STURGEO9	138	1.0860
54806	946/947N	240	1.1083	54809	732S901T	240	1.0752	54814	717S701T	138	1.0634
54818	VERMILA9	138	1.0803	54819	TER 70A9	138	1.0630	54822	766S901T	240	1.0624
54823	NEVIS 9	138	1.0747	54827	MONITOR9	138	1.0519	54828	767S701T	138	1.0935
54836	MILNERB9	138	1.0720	54838	848S902T	240	1.0734	54840	732S902T	240	1.0517
54844	709S702T	138	1.1092	54847	BAT RV80	240	1.0990	54962	KAYBOBTP	138	1.0717
54978	EAST IN4	240	1.1085	54983	MARION T	138	1.0653	54984	HIGHVL T	138	1.0652
54988	CROSSF T	240	1.0574	54995	W.GRN TP	240	1.0883	55003	SANDYPT9	138	1.0794
55007	ALGAR-39	138	1.0918	55008	MARIANA7	138	1.0931	55072	SYNC_D04	240	1.0652
55073	AURORA 4	240	1.0698	55117	CLAIR L	138	1.0736	55118	POPLAR 7	138	1.0599
55147	MILNERC9	138	1.0825	55226	WABASCA9	240	1.0677	55260	EMP LIQ7	138	1.0774
55272	FIELDGA9	138	1.0534	55280	BRINTNEL	240	1.0629	55352	GRND CTR	138	1.0684
55367	VEGREVL9	138	1.0539	55515	PRIMROSE	138	1.0563	55820	FICKLE 9	138	1.0675
55891	904AL TP	240	1.1085	55909	DALEH TP	138	1.0656	55910	OBED TAP	138	1.0656
55911	EMPLIQTP	138	1.0779	55912	740L JNC	138	1.0846	55913	G.ROBB T	138	1.0825
55924	CH KGT T	138	1.0717	55943	MILO 1	240	1.0684	55969	770S701T	138	1.1087
50010	COM132	132	1.0509	50016	CKY230	230	1.0520	50020	CMS230	230	1.0500
50036	RBW230	230	1.0583	50037	PEM230	230	1.0615	50038	RBW230-1	230	1.0574
50182	ARN132	132	1.0669	50185	ALZ230	230	1.0608	50186	ROS230	230	1.0716
50187	BRT230	230	1.0686	50188	BUT230	230	1.0500	50190	CBN230	230	1.0528
50191	ROS360	360	1.0529	50192	WAH360	360	1.0533	50193	BRT360	360	1.0500
50313	VIT132	132	1.0705	50314	PVO133	132	1.0699	50315	PVO132	132	1.0704
50316	LDY132	132	1.0525	50318	JPT132	132	1.0716	50319	COC132	132	1.0682
50320	HMC132	132	1.0680	50321	PHY132	132	1.0567	50322	CFT132	132	1.0662
50323	DMR132	132	1.0839	50324	PAL132	132	1.0667	50325	GCL132	132	1.0682
50326	NFD132	132	1.0726	50327	ASH132	132	1.0719	50328	PUN132	132	1.0564
50330	LDR132	132	1.0500	50334	KGH132	132	1.0610	50335	UTA132	132	1.0612
50336	PVL132-2	132	1.0733	50337	LDY122	132	1.0713	50338	CMX132	132	1.0578
50339	PVL132	132	1.0733	50342	SCA132	132	1.0500	50343	KSH132-2	132	1.0733
50344	SHA1	132	1.0716	50345	KSH132	132	1.0727	50346	SHA2	132	1.0758
50347	GOW132	132	1.0863	50348	GTP132	132	1.0902	50349	CLD132	132	1.0941
50350	SOO132	132	1.0955	50351	JOR132	132	1.0992	50352	PML132	132	1.0593
50353	WOS132	132	1.0562	50354	GLSTP17	132	1.0749	50355	GLSTP18	132	1.0720
50356	DND132	132	1.0856	50357	LTZ115	132	1.0714	50358	LTZ116	132	1.0714
50359	JHT132	132	1.0500	50377	LDYTP138	132	1.0527	50381	PVLTP116	132	1.0733
50382	HWDTP122	132	1.0717	50383	LDYTP122	132	1.0713	50385	CMXTP102	132	1.0559
50386	CMXTP101	132	1.0598	50387	PVLTP115	132	1.0734	50390	KSHTP11	132	1.0729
50391	KSHTP14	132	1.0736	50393	SHATP10	132	1.0717	50394	SHATP14	132	1.0758
50395	SALTP17	132	1.0734	50396	SALTP18	132	1.0734	50399	LTZTP115	132	1.0714

50400	LTZTP116	132	1.0714	50403	CMX132-2	132	1.0544	50460	KMO287	287	1.0528
50463	SKA500	500	1.0526	50464	TKW500	500	1.0529	50541	KDS230	230	1.0506
50545	BLW230	230	1.0741	50546	SCK230	230	1.0679	50547	HMH230	230	1.0645
50548	BLM230	230	1.0525	50549	QNT230	230	1.0518	50550	QRP230	230	1.0738
50551	TLR230	230	1.0523	50553	BCR230	230	1.0523	50554	RBF230	230	1.0750
50556	LAP230	230	1.0501	50557	SNK230	230	1.0517	50560	KDS500	500	1.0614
50561	WSN500	500	1.0507	50562	GLN500	500	1.0597	50677	MCK138	138	1.0538
50678	AVO138	138	1.0560	50679	BLU138	138	1.0629	50680	VLM138	138	1.0694
50686	SCO138	138	1.0686	50687	ABA138	138	1.0686	50701	REV500	500	1.0500
50729	PRI138TP	138	1.0685	50782	CBK230	230	1.0502	50783	SEL230	230	1.0542
50785	SEV230	230	1.0529	50786	INV230	230	1.0515	50789	AAL230	230	1.0514
50791	CBK500	500	1.0802	50792	SEL500	500	1.0500	50899	ABA138TP	138	1.0686
50913	HWD132-2	132	1.0695	50914	HWDTP112	132	1.0695	50922	DNDTAP	132	1.0862
50923	HSY-PH	132	1.0905	50924	ESQ-PH	132	1.0856	50928	SCG IPP	132	1.0500
50932	IPH132	132	1.0680	50933	JUL132	132	1.0579	50934	JULTP130	132	1.0610
51017	KMS230	230	1.1122	51019	OYR132B1	132	1.0540	51020	OYR132B2	132	1.0563
51021	OYR T101	132	1.0545	51022	OYR T119	132	1.0571	51024	QLC132B1	132	1.0758
51025	QLC132B2	132	1.0758	51040	ICG132	132	1.0500	51045	ALH230	230	1.0552
51051	PGS132	132	1.0700	51052	PGS-105T	132	1.0700	51053	PGS-114T	132	1.0700
60085	BRIDGER	345	1.0500	60240	MIDPOINT	500	1.0589	62012	TOWN2	500	1.0769
62013	TOWN1	500	1.0769	62033	ANA BPA	115	1.0520	62046	BROADVU	500	1.0813
62053	BROADV&2	500	1.0889	62054	BROADV&1	500	1.0904	62057	COLSTRP	500	1.0800
40045	ALLSTON	500	1.0772	40051	ALVEY	500	1.0814	40061	ASHE	500	1.0800
41184	BALD MT	115	1.0514	40091	BELL BPA	500	1.0918	40111	BIG EDDY	500	1.0803
43049	BOARD F	500	1.0800	47013	BRIDGPRT	115	1.0521	40155	BUCKLEY	500	1.0830
45029	BURNS	500	1.0671	45035	CAPTJACK	500	1.0750	46209	CARMEN	115	1.0525
42315	CASCADEP	115	1.0591	42312	CASCADEP	230	1.0506	41311	CELILO1	500	1.0801
41312	CELILO2	500	1.0801	40233	CHIEF JO	500	1.0800	42316	CLE ELUM	115	1.0595
40269	CONNEL T	115	1.0520	40271	CONNELL	115	1.0550	40287	COULEE	500	1.0820
40302	COVINGT4	500	1.0773	40306	COVINGT5	500	1.0779	43123	COYOTE	500	1.0834
40323	CUSTER W	500	1.0529	45095	DIXONVLE	500	1.0780	40369	DWORSHAK	500	1.0690
42395	EASTON	115	1.0610	40381	ECHOLAKE	500	1.0826	40451	GAR1EAST	500	1.0921
40453	GAR2EAST	500	1.0921	40459	GARRISON	500	1.0524	40485	GREEN PT	115	1.0520
40489	GRIZZLY	500	1.0720	40499	HANFORD	500	1.0881	40517	HATTON T	115	1.0532
40521	HATWAI	500	1.0691	45137	HERMIST	230	1.0509	41212	HILLS CR	115	1.0500
40553	HOT SPR	500	1.0968	42405	HYAK	115	1.0618	40585	JOHN DAY	500	1.0800
40601	KEELER	500	1.0762	45262	KFALLS	500	1.0791	42411	KITTITAS	115	1.0617
40629	LANE	500	1.0717	40665	LIT GOOS	500	1.0805	40679	LOW GRAN	500	1.0794
40683	LOW MON	500	1.0823	40687	MALIN	500	1.0731	40693	MAPLE VL	500	1.0843
40699	MARION	500	1.0807	40711	MCLOUGLN	500	1.0805	40721	MCNARY	345	1.0512
40723	MCNARY	500	1.0818	45197	MERIDINP	500	1.0798	40729	MESA	115	1.0508
40749	MONROE	500	1.0782	42429	NCLE ELM	115	1.0591	40797	OLYMPIA	500	1.0799
40809	OSTRNDER	500	1.0799	40821	PAUL	500	1.0800	40827	PEARL	500	1.0801
40837	PONDROSA	500	1.0750	40869	RAVER	500	1.0810	40887	RINGOLD	115	1.0509
43485	ROUND BU	500	1.0690	40913	SACJAWEA	500	1.0823	40917	SACJWA T	500	1.0828
40941	SANTIAM	500	1.0805	40949	SATSOP	500	1.0820	40957	SCHULTZ	500	1.0934
40973	SICKLER	500	1.0847	40989	SLATT	500	1.0825	41043	SUMMER L	500	1.0719
45289	SWIFT	230	1.0500	41051	TACOMA	500	1.0819	41057	TAFT	500	1.0927
41095	TROUTDAL	500	1.0828	41103	UNDRWOOD	115	1.0514	41113	VANTAGE	500	1.0915
47099	WELLS	115	1.0604	42467	WOLDALE	115	1.0605	42314	X-POINT	200	1.0605
65510	EMERY	345	1.0500	64074	MILLERS	120	1.0563	64165	SQAW VLY	120	1.0607
64182	SANDIA	120	1.0562	64229	SUMMIT 2	115	1.0508	52226	PRI138	138	1.0694
52229	KER138	138	1.0765	52230	HED138	138	1.0743	52291	DKL138	138	1.0579
52300	LEE138T3	138	1.0577	52301	LEE138T4	138	1.0577	52302	LEE138C	138	1.0577
52303	JOR138TP	138	1.0573	52304	DGB138	138	1.0565	52306	SEX138	138	1.0580

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  52307 GLE138    138 1.0582    52308 REC138    138 1.0584    52309 SAU138    138 1.0569
  52310 SPR138TP  138 1.0569    52313 HOL138    138 1.0568    52314 OKM138    138 1.0561
  52319 JOR138    138 1.0571    52426 MAS138    138 1.0743    52809 LEE-T3    230 1.0585
  52810 LEE-T4A   230 1.0578    52811 LEE-T4B   230 1.0596    52812 LEE-T4C   230 1.0582
  52813 LEE-T4D   230 1.0583    52815 PRI-T2    138 1.0727

    undervoltage summary < 0.900000
--no.-- --name-- -kv- (v pu)  --no.-- --name-- -kv- (v pu)  --no.-- --name-- -kv- (v pu)



    undervoltage summary < 0.950000
--no.-- --name-- -kv- (v pu)  --no.-- --name-- -kv- (v pu)  --no.-- --name-- -kv- (v pu)

  54551 RING CK7  138 0.9484    54796 791S701T  138 0.9196    54835 791S702T  138 0.9260
  50781 NTL VR    138 0.9447
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GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

		generation capacity	generation on-line	load categories power	load categories current	load categories imped.	shunt	svd	net inter	losses	slack bus
area name	ALBERTA										
	mw	10743.6	6887.3	6274.4	0.0	0.0	0.0	0.0	200.4	412.4	37.5
54	mvar	4941.5	852.3	1997.1	0.0	0.0	-21.7	-1195.6	-19.2	91.8	20.4
area name	B.C.HYDRO										
	mw	14043.0	8262.4	6035.1	0.0	0.0	0.0	0.0	1800.5	426.8	268.5
50	mvar	6475.0	172.3	2359.8	0.0	0.0	2932.5	2574.5	-364.3	-7330.3	-5.9
area name	IDAHO										
	mw	4676.4	3198.4	1955.0	0.0	0.0	0.0	0.0	1066.8	176.6	183.0
60	mvar	2192.5	610.7	501.3	0.0	0.0	-97.2	0.0	-382.6	589.2	27.8
area name	MONTANA										
	mw	4502.2	3997.1	1207.7	0.0	0.0	0.4	0.0	2601.3	187.7	729.1
62	mvar	1929.0	169.8	524.8	0.0	0.0	-121.4	-686.3	-969.9	1422.6	8.6
area name	NORTHWEST										
	mw	43404.3	16625.8	16651.6	0.0	0.0	0.0	0.0	-646.9	621.1	580.6
40	mvar	15534.6	-166.5	5157.0	0.0	0.0	-1734.7	961.8	1637.0	-6187.7	-321.0
area name	PACE										
	mw	6242.0	5532.7	4750.0	0.0	0.0	0.0	0.0	590.9	191.8	81.7
65	mvar	3201.9	562.1	1528.0	0.0	0.0	-527.5	0.0	-172.5	-265.9	13.2
area name	PSCOLORADO										
	mw	5792.0	4236.1	4858.1	0.0	0.0	0.0	0.0	-743.5	121.6	104.1
70	mvar	3667.3	629.3	1835.0	0.0	0.0	0.0	-1397.8	53.6	138.4	4.0
area name	SIERRA										
	mw	1901.7	1069.5	1075.2	0.0	0.0	0.0	0.0	-36.0	30.4	99.5
64	mvar	925.4	-25.0	280.4	0.0	0.0	-158.5	73.9	19.8	-240.5	7.7
area name	W KOOTENAY										
	mw	763.5	498.0	486.1	0.0	0.0	0.0	0.0	0.5	11.4	98.0
52	mvar	450.0	3.5	160.7	0.0	0.0	-79.2	-71.9	-13.5	7.4	-4.9
area name	WAPA R.M.										
	mw	6091.6	3960.6	2784.2	0.0	0.0	0.0	0.0	1051.2	125.2	415.7
73	mvar	2883.8	-166.2	950.8	0.0	0.0	-299.2	-184.5	-217.2	-416.0	18.2

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

		generation capacity	generation on-line	--- load categories ---- power	current	imped.	shunt	-- svd	-- inter	net losses	slack bus
area name	WAPA U.M.										
	mw	61.8	43.6	-108.7	0.0	0.0	0.0	0.0	141.2	11.1	43.6
63	mvar	34.0	-6.4	121.4	0.0	0.0	-79.0	9.9	12.9	-71.6	-6.4
TOTL	mw	98222.1	54311.4	45968.6	0.0	0.0	0.4	0.0	6026.3	2316.1	
	mvar	42235.0	2635.9	15416.4	0.0	0.0	-185.8	84.0	-416.1	-12262.6	

Area Interchange Summary

		mw	mvar
FROM AREA	54 ALBERTA		
TO AREA	50 B.C.HYDRO	200.4	-19.2
TOTAL		200.4	-19.2
FROM AREA	50 B.C.HYDRO		
TO AREA	54 ALBERTA	-200.4	19.2
TO AREA	40 NORTHWEST	2001.4	-397.0
TO AREA	52 W KOOTENAY	-0.5	13.5
TOTAL		1800.5	-364.3
FROM AREA	60 IDAHO		
TO AREA	40 NORTHWEST	1016.2	-348.4
TO AREA	65 PACE	177.2	-12.9
TO AREA	64 SIERRA	-126.6	-21.3
TOTAL		1066.8	-382.6
FROM AREA	62 MONTANA		
TO AREA	40 NORTHWEST	2591.7	-932.4
TO AREA	65 PACE	88.4	-15.1
TO AREA	63 WAPA U.M.	-78.8	-22.4
TOTAL		2601.3	-969.9
FROM AREA	40 NORTHWEST		
TO AREA	50 B.C.HYDRO	-2001.4	397.0
TO AREA	60 IDAHO	-1016.2	348.4
TO AREA	26 LADWP	1956.0	412.2
TO AREA	62 MONTANA	-2591.7	932.4
TO AREA	30 PG AND E	2878.2	-432.7
TO AREA	64 SIERRA	128.3	-20.3
TOTAL		-646.9	1637.0
FROM AREA	65 PACE		
TO AREA	14 ARIZONA	281.9	30.5
TO AREA	60 IDAHO	-177.2	12.9
TO AREA	26 LADWP	68.1	-132.9
TO AREA	62 MONTANA	-88.4	15.1
TO AREA	18 NEVADA	144.7	-80.7
TO AREA	64 SIERRA	24.5	9.0
TO AREA	19 WAPA L.C.	182.6	-30.6
TO AREA	73 WAPA R.M.	154.6	4.1
TOTAL		590.9	-172.5
FROM AREA	70 PSCOLORADO		
TO AREA	73 WAPA R.M.	-743.5	53.6
TOTAL		-743.5	53.6
FROM AREA	64 SIERRA		
TO AREA	60 IDAHO	126.6	21.3
TO AREA	26 LADWP	-31.9	6.4
TO AREA	40 NORTHWEST	-128.3	20.3
TO AREA	65 PACE	-24.5	-9.0
TO AREA	30 PG AND E	10.1	-16.4
TO AREA	24 SOCALIF	12.1	-2.7

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   TOTAL                                          -36.0       19.8

 FROM AREA   52 W KOOTENAY                          mw        mvar
   TO AREA   50 B.C.HYDRO                            0.5      -13.5
   TOTAL                                             0.5      -13.5

 FROM AREA   73 WAPA R.M.                           mw        mvar
   TO AREA   10 NEW MEXICO                         344.5     -101.0
   TO AREA   65 PACE                              -154.6       -4.1
   TO AREA   70 PSCOLORADO                         743.5      -53.6
   TO AREA   19 WAPA L.C.                          180.1      -68.0
   TO AREA   63 WAPA U.M.                          -62.4        9.5
   TOTAL                                          1051.2     -217.2

 FROM AREA   63 WAPA U.M.                           mw        mvar
   TO AREA   62 MONTANA                             78.8       22.4
   TO AREA   73 WAPA R.M.                           62.4       -9.5
   TOTAL                                           141.2       12.9
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AREA TIE LINE SUMMARY

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

```
  ---------from--------      --------- to --------
  --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

    54150 LANGDON2  500        50791 CBK500    500  1             193.35      4.10   f
    54205 COLEMAN7  138        50776 NTL138    138  1               6.24    -20.64   t
    54273 POCATER7  138        50830 FRO T274  138  1               0.84     -2.69   t
 from area  54 to area  50 B.C.HYDRO                              200.42    -19.23

 Total from area  54 ALBERTA                                      200.42    -19.23

  ---------from--------      --------- to --------
  --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

    62004 ANACOND   230        40457 GARRISON  230  1             -91.13    -15.52   f
    62004 ANACOND   230        40457 GARRISON  230  2             -97.99    -20.96   f
    62009 RATTLE S  161        40867 RATTLE S  230  1             -63.47    -27.71   t
    62012 TOWN2     500        40453 GAR2EAST  500  2            1307.86   -393.09   t
    62013 TOWN1     500        40451 GAR1EAST  500  1            1307.86   -393.09   t
    62066 KERR      115        40391 ELMO      115  1              19.83    -28.60   f
    62072 OVANDO    230        40457 GARRISON  230  1             -51.67     10.80   t
    62072 OVANDO    230        40551 HOT SPR   230  1             147.85    -19.37   t
    62085 CROWCR B  115        48055 BURKAVAB  115  1              56.26    -22.51   t
    62086 THOMSON   115        48053 BURKAVAA  115  1              56.59    -21.98   t
 from area  62 to area  40 NORTHWEST                             2591.99   -932.03

    62030 PTRSNFLT  230        65025 AMPS      230  1             113.93      0.48   t
    62045 BLGS PHA  230        66750 YELOWTLP  230  1             -47.61     -4.01   t
    62061 RMRK PHA  161        66755 YELOWTLP  161  1             -25.16     -4.94   f
    62084 DILLON S  161        65155 BIGGRASS  161  1              46.95     -6.62   t
 from area  62 to area  65 PACE                                    88.11    -15.09

    90223 MTSGFALL  230        90208 MTSHAVRE  230  1             -12.14    -23.73   f
    90224 MTSRNBW   230        90215 MTSVER    230  1             -10.67    -22.56   f
    62027 SHELBY    115        63014 TIBERTAP  115  1             -10.77      0.85   f
    62051 HARDIN    230        63002 CRSOVRUM  230  1             120.34      1.89   t
    62056 HUNTLEY   230        63002 CRSOVRUM  230  1            -235.93     17.17   t
    62060 COLSTRP   230        90204 MTSFTPCK  230  1              70.32      3.99   t
 from area  62 to area  63 WAPA U.M.                              -78.85    -22.38

 Total from area  62 MONTANA                                     2601.26   -969.50

  ---------from--------      --------- to --------
  --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

    40145 BOUNDARY  230        50822 NLYPHS    230  1            -162.26    -10.02   f
    40323 CUSTER W  500        50194 ING500    500  1            -927.27    204.64   t
    40323 CUSTER W  500        50194 ING500    500  2            -911.85    202.24   t
 from area  40 to area  50 B.C.HYDRO                            -2001.39    396.86

    45029 BURNS     500        60240 MIDPOINT  500  1           -1058.93    359.37   t
    45103 ENTERPRS  230        60150 HELLSCYN  230  1             -27.84     -9.52   f
    40507 HARNEY    115        61826 HINES     115  1             -17.00     11.23   f
    40621 LAGRANDE  230        60192 LADD      230  1              -0.05     -9.17   f
    48197 LOLO      230        60278 IMNAHA    230  1              87.65     -3.38   t
 from area  40 to area  60 IDAHO                                -1016.17    348.52

    41311 CELILO1   500        26097 SYLMAR1   230  1             388.81     62.93   f
    41313 CELILO3   230        26098 SYLMAR3   230  1             589.18    143.11   f
    41312 CELILO2   500        26099 SYLMAR2   230  1             388.81     62.91   f
    41314 CELILO4   230        26100 SYLMAR4   230  1             589.18    143.22   f
 from area  40 to area  26 LADWP                                  1955.99    412.17

    48053 BURKAVAA  115        62086 THOMSON   115  1             -56.59     21.98   f
    48055 BURKAVAB  115        62085 CROWCR B  115  1             -56.26     22.51   f
    40391 ELMO      115        62066 KERR      115  1             -19.83     28.60   t
    40451 GAR1EAST  500        62013 TOWN1     500  1           -1307.86    393.09   f
    40453 GAR2EAST  500        62012 TOWN2     500  2           -1307.86    393.09   f
    40457 GARRISON  230        62072 OVANDO    230  1              51.67    -10.80   f
    40457 GARRISON  230        62004 ANACOND   230  1              91.13     15.52   t
    40457 GARRISON  230        62004 ANACOND   230  2              97.99     20.96   t
    40551 HOT SPR   230        62072 OVANDO    230  1            -147.85     19.37   f
    40867 RATTLE S  230        62009 RATTLE S  161  1              63.47     27.71   f
 from area  40 to area  62 MONTANA                               -2592.00    932.03

    45035 CAPTJACK  500        30020 OLINDA    500  1            1060.91   -147.37   f
    45087 DELTA     115        31468 CASCADE   115  1              70.92    -19.25   f
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   40687 MALIN     500        30005 ROUND MT  500  1            869.65   -125.02   f
   40687 MALIN     500        30005 ROUND MT  500  2            876.83   -140.95   f
from area  40 to area  30 PG AND E                             2878.30   -432.59

   40537 HIL TOP   230        64058 HIL TOP   345  1            128.34    -20.29   f
from area  40 to area  64 SIERRA                                128.34    -20.29

Total from area  40 NORTHWEST                                  -646.92   1636.71

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   66235 PINTO PS  345        14101 FOURCORN  345  1            281.86     30.54   t
from area  65 to area  14 ARIZONA                               281.86     30.54

   65075 ANTLOPE   230        60073 BRADY     230  1             69.48    -27.73   f
   65135 BENLOMND  345        60060 BORAH     345  1             -9.37     97.32   t
   65220 BRIDGER   230        60085 BRIDGER   345  1             -3.72     -5.08   t
   65220 BRIDGER   230        60085 BRIDGER   345  2             -3.79     -5.16   t
   65220 BRIDGER   230        60085 BRIDGER   345  3             -3.72     -5.08   t
   65665 GOSHEN    345        60085 BRIDGER   345  1           -601.80    -60.06   f
   65665 GOSHEN    345        60190 KINPORT   345  1            330.24      1.61   t
   65670 GOSHEN    161        60030 BLACKFT   161  1             86.28     -2.93   f
   65920 MALAD     138        60020 AMFLS     138  1            -19.81      0.77   t
   66565 TREASTON  230        60073 BRADY     230  1            -21.11     19.27   t
from area  65 to area  60 IDAHO                                -177.34     12.94

   65995 MONA      345        26043 INTERMT   345  1             34.07    -66.47   f
   65995 MONA      345        26043 INTERMT   345  2             34.07    -66.47   f
from area  65 to area  26 LADWP                                  68.14   -132.93

   65025 AMPS      230        62030 PTRSNFLT  230  1           -113.93     -0.48   f
   65155 BIGGRASS  161        62084 DILLON S  161  1            -46.95      6.62   f
   66750 YELOWTLP  230        62045 BLGS PHA  230  1             47.61      4.01   f
   66755 YELOWTLP  161        62061 RMRK PHA  161  1             25.16      4.94   t
from area  65 to area  62 MONTANA                               -88.11     15.09

   66280 REDBUTTE  345        18002 HA PS     345  1            144.71    -80.65   f
from area  65 to area  18 NEVADA                                144.71    -80.65

   66210 PAVANT    230        64124 UTAH-NEV  230  1             24.54      8.98   t
from area  65 to area  64 SIERRA                                 24.54      8.98

   66355 SIGURDPS  230        79031 GLENCANY  230  1            182.56    -30.57   t
from area  65 to area  19 WAPA L.C.                             182.56    -30.57

   65060 ANT MINE  230        73276 TEKLA     230  1             33.93     13.11   f
   65085 ASHLEY    138        79067 VERNAL    138  1            -48.49      5.49   t
   65192 BONANZA   138        79067 VERNAL    138  1             47.09     -2.51   t
   65193 BONANZA   345        79005 BEARS     345  1           -187.20    -11.31   f
   65305 CASPERPP  115        73167 REFNRYTP  115  1            -38.11     -0.36   f
   65305 CASPERPP  115        73042 CASPERLM  115  1              1.03     -8.37   t
   65420 DAVEJOHN  230        73107 LAR.RIVR  230  1             88.28    -20.06   f
   65420 DAVEJOHN  230        73190 STEGALL   230  1             90.53    -17.83   f
   65425 DAVEJOHN  115        73070 GLENRCKN  115  1             70.78     -2.81   f
   65425 DAVEJOHN  115        73071 GLENRCKS  115  1             80.62      0.03   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  1            -50.98      8.84   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  2            -50.98      8.84   f
   66278 RANGELY   138        79001 ARTESIA   138  1             -6.21     -6.10   f
   66278 RANGELY   138        79046 MEEKER    138  1             19.00     -4.66   f
   66305 RIVERTON  230        73170 RIVERTON  115  1              3.87      5.06   f
   66535 THERMOPL  230        73197 THERMOPL  115  1              1.54      4.53   t
   66540 THERPACE  115        73197 THERMOPL  115  1              6.95      4.74   t
   66720 WORLAND   115        73222 WORLANTP  115  1             -6.70      2.56   t
   66725 WYODAK    230        73148 OSAGE     230  1            104.43    -12.03   t
   66725 WYODAK    230        73168 RENO      230  1             56.72     -1.05   f
   66725 WYODAK    230        73294 HUGHES    230  1            108.36     -2.36   f
   66725 WYODAK    230        73282 WYODAK     69  1             11.66     13.90   f
   66725 WYODAK    230        73282 WYODAK     69  2              7.89      9.40   f
   66725 WYODAK    230        74016 WYGEN      14  1              0.00      0.00   f
   66750 YELOWTLP  230        73229 YELLOWBR  230  1           -189.48     17.05   t
from area  65 to area  73 WAPA R.M.                             154.54      4.11

Total from area  65 PACE                                        590.90   -172.49

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   70005 BRUSHCPP  115        73013 B.CK PS   115  1             42.00      2.61   f
   70005 BRUSHCPP  115        73013 B.CK PS   115  2             44.57      4.75   f
   70116 COBBLAKE  115        73044 COBBLKTP  115  1            -11.50     -1.07   f
   70122 COMANCHE  230        73477 FULLER    230  1             84.93     17.09   t
```

70139	DANIELPK	230	73477	FULLER	230	1	-21.89	1.88	t
70193	FTN VALL	115	73412	MIDWAYBR	115	1	11.63	-5.68	t
70205	GRANDJCT	230	79036	GRANDJCT	345	1	-20.39	-11.59	f
70256	LAPORTPS	115	73105	LAPORTE	115	1	-13.32	-5.92	t
70274	MALTA	230	73138	MT.ELBRT	230	1	-69.85	6.57	f
70285	MIDWAYPS	115	73412	MIDWAYBR	115	1	20.07	-43.07	f
70286	MIDWAYPS	230	73413	MIDWAYBR	230	1	153.50	51.48	t
70287	MILL	115	73296	FRASER	115	1	-35.13	5.36	f
70308	PALMER	115	73414	MONUMENT	115	1	-14.00	3.27	t
70311	PAWNEE	230	73192	STORY	230	1	-91.27	-29.16	t
70327	PONCHA	115	79037	GUNNISON	115	1	-2.96	3.80	f
70350	RAWHIDE	24	73165	RAWHIDE	230	1	262.21	34.01	t
70358	RIFLE PS	230	79059	RIFLE WA	230	1	-66.26	28.11	f
70358	RIFLE PS	230	79250	AMATLAS	230	1	-49.95	-13.81	f
70375	SAN LUIS	230	79054	PONCHABR	230	1	-59.88	13.45	t
70410	ST.VRAIN	230	73116	LONGPEAK	230	1	-31.66	32.51	f
70470	WELD PS	115	73211	WELD LM	115	1	-16.16	122.23	f
70471	WELD PS	230	73212	WELD LM	230	1	-273.31	-83.98	f
70474	WINDSOR	230	73011	AULT	230	1	-224.80	-11.40	t
70476	WOODLAND	115	73400	EMIL AND	115	1	11.40	-0.04	f
70525	MTHARRIS	138	79038	HAYDEN	138	1	-5.59	-1.06	t
79033	GOREPASS	230	79039	HAYDEN	230	1	-186.87	-0.55	t
79033	GOREPASS	230	73072	GOREPASS	138	1	-3.23	5.47	f
79034	GRANDJCT	115	79048	MONTROSE	115	1	30.60	-6.72	t
79056	RIFLE CU	138	79046	MEEKER	138	1	-45.00	0.62	f
79057	RIFLE CU	230	79059	RIFLE WA	230	1	-0.16	-53.46	t
79058	RIFLE CU	345	79014	CRAIG	345	1	-405.39	-21.06	f
79058	RIFLE CU	345	79036	GRANDJCT	345	1	401.33	22.78	f
79091	WOLCOTTP	230	79039	HAYDEN	230	1	-151.78	6.46	f
79173	COLBRAN	115	79174	MOLINA-L	115	1	-0.00	-0.52	f
70351	RAWHIDEA	14	73165	RAWHIDE	230	1	-0.00	-0.00	t
70550	W CANON	115	73551	W CANON	230	1	-5.46	-19.75	t

from area 70 to area 73 WAPA R.M. -743.55 53.61

Total from area 70 PSCOLORADO -743.55 53.61

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
79060	SANJN PS	345	10292	SAN_JUAN	345	1	344.49	-101.02	t

from area 73 to area 10 NEW MEXICO 344.49 -101.02

73042	CASPERLM	115	65305	CASPERPP	115	1	-1.03	8.37	f
73070	GLENRCKN	115	65425	DAVEJOHN	115	1	-70.78	2.81	t
73071	GLENRCKS	115	65425	DAVEJOHN	115	1	-80.62	-0.03	t
73107	LAR.RIVR	230	65420	DAVEJOHN	230	1	-88.28	20.06	t
73148	OSAGE	230	66725	WYODAK	230	1	-104.43	12.03	f
73167	REFNRYTP	115	65305	CASPERPP	115	1	38.11	0.36	t
73168	RENO	230	66725	WYODAK	230	1	-56.72	1.05	t
73170	RIVERTON	115	66305	RIVERTON	230	1	-3.87	-5.06	t
73190	STEGALL	230	65420	DAVEJOHN	230	1	-90.53	17.83	t
73197	THERMOPL	115	66540	THERPACE	115	1	-6.95	-4.74	f
73197	THERMOPL	115	66535	THERMOPL	230	1	-1.54	-4.53	f
73222	WORLANTP	115	66720	WORLAND	115	1	6.70	-2.56	f
73229	YELLOWBR	230	66750	YELOWTLP	230	1	189.48	-17.05	f
73276	TEKLA	230	65060	ANT MINE	230	1	-33.93	-13.11	t
73282	WYODAK	69	66725	WYODAK	230	1	-11.66	-13.90	t
73282	WYODAK	69	66725	WYODAK	230	2	-7.89	-9.40	t
73294	HUGHES	230	66725	WYODAK	230	1	-108.36	2.36	t
79001	ARTESIA	138	66278	RANGELY	138	1	6.21	6.10	t
79005	BEARS	345	65193	BONANZA	345	1	187.20	11.31	t
79026	FLAMGORG	138	65565	FLAMGORG	230	1	50.98	-8.84	t
79026	FLAMGORG	138	65565	FLAMGORG	230	2	50.98	-8.84	t
79046	MEEKER	138	66278	RANGELY	138	1	-19.00	4.66	t
79067	VERNAL	138	65085	ASHLEY	138	1	48.49	-5.49	f
79067	VERNAL	138	65192	BONANZA	138	1	-47.09	2.51	f
74016	WYGEN	14	66725	WYODAK	230	1	0.00	0.00	t

from area 73 to area 65 PACE -154.54 -4.11

73011	AULT	230	70474	WINDSOR	230	1	224.80	11.40	f
73013	B.CK PS	115	70005	BRUSHCPP	115	1	-42.00	-2.61	t
73013	B.CK PS	115	70005	BRUSHCPP	115	2	-44.57	-4.75	t
73044	COBBLKTP	115	70116	COBBLAKE	115	1	11.50	1.07	t
73072	GOREPASS	138	79033	GOREPASS	230	1	3.23	-5.47	t
73105	LAPORTE	115	70256	LAPORTPS	115	1	13.32	5.92	f
73116	LONGPEAK	230	70410	ST.VRAIN	230	1	31.66	-32.51	t
73138	MT.ELBRT	230	70274	MALTA	230	1	69.85	-6.57	t
73165	RAWHIDE	230	70350	RAWHIDE	24	1	-262.21	-34.01	f
73165	RAWHIDE	230	70351	RAWHIDEA	14	1	0.00	0.00	f
73192	STORY	230	70311	PAWNEE	230	1	91.27	29.16	f
73211	WELD LM	115	70470	WELD PS	115	1	16.16	-122.23	t
73212	WELD LM	230	70471	WELD PS	230	1	273.31	83.98	t

73296	FRASER	115	70287	MILL	115	1	35.13	-5.36	t
73400	EMIL AND	115	70476	WOODLAND	115	1	-11.40	0.04	t
73412	MIDWAYBR	115	70193	FTN VALL	115	1	-11.63	5.68	f
73412	MIDWAYBR	115	70285	MIDWAYPS	115	1	-20.07	43.07	t
73413	MIDWAYBR	230	70286	MIDWAYPS	230	1	-153.50	-51.48	f
73414	MONUMENT	115	70308	PALMER	115	1	14.00	-3.27	f
73477	FULLER	230	70122	COMANCHE	230	1	-84.93	-17.09	f
73477	FULLER	230	70139	DANIELPK	230	1	21.89	-1.88	f
79014	CRAIG	345	79058	RIFLE CU	345	1	405.39	21.06	t
79036	GRANDJCT	345	79058	RIFLE CU	345	1	-401.33	-22.78	t
79036	GRANDJCT	345	70205	GRANDJCT	230	1	20.39	11.59	t
79037	GUNNISON	115	70327	PONCHA	115	1	2.96	-3.80	t
79038	HAYDEN	138	70525	MTHARRIS	138	1	5.59	1.06	f
79039	HAYDEN	230	79033	GOREPASS	230	1	186.87	0.55	f
79039	HAYDEN	230	79091	WOLCOTTP	230	1	151.78	-6.46	t
79046	MEEKER	138	79056	RIFLE CU	138	1	45.00	-0.62	t
79048	MONTROSE	115	79034	GRANDJCT	115	1	-30.60	6.72	f
79054	PONCHABR	230	70375	SAN LUIS	230	1	59.88	-13.45	f
79059	RIFLE WA	230	70358	RIFLE PS	230	1	66.26	-28.11	t
79059	RIFLE WA	230	79057	RIFLE CU	230	1	0.16	53.46	f
79174	MOLINA-L	115	79173	COLBRAN	115	1	0.00	0.52	t
79250	AMATLAS	230	70358	RIFLE PS	230	1	49.95	13.81	t
73551	W CANON	230	70550	W CANON	115	1	5.46	19.75	f
from area 73 to area 70 PSCOLORADO							743.55	-53.61	
79061	SHIP PS	230	79063	SHIPROCK	230	1	153.63	-46.07	t
79260	ELPASOTP	115	79105	GLADETAP	115	1	26.48	-21.95	t
from area 73 to area 19 WAPA L.C.							180.11	-68.02	
73229	YELLOWBR	230	63001	CROS PHA	230	1	-62.34	9.52	f
from area 73 to area 63 WAPA U.M.							-62.34	9.52	
Total from area 73 WAPA R.M.							1051.27	-217.23	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
90204	MTSFTPCK	230	62060	COLSTRP	230	1	-70.32	-3.99	f
90208	MTSHAVRE	230	90223	MTSGFALL	230	1	12.14	23.73	t
90215	MTSVER	230	90224	MTSRNBW	230	1	10.67	22.56	t
63002	CRSOVRUM	230	62051	HARDIN	230	1	-120.34	-1.89	f
63002	CRSOVRUM	230	62056	HUNTLEY	230	1	235.93	-17.17	f
63014	TIBERTAP	115	62027	SHELBY	115	1	10.77	-0.85	t
from area 63 to area 62 MONTANA							78.85	22.38	
63001	CROS PHA	230	73229	YELLOWBR	230	1	62.34	-9.52	t
from area 63 to area 73 WAPA R.M.							62.34	-9.52	
Total from area 63 WAPA U.M.							141.19	12.86	

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Summation of selected system

	-----MW----	----MVAR---		
Generation	54311.449	2635.937	Generators	2550
Actual Load	45968.566	15416.440	Loads	6820
Net actual shunt	0.405	-185.779	Shunts	1294
Net actual svd	0.000	83.982	Svd	590
Loss	2316.142	-12262.634	Buses	13167
			Lines	10965
			Transformers	5124
MVA-miles	4750043.0	1069415.0	DC buses	6
Miles	46968.402		DC converters	10
			DC lines	3

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 54 [ALBERTA]

	-----MW----	----MVAR---		
Generation	6887.254	852.350	Generators	136
Actual Load	6274.402	1997.100	Loads	517
Net actual shunt	0.000	-21.744	Shunts	9
Net actual svd	0.000	-1195.582	Svd	76
Net Interchange	200.422	-19.230	Buses	989
Sched Interchange	200.000		Lines	782
Loss	412.430	91.808	Transformers	406
MVA-miles	1164672.4	291558.1	DC buses	0
Miles	18668.695		DC converters	0
			DC lines	0
Loss at 13.20 Kv	1.466	19.090		
Loss at 13.80 Kv	3.240	76.348		
Loss at 14.40 Kv	0.440	14.459		
Loss at 25.00 Kv	1.465	16.921		
Loss at 34.00 Kv	0.046	0.759		
Loss at 69.00 Kv	14.503	-22.350		
Loss at 138.00 Kv	157.632	-309.255		
Loss at 240.00 Kv	217.491	-426.241		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	16.147	722.078		
Largest mismatch MVA	0.0118	0.0376		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 50 [B.C.HYDRO]

	-----MW----	----MVAR---		
Generation	8262.378	172.312	Generators	106
Actual Load	6035.052	2359.838	Loads	395
Net actual shunt	0.000	2932.547	Shunts	104
Net actual svd	0.000	2574.485	Svd	125
Net Interchange	1800.482	-364.261	Buses	1054
Sched Interchange	1800.000		Lines	719
Loss	426.845	-7330.297	Transformers	644
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.044	1.963		
Loss at 13.80 Kv	6.667	399.941		
Loss at 34.00 Kv	0.000	0.002		
Loss at 46.00 Kv	0.301	0.082		
Loss at 132.00 Kv	25.089	36.344		
Loss at 138.00 Kv	11.144	-136.447		
Loss at 230.00 Kv	39.333	-775.640		
Loss at 500.00 Kv	297.910	-7330.033		
Loss at other Kv	46.355	473.493		
Largest mismatch MVA	0.0167	0.0305		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 60 [IDAHO]

-----MW---- ----MVAR---

Generation	3198.399	610.706	Generators	49
Actual Load	1955.000	501.300	Loads	64
Net actual shunt	0.000	-97.163	Shunts	2
Net actual svd	0.000	0.000	Svd	0
Net Interchange	1066.805	-382.636	Buses	156
Sched Interchange	1066.000		Lines	120
Loss	176.595	589.206	Transformers	96
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.271	5.818		
Loss at 13.80 Kv	1.193	45.018		
Loss at 14.40 Kv	0.391	15.241		
Loss at 34.50 Kv	0.000	0.000		
Loss at 100.00 Kv	1.016	92.572		
Loss at 115.00 Kv	0.439	0.377		
Loss at 138.00 Kv	15.196	-54.824		
Loss at 161.00 Kv	1.327	1.308		
Loss at 230.00 Kv	16.015	-293.568		
Loss at 345.00 Kv	135.736	613.607		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	5.011	163.657		
Largest mismatch MVA	0.0055	0.0120		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 62 [MONTANA]

	-----MW----	----MVAR---		
Generation	3997.094	169.786	Generators	22
Actual Load	1207.745	524.807	Loads	200
Net actual shunt	0.405	-121.396	Shunts	56
Net actual svd	0.000	-686.329	Svd	13
Net Interchange	2601.268	-969.869	Buses	312
Sched Interchange	2601.000		Lines	317
Loss	187.675	1422.573	Transformers	89
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.000	39.196		
Loss at 69.00 Kv	0.581	1.702		
Loss at 100.00 Kv	19.316	-40.564		
Loss at 115.00 Kv	4.273	-12.873		
Loss at 161.00 Kv	16.784	-70.527		
Loss at 230.00 Kv	24.660	-158.620		
Loss at 500.00 Kv	120.238	1406.447		
Loss at other Kv	1.823	257.812		
Largest mismatch MVA	0.0046	0.0173		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 40 [NORTHWEST]

	-----MW----	----MVAR---		
Generation	16625.799	-166.535	Generators	290
Actual Load	16651.566	5157.048	Loads	1663
Net actual shunt	0.000	-1734.678	Shunts	46
Net actual svd	0.000	961.807	Svd	164
Net Interchange	-646.934	1636.963	Buses	2740
Sched Interchange	-647.000		Lines	2709
Loss	621.146	-6187.672	Transformers	632
MVA-miles	3075278.0	654526.4	DC buses	4
Miles	18402.309		DC converters	4
			DC lines	2
Loss at 11.00 Kv	0.000	0.221		
Loss at 13.20 Kv	-0.000	2.327		
Loss at 13.80 Kv	4.419	148.996		
Loss at 14.40 Kv	-0.000	0.000		
Loss at 25.00 Kv	3.333	176.644		
Loss at 34.50 Kv	0.070	-0.955		
Loss at 69.00 Kv	7.511	2.904		
Loss at 100.00 Kv	0.120	-0.183		
Loss at 115.00 Kv	130.789	-29.410		
Loss at 230.00 Kv	147.688	-766.375		
Loss at 345.00 Kv	6.845	-316.149		

Loss at 500.00 Kv	259.984	-6260.270
Loss at other Kv	60.387	854.575
Largest mismatch MVA	0.0312	0.0426

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 65 [PACE]

	-----MW----	----MVAR---		
Generation	5532.693	562.087	Generators	53
Actual Load	4749.998	1528.040	Loads	273
Net actual shunt	0.000	-527.538	Shunts	51
Net actual svd	0.000	0.000	Svd	2
Net Interchange	590.886	-172.545	Buses	564
Sched Interchange	590.300		Lines	408
Loss	191.813	-265.880	Transformers	336
MVA-miles	3.4	1.1	DC buses	0
Miles	1.900		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.803	22.556		
Loss at 34.50 Kv	1.011	7.118		
Loss at 46.00 Kv	3.907	70.487		
Loss at 69.00 Kv	0.726	8.179		
Loss at 100.00 Kv	0.017	0.585		
Loss at 115.00 Kv	2.786	-8.627		
Loss at 138.00 Kv	40.659	35.618		
Loss at 161.00 Kv	7.743	-25.150		
Loss at 230.00 Kv	66.475	-82.150		
Loss at 345.00 Kv	65.244	-352.900		
Loss at other Kv	2.440	58.403		
Largest mismatch MVA	0.0165	0.0284		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 70 [PSCOLORADO]

	-----MW----	----MVAR---		
Generation	4236.084	629.279	Generators	46
Actual Load	4858.050	1835.016	Loads	358
Net actual shunt	0.000	0.000	Shunts	0
Net actual svd	0.000	-1397.769	Svd	43
Net Interchange	-743.543	53.571	Buses	500
Sched Interchange	-743.800		Lines	461
Loss	121.577	138.412	Transformers	147
MVA-miles	22627.9	6409.4	DC buses	0
Miles	564.500		DC converters	0
			DC lines	0
Loss at 13.80 Kv	2.115	74.425		
Loss at 14.40 Kv	0.081	0.808		
Loss at 25.00 Kv	0.013	0.165		
Loss at 46.00 Kv	0.190	0.001		
Loss at 69.00 Kv	3.837	-11.919		
Loss at 100.00 Kv	0.007	-0.108		
Loss at 115.00 Kv	21.300	-103.343		
Loss at 138.00 Kv	0.677	-3.604		
Loss at 230.00 Kv	86.290	-43.581		
Loss at 345.00 Kv	0.000	0.003		
Loss at other Kv	7.069	225.564		
Largest mismatch MVA	0.0053	0.0346		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 64 [SIERRA]

	-----MW----	----MVAR---		
Generation	1069.519	-24.957	Generators	19
Actual Load	1075.167	280.355	Loads	115
Net actual shunt	0.000	-158.510	Shunts	23
Net actual svd	0.000	73.880	Svd	5
Net Interchange	-36.026	19.820	Buses	275
Sched Interchange	-36.000		Lines	197
Loss	30.380	-240.514	Transformers	117
MVA-miles	52284.1	27632.4	DC buses	0

Miles	1042.600		DC converters	0
			DC lines	0
Loss at 13.80 Kv	1.783	32.633		
Loss at 69.00 Kv	0.000	0.000		
Loss at 115.00 Kv	0.298	-7.507		
Loss at 230.00 Kv	0.952	-112.572		
Loss at 345.00 Kv	6.759	-184.697		
Loss at other Kv	20.588	31.629		
Largest mismatch MVA	0.0060	0.0160		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 52 [W KOOTENAY]

	-----MW----	----MVAR---		
Generation	498.040	3.502	Generators	18
Actual Load	486.100	160.700	Loads	65
Net actual shunt	0.000	-79.173	Shunts	27
Net actual svd	0.000	-71.875	Svd	4
Net Interchange	0.534	-13.515	Buses	260
Sched Interchange	0.000		Lines	166
Loss	11.406	7.366	Transformers	116
MVA-miles	18592.9	6170.2	DC buses	0
Miles	1005.200		DC converters	0
			DC lines	0
Loss at 13.20 Kv	-0.000	9.142		
Loss at 13.80 Kv	0.000	0.000		
Loss at 14.40 Kv	0.000	21.995		
Loss at 25.00 Kv	0.000	0.000		
Loss at 138.00 Kv	0.104	-8.441		
Loss at 161.00 Kv	2.006	-19.732		
Loss at 230.00 Kv	0.701	-19.517		
Loss at other Kv	8.593	23.919		
Largest mismatch MVA	0.0015	0.0027		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 73 [WAPA R.M.]

	-----MW----	----MVAR---		
Generation	3960.615	-166.176	Generators	74
Actual Load	2784.180	950.836	Loads	356
Net actual shunt	0.000	-299.174	Shunts	4
Net actual svd	0.000	-184.518	Svd	53
Net Interchange	1051.240	-217.228	Buses	620
Sched Interchange	1050.700		Lines	567
Loss	125.193	-416.033	Transformers	174
MVA-miles	416583.8	83117.4	DC buses	0
Miles	7283.200		DC converters	0
			DC lines	0
Loss at 13.80 Kv	3.826	48.779		
Loss at 34.50 Kv	0.149	2.097		
Loss at 69.00 Kv	3.032	-20.067		
Loss at 115.00 Kv	44.688	-229.897		
Loss at 138.00 Kv	3.391	-37.139		
Loss at 230.00 Kv	30.755	-340.404		
Loss at 345.00 Kv	34.979	-33.682		
Loss at other Kv	4.372	194.280		
Largest mismatch MVA	0.0096	0.0557		

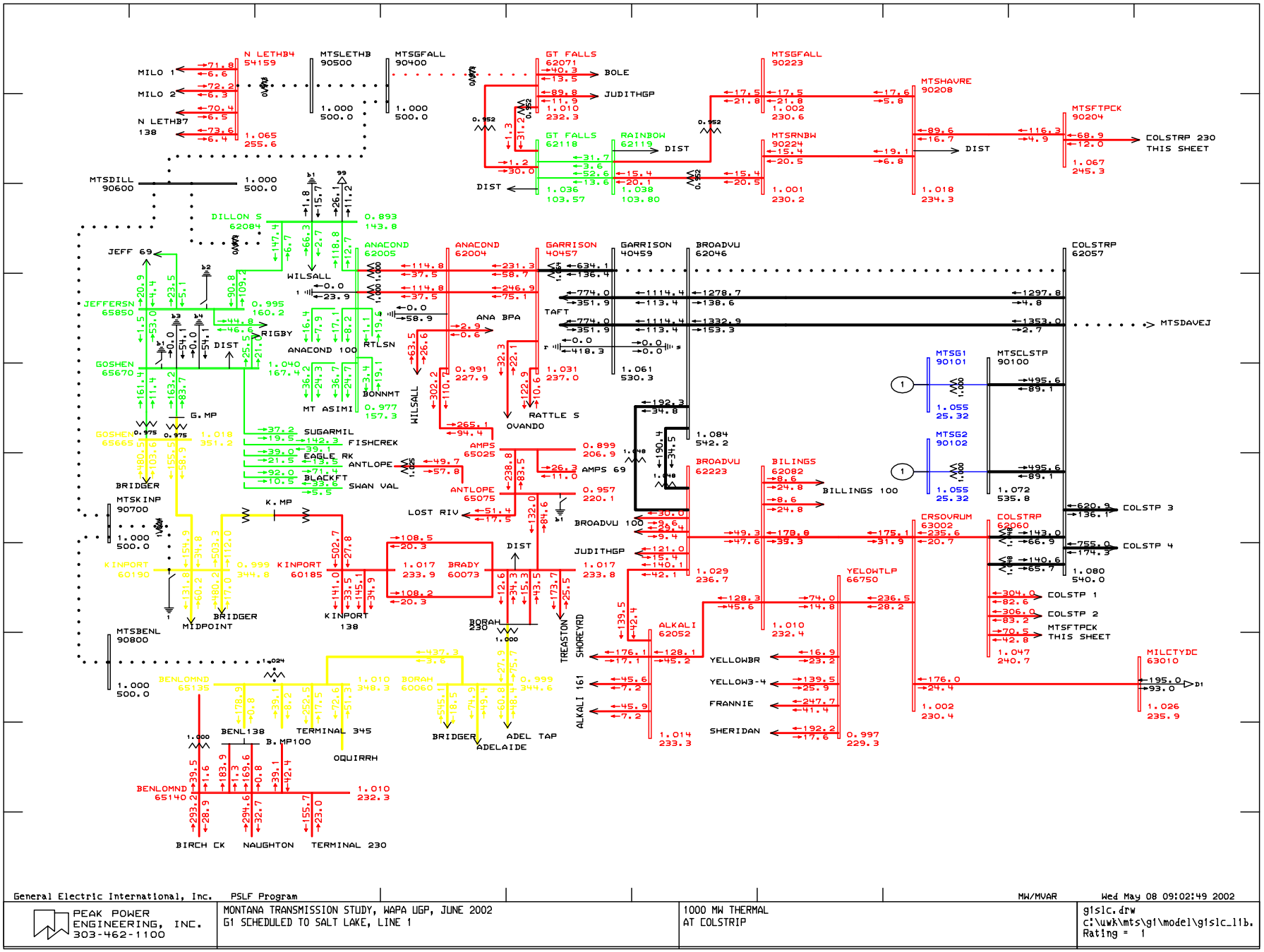
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 1

Area 63 [WAPA U.M.]

	-----MW----	----MVAR---		
Generation	43.576	-6.416	Generators	1
Actual Load	-108.700	121.400	Loads	17
Net actual shunt	0.000	-78.951	Shunts	1
Net actual svd	0.000	9.883	Svd	4
Net Interchange	141.193	12.856	Buses	21
Sched Interchange	141.000		Lines	13
Loss	11.083	-71.605	Transformers	3
MVA-miles	0.0	0.0	DC buses	0

Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.148	4.360		
Loss at 115.00 Kv	0.345	-6.309		
Loss at 161.00 Kv	0.000	0.000		
Loss at 230.00 Kv	10.589	-69.656		
Largest mismatch MVA	0.0003	0.0008		

B.4 slcl1


N LETHB4 54159
MTSLETHB 90500
MTSGFALL 90400
GT FALLS 62071
BOLE
JUDITHGP
MTSGFALL 90223
MTSHAVRE 90208
MTSFTPCK 90204
COLSTRP 230 THIS SHEET
MILO 1
MILO 2
N LETHB7 138
GT FALLS 62118
RAINBOW 62119
DIST
MTSRNBW 90224
MTSDILL 90600
DILLON S 62084
JEFF 69
ANACOND 62005
ANACOND 62004
GARRISON 40457
GARRISON 40459
BROADVU 62046
COLSTRP 62057
WILSALL
JEFFERSN 65850
RIGBY
ANACOND 100
RTLSN
ANA BPA
TAFT
MTSDAVEJ
GOSHEN 65670
BONNMT
MT ASIMI
RATTLE S
OVANDO
MTSG1 90101
MTSCLSTP 90100
G. MP
GOSHEK 65665
SUGARMIL
FISHCREK
EAGLE RK
ANTLOPE
BLACKFT
SWAN VAL
AMP5 65025
AMPS 69
BROADVU 62223
BILINGS 62082
BILINGS 100
MTSG2 90102
BRIDGER
MTSKINP 90700
K. MP
ANTLOPE 65075
LOST RIV
BROADVU 100
CRSOVRUM 63002
COLSTRP 62060
COLSTP 3
COLSTP 4
KINPORT 60190
KINPORT 60185
BRADY 60073
JUDITHGP
YELOWTLP 66750
COLSTP 1
COLSTP 2
MTSFTPCK THIS SHEET
MIDPOINT
KINPORT 138
BORAH 230
TREASTON
SHOREYRD
ALKALI 62052
MTSBENL 90800
BENLOMND 65135
BORAH 60060
YELLOWBR
YELLOW3-4
FRANNIE
SHERIDAN
MILCTYDC 63010
ALKALI 161
BENL138
B. MP100
TERMINAL 345
OQUIRRH
BRIDGER
ADEL TAP
ADELAIDE
BENLOMND 65140
BIRCH CK
NAUGHTON
TERMINAL 230
General Electric International, Inc.
PSLF Program
MW/MVAR
Wed May 08 09:02:49 2002
PEAK POWER ENGINEERING, INC. 303-462-1100
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1
1000 MW THERMAL
AT COLSTRIP
g1slc.drw
c:\uwk\mts\g1\model\g1slc_l1b.
Rating = 1

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Percent Loading Summary -- using rating 1 - 100.0 percent of rating

----------from----------				---------- to ----------									rate	per cent
--no.--	--name--	-kv-	-ar-	--no.--	--name--	-kv-	-ar-	ck	---mw---	-mvar-	-mva--	------	loading	
65850	JEFFERSN	161	65	65860	JFRSNPHA	161	65	1	-90.8	109.2	142.0	100.0M	142.0	F
54611	RUTH LK8	69	54	54839	RUTH LK1	138	54	1	57.9	13.8	59.5	45.0M	132.3	T
64026	CARSON	120	64	64027	CARSON T	120	64	1	-56.0	-6.4	56.3	216.5A	131.3	F
55015	DOME EA9	14	54	55525	163ST2	240	54	T2	-57.3	-4.6	57.5	45.0M	128.6	T
64194	DAYTON	120	64	64254	DAYTON	25	64	1	16.6	6.5	17.8	14.0M	127.4	F
79026	FLAMGORG	138	73	79029	FLAMGORG	69	73	1	22.1	6.0	22.9	19.0M	120.4	F
64099	SPAN SPG	120	64	64114	TRACY	120	64	1	-127.3	-2.5	127.3	514.8A	117.9	F
64091	RENO	120	64	64263	RENO	25	64	1	50.3	20.4	54.3	46.7M	116.3	F
70249	LAJUNTAW	115	70	70250	LAJUNTAW	69	70	1	26.2	12.4	29.0	25.0M	116.0	F
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	1	50.2	20.3	54.2	46.7M	116.0	F
64091	RENO	120	64	64263	RENO	25	64	2	50.2	20.3	54.1	46.7M	116.0	F
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	2	47.8	19.3	51.6	46.7M	110.4	F
64202	HAN CRTP	120	64	64203	TWN CRTP	120	64	1	74.2	19.8	76.8	356.0A	109.1	F
64201	PINSN TP	120	64	64202	HAN CRTP	120	64	1	74.6	20.6	77.4	356.0A	109.0	F
64200	REDHOUSE	120	64	64201	PINSN TP	120	64	1	75.9	23.6	79.4	356.0A	108.9	T
64129	VALMY	120	64	64200	REDHOUSE	120	64	1	77.0	26.3	81.4	356.0A	108.6	T
54234	CASTLE R	138	54	55972	CASTLE-1	25	54	1	-50.0	21.0	54.2	50.0M	108.4	F
50459	KIT287	287	50	51075	KIT B5	13	50	5	80.3	24.1	83.8	79.0M	106.1	F
54232	PANCAN 9	138	54	55386	EMPRESS9	25	54	T1	15.7	1.0	15.7	15.0M	104.7	F
64114	TRACY	120	64	64118	TRACY G2	14	64	1	-82.5	-3.8	82.6	81.0M	104.0	T
48319	PLEASANT	115	40	48355	RATHDRUM	115	40	1	-84.1	-16.3	85.6	430.8A	103.5	F
43017	BEAVER	14	40	43021	BEAVER	230	40	1	356.8	46.1	359.8	348.0M	103.4	F
62047	COLSTP 4	26	62	62057	COLSTRP	500	62	1	755.0	241.6	792.7	770.0M	103.0	F
54052	BLUERIDG	138	54	55281	BLUERDGE	14	54	T1	20.8	15.2	25.7	25.0M	102.9	F
54154	E CALGAR	240	54	54189	ENMX2SD9	138	54	T1	234.1	-169.4	289.0	300.0M	102.8	T
46733	LAGRND5	14	40	46735	LGBK5	115	40	1	40.0	7.4	40.7	40.0M	101.7	F
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	78	155.0	-8.7	155.2	155.0M	101.7	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	56	155.0	-8.7	155.2	155.0M	101.7	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	9A	155.0	-8.7	155.2	155.0M	101.7	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	BC	155.0	-8.7	155.2	155.0M	101.7	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	34	155.0	-8.7	155.2	155.0M	101.7	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	12	155.0	-8.7	155.2	155.0M	101.7	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	DE	155.0	-8.7	155.2	155.0M	101.7	T
41304	COUGAR T	7	40	46211	COUGAR T	115	40	1	28.0	-8.4	29.2	30.0M	101.5	T
62084	DILLON S	161	62	65155	BIGGRASS	161	65	1	147.4	-6.7	147.6	589.9A	100.4	F

```
Processing file ..\base\rvolthsbs.out
Processing file rvoltslcl1b.out

Compvolt found the following for comparisons:
     349 Voltage Violations read from ..\base\rvolthsbs.out
     357 Voltage Violations read from rvoltslcl1b.out


**** VOLTS:  NEW ****
Component                   w/o Prj         w/ Prj  Rating
90204 MTSFTPCK  230   0.95 <= pu <= 1.05    1.0667  1.00 pu kV
90209 MTSMALTA  230   0.95 <= pu <= 1.05    1.0515  1.00 pu kV
90211 MTSRICHC  230   0.95 <= pu <= 1.05    1.0619  1.00 pu kV
62030 PTRSNFLT  230   0.95 <= pu <= 1.05    0.8751  1.00 pu kV
62084 DILLON S  161   0.95 <= pu <= 1.05    0.8935  1.00 pu kV
65025 AMPS      230   0.95 <= pu <= 1.05    0.8994  1.00 pu kV
65155 BIGGRASS  161   0.95 <= pu <= 1.05    0.8822  1.00 pu kV
62030 PTRSNFLT  230   0.95 <= pu <= 1.05    0.8751  1.00 pu kV
62064 BRADLEYC  161   0.95 <= pu <= 1.05    0.9346  1.00 pu kV
62065 ENNIS MT  161   0.95 <= pu <= 1.05    0.9233  1.00 pu kV
62084 DILLON S  161   0.95 <= pu <= 1.05    0.8935  1.00 pu kV
62158 SHERDNMT  161   0.95 <= pu <= 1.05    0.9108  1.00 pu kV
65010 AEC IPC   138   0.95 <= pu <= 1.05    0.9447  1.00 pu kV
65015 AEC SCOV  138   0.95 <= pu <= 1.05    0.9450  1.00 pu kV
65025 AMPS      230   0.95 <= pu <= 1.05    0.8994  1.00 pu kV
65065 ANTLOP 1  138   0.95 <= pu <= 1.05    0.9452  1.00 pu kV
65070 ANTLOP 2  138   0.95 <= pu <= 1.05    0.9452  1.00 pu kV
65080 ANTLOPE   161   0.95 <= pu <= 1.05    0.9472  1.00 pu kV
65155 BIGGRASS  161   0.95 <= pu <= 1.05    0.8822  1.00 pu kV
65860 JFRSNPHA  161   0.95 <= pu <= 1.05    0.9226  1.00 pu kV
65910 LOST RIV  230   0.95 <= pu <= 1.05    0.9479  1.00 pu kV

**** VOLTS: WORSE ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS: BETTER ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS:  AWAY ****
Component             w/o Prj      w/ Prj          Rating
50343 KSH132-2  132   1.0501  0.95 <= pu <= 1.05   1.00 pu kV
50346 SHA2      132   1.0504  0.95 <= pu <= 1.05   1.00 pu kV
50391 KSHTP14   132   1.0504  0.95 <= pu <= 1.05   1.00 pu kV
50394 SHATP14   132   1.0504  0.95 <= pu <= 1.05   1.00 pu kV
50561 WSN500    500   1.0502  0.95 <= pu <= 1.05   1.00 pu kV
50655 VVW138    138   1.0510  0.95 <= pu <= 1.05   1.00 pu kV
50691 NIC230    230   1.0502  0.95 <= pu <= 1.05   1.00 pu kV
62033 ANA BPA   115   1.0568  0.95 <= pu <= 1.05   1.00 pu kV
45337 WEED JPS  115   1.0507  0.95 <= pu <= 1.05   1.00 pu kV
66225 PINTO     345   1.0511  0.95 <= pu <= 1.05   1.00 pu kV
66235 PINTO PS  345   1.0501  0.95 <= pu <= 1.05   1.00 pu kV
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GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

overvoltage summary > 1.100000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54090	BICKERD4	240	1.1047	54153	BRAZEAU4	240	1.1053	54329	KEEPHIL4	240	1.1117
54524	GENESEE4	240	1.1086	54681	NEVIS 7	138	1.1101	54802	STURGEO9	138	1.1003
55969	770S701T	138	1.1052	51017	KMS230	230	1.1075				

overvoltage summary > 1.050000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
90204	MTSFTPCK	230	1.0667	90209	MTSMALTA	230	1.0515	90211	MTSRICHC	230	1.0619
54012	FOX CREE	138	1.0510	54013	KAYBOB 9	138	1.0517	54014	GULF RO9	138	1.0592
54021	WESGEN 7	138	1.0507	54050	RBCUPIL7	138	1.0507	54054	LAMOURE4	240	1.0795
54073	IPPL ST9	138	1.0575	54077	BIGSTON4	240	1.0600	54078	CHEVRON7	138	1.0515
54081	METIS644	240	1.0853	54082	BICKERD7	138	1.0557	54090	BICKERD4	240	1.1047
54097	BIG HOR9	138	1.0817	54098	STRACHA9	138	1.0577	54103	DEERLAN4	240	1.0820
54121	ELLERSLI	240	1.0759	54125	SUNDANL9	138	1.0543	54126	WABAMUN4	240	1.0869
54128	SUNDANM9	240	1.0965	54129	E EDMON4	240	1.0709	54130	N CALDE4	240	1.0645
54131	N BARRH4	240	1.0836	54139	GAETZ 4	240	1.0597	54141	HIGHVAL9	138	1.0538
54142	WILLESD4	240	1.0961	54144	RED DEE4	240	1.0636	54147	BENALTO4	240	1.0767
54148	E CROSS4	240	1.0585	54150	LANGDON2	500	1.0533	54152	JANET 4	240	1.0533
54153	BRAZEAU4	240	1.1053	54157	PEIGAN 4	240	1.0748	54159	N LETHB4	240	1.0648
54184	SARCEE 7	138	1.0530	54195	RUNDLE S	138	1.0504	54223	WARE JCT	240	1.0511
54249	RP05103S	138	1.0669	54261	SPRAY S	138	1.0508	54269	COALSPU7	138	1.0609
54281	MILO 2	240	1.0605	54285	LEISMER9	240	1.0749	54287	GREGG R9	138	1.0701
54302	MARIONA9	138	1.0540	54325	CHEV KG9	138	1.0515	54326	COAL VA9	138	1.0582
54329	KEEPHIL4	240	1.1117	54335	W BROOK4	240	1.0550	54384	ENMX28S9	138	1.0523
54412	BENBOW 9	138	1.0517	54441	946/947X	240	1.0759	54444	SPRINGB9	138	1.0505
54505	JASPER 4	240	1.0658	54506	BELLAMY4	240	1.0757	54509	ARGYLL W	240	1.0758
54512	DOME T29	240	1.0764	54513	LAMBTON4	240	1.0705	54514	CLOVERB4	240	1.0694
54518	ARGYLL E	240	1.0760	54519	CASTLTX2	240	1.0705	54521	PETROLIA	240	1.0746
54524	GENESEE4	240	1.1086	54542	RBW LAK7	138	1.0505	54546	CHINCHA7	138	1.0575
54547	KEG RVR7	138	1.0561	54548	KEMP RV9	138	1.0578	54549	HOTCHKS7	138	1.0596
54552	CADOTTE9	138	1.0585	54553	NORCEN 9	138	1.0552	54554	LUBICON7	138	1.0582
54555	CRANBER9	138	1.0591	54558	WESLY C7	138	1.0791	54559	CARMON 9	138	1.0767
54560	PEACE/29	138	1.0753	54561	DIASHOW7	138	1.0736	54589	DOME CU7	138	1.0672
54593	DONNELL9	138	1.0669	54594	TAP7L487	138	1.0686	54595	TRIANGL7	138	1.0619
54596	VALLEYV9	138	1.0782	54600	L.SMOKY7	138	1.0848	54601	STURGEO7	138	1.0844
54606	SIMONET9	138	1.0846	54607	FOXCRK/2	138	1.0515	54608	GOOSE R9	138	1.0666
54612	RUTH LA7	138	1.0600	54613	RUTH LK7	138	1.0603	54618	PARS CR7	138	1.0508
54621	MITS E.4	240	1.0565	54622	MITS E.7	138	1.0892	54623	AEC MILL	138	1.0881
54624	OTAUWAU7	138	1.0890	54633	LOU CR.7	138	1.0570	54634	SARHLK/2	138	1.0511
54636	ESSO JU7	138	1.0519	54637	MORSE RV	138	1.0524	54639	VIRGINI9	138	1.0529
54643	WOLF LK9	138	1.0709	54646	MARG LK4	240	1.0740	54647	MARG LK7	138	1.0861
54648	LACOREY9	138	1.0683	54652	BONNY 9	138	1.0544	54654	BONN SVC	138	1.0544
54655	WHITFISH	240	1.0857	54675	PAINTRT7	240	1.0896	54680	NEVIS 4	240	1.0748
54681	NEVIS 7	138	1.1101	54685	3HILLS/3	138	1.0581	54691	MICH. C9	138	1.0735
54693	WINT HI9	138	1.0749	54694	BULLPON9	138	1.0750	54707	SHEER 14	240	1.0625
54709	ANDERSO4	240	1.0630	54710	ANDERSON	138	1.0850	54711	SHEER 24	240	1.0625
54715	BAT. RV7	138	1.0821	54721	BAT RV79	240	1.0926	54723	CORDEL 4	240	1.0926
54729	PRIM TAP	138	1.0652	54730	PRIMROSE	138	1.0712	54796	791S701T	138	1.0628
54802	STURGEO9	138	1.1003	54806	946/947N	240	1.0709	54809	732S901T	240	1.0667
54818	VERMILA9	138	1.0798	54822	766S901T	240	1.0628	54823	NEVIS 9	138	1.0878

54835	791S702T	138	1.0631	54836	MILNERB9	138	1.0779	54844	709S702T	138	1.0732
54847	BAT RV80	240	1.0926	54848	791S703T	138	1.0530	54962	KAYBOBTP	138	1.0517
54963	CANMORE9	138	1.0506	54978	EAST IN4	240	1.0705	54983	MARION T	138	1.0541
54984	HIGHVL T	138	1.0538	54988	CROSSF T	240	1.0585	54995	W.GRN TP	240	1.0961
55012	BASSET 7	138	1.0562	55013	HAIGRIVE	138	1.0572	55067	FTNELSON	138	1.0665
55072	SYNC_D04	240	1.0563	55073	AURORA 4	240	1.0619	55075	SEAL LK9	138	1.0643
55147	MILNERC9	138	1.0880	55226	WABASCA9	240	1.0532	55272	FIELDGA9	138	1.0513
55280	BRINTNEL	240	1.0504	55515	PRIMROSE	138	1.0565	55763	BC BORDE	138	1.0627
55891	904AL TP	240	1.0705	55894	SARCEE M	138	1.0512	55912	740L JNC	138	1.0609
55913	G.ROBB T	138	1.0600	55924	CH KGT T	138	1.0515	55943	MILO 1	240	1.0605
55969	770S701T	138	1.1052	50010	COM132	132	1.0719	50020	CMS230	230	1.0500
50036	RBW230	230	1.0547	50037	PEM230	230	1.0584	50038	RBW230-1	230	1.0532
50182	ARN132	132	1.0806	50185	ALZ230	230	1.0508	50186	ROS230	230	1.0609
50187	BRT230	230	1.0696	50188	BUT230	230	1.0500	50193	BRT360	360	1.0500
50313	VIT132	132	1.0513	50314	PVO133	132	1.0502	50315	PVO132	132	1.0507
50323	DMR132	132	1.0550	50330	LDR132	132	1.0503	50331	GLD132	132	1.0515
50334	KGH132	132	1.0524	50335	UTA132	132	1.0527	50342	SCA132	132	1.0500
50347	GOW132	132	1.0512	50348	GTP132	132	1.0546	50349	CLD132	132	1.0564
50350	SOO132	132	1.0570	50351	JOR132	132	1.0607	50352	PML132	132	1.0513
50353	WOS132	132	1.0531	50354	GLSTP17	132	1.0557	50355	GLSTP18	132	1.0543
50356	DND132	132	1.0515	50395	SALTP17	132	1.0542	50396	SALTP18	132	1.0544
50447	TKW138	138	1.0531	50463	SKA500	500	1.0629	50464	TKW500	500	1.0685
50540	GMS230	230	1.0548	50541	KDS230	230	1.0539	50545	BLW230	230	1.0650
50546	SCK230	230	1.0592	50547	HMH230	230	1.0574	50548	BLM230	230	1.0587
50549	QNT230	230	1.0579	50550	QRP230	230	1.0647	50551	TLR230	230	1.0585
50553	BCR230	230	1.0585	50554	RBF230	230	1.0659	50556	LAP230	230	1.0569
50557	SNK230	230	1.0589	50558	GMS500	500	1.0500	50560	KDS500	500	1.0615
50562	GLN500	500	1.0676	50653	NIC138	138	1.0518	50656	SVA138	138	1.0511
50659	BDM138	138	1.0502	50660	WGS138	138	1.0607	50661	MON138	138	1.0579
50672	BKL138	138	1.0509	50679	BLU138	138	1.0526	50680	VLM138	138	1.0578
50686	SCO138	138	1.0667	50687	ABA138	138	1.0572	50700	MCA500	500	1.0500
50701	REV500	500	1.0500	50729	PRI138TP	138	1.0666	50776	NTL138	138	1.0539
50783	SEL230	230	1.0592	50785	SEV230	230	1.0584	50792	SEL500	500	1.0500
50899	ABA138TP	138	1.0572	50902	BDM138TP	138	1.0502	50922	DNDTAP	132	1.0522
50923	HSY-PH	132	1.0549	50924	ESQ-PH	132	1.0515	50928	SCG IPP	132	1.0678
50934	JULTP130	132	1.0524	51017	KMS230	230	1.1075	51045	ALH230	230	1.0580
60085	BRIDGER	345	1.0500	60240	MIDPOINT	500	1.0698	90100	MTSCLSTP	500	1.0717
62012	TOWN2	500	1.0858	62013	TOWN1	500	1.0858	62046	BROADVU	500	1.0845
62053	BROADV&2	500	1.0914	62054	BROADV&1	500	1.0928	62057	COLSTRP	500	1.0800
40045	ALLSTON	500	1.0712	40051	ALVEY	500	1.0771	40061	ASHE	500	1.0800
40091	BELL BPA	500	1.0651	40111	BIG EDDY	500	1.0766	43049	BOARD F	500	1.0840
40139	BONNVILE	115	1.0500	47013	BRIDGPRT	115	1.0529	40155	BUCKLEY	500	1.0777
45029	BURNS	500	1.0533	45035	CAPTJACK	500	1.0778	46209	CARMEN	115	1.0615
41311	CELILO1	500	1.0765	41312	CELILO2	500	1.0765	40233	CHIEF JO	500	1.0800
40287	COULEE	500	1.0810	40302	COVINGT4	500	1.0738	40306	COVINGT5	500	1.0744
43115	COYO M1	500	1.0550	43123	COYOTE	500	1.0836	45095	DIXONVLE	500	1.0776
40369	DWORSHAK	500	1.0645	40381	ECHOLAKE	500	1.0769	40451	GAR1EAST	500	1.0839
40453	GAR2EAST	500	1.0839	40459	GARRISON	500	1.0605	40485	GREEN PT	115	1.0516
40489	GRIZZLY	500	1.0803	40499	HANFORD	500	1.0797	40521	HATWAI	500	1.0634
45137	HERMIST	230	1.0509	41212	HILLS CR	115	1.0500	40553	HOT SPR	500	1.0932
40585	JOHN DAY	500	1.0850	40601	KEELER	500	1.0799	45262	KFALLS	500	1.0793
40629	LANE	500	1.0712	40665	LIT GOOS	500	1.0800	40679	LOW GRAN	500	1.0800
40683	LOW MON	500	1.0800	40687	MALIN	500	1.0766	40693	MAPLE VL	500	1.0760
40699	MARION	500	1.0785	40711	MCLOUGLN	500	1.0679	40721	MCNARY	345	1.0509
40723	MCNARY	500	1.0790	45197	MERIDINP	500	1.0759	40749	MONROE	500	1.0780

40797	OLYMPIA	500	1.0790	40809	OSTRNDER	500	1.0702	40821	PAUL	500	1.0800
40827	PEARL	500	1.0765	40837	PONDROSA	500	1.0844	40869	RAVER	500	1.0780
43485	ROUND BU	500	1.0767	40913	SACJAWEA	500	1.0747	40917	SACJWA T	500	1.0760
40941	SANTIAM	500	1.0778	40949	SATSOP	500	1.0797	40957	SCHULTZ	500	1.0828
40973	SICKLER	500	1.0788	40989	SLATT	500	1.0803	41043	SUMMER L	500	1.0813
45289	SWIFT	230	1.0500	41051	TACOMA	500	1.0778	41057	TAFT	500	1.0868
41095	TROUTDAL	500	1.0627	41113	VANTAGE	500	1.0717	47099	WELLS	115	1.0623
52226	PRI138	138	1.0667	52229	KER138	138	1.0702	52230	HED138	138	1.0692
52426	MAS138	138	1.0692	52815	PRI-T2	138	1.0675				

undervoltage summary < 0.900000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
62030	PTRSNFLT	230	0.8751	62084	DILLON S	161	0.8935	65025	AMPS	230	0.8994
65155	BIGGRASS	161	0.8822								

undervoltage summary < 0.950000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
50781	NTL VR	138	0.9499	62030	PTRSNFLT	230	0.8751	62064	BRADLEYC	161	0.9346
62065	ENNIS MT	161	0.9233	62084	DILLON S	161	0.8935	62158	SHERDNMT	161	0.9108
48069	CHESTER	115	0.9436	48165	IRVIN	115	0.9479	48310	OPORTUNE	115	0.9483
48299	OPPORTUN	115	0.9458	48306	OTIS	230	0.9374	65010	AEC IPC	138	0.9447
65015	AEC SCOV	138	0.9450	65025	AMPS	230	0.8994	65065	ANTLOP 1	138	0.9452
65070	ANTLOP 2	138	0.9452	65080	ANTLOPE	161	0.9472	65155	BIGGRASS	161	0.8822
65860	JFRSNPHA	161	0.9226	65910	LOST RIV	230	0.9479	70249	LAJUNTAW	115	0.9285
64072	MEYERS	120	0.9488	64092	RND HILL	120	0.9470	64102	STATELIN	120	0.9461
64203	TWN CRTP	120	0.9457								

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

		generation capacity	generation on-line	--- load categories ---- power	current	imped.	shunt	-- svd --	net inter	losses	slack bus
area name	ALBERTA										
mw		10743.6	7862.7	7899.2	0.0	0.0	0.0	0.0	-399.4	363.0	59.3
54 mvar		4916.5	857.1	2641.0	0.0	0.0	-22.5	-1851.9	-37.1	127.6	11.7
area name	B.C.HYDRO										
mw		14693.0	10255.0	6889.1	0.0	0.0	0.0	0.0	2849.1	516.8	201.4
50 mvar		6719.0	988.3	2565.8	0.0	0.0	2954.6	2140.1	-259.1	-6413.0	9.9
area name	IDAHO										
mw		4676.4	3594.5	2984.0	0.0	0.0	0.0	0.0	421.0	189.5	172.2
60 mvar		2192.5	380.9	711.6	0.0	0.0	-594.0	0.0	-120.7	384.0	12.4
area name	MONTANA										
mw		4502.2	3892.9	1422.9	0.0	0.0	0.2	0.0	2249.6	220.2	680.9
62 mvar		1929.0	280.9	610.2	0.0	0.0	-116.8	-721.2	-759.1	1267.9	-60.9
area name	NORTHWEST										
mw		43502.3	27425.1	22671.3	0.0	0.0	0.0	0.0	3514.2	1239.6	663.1
40 mvar		15475.0	4461.6	6850.3	0.0	0.0	-1867.0	-4766.1	1266.1	2978.4	49.4
area name	PACE										
mw		6212.0	5175.2	6293.7	0.0	0.0	0.0	0.0	-1430.8	312.3	154.2
65 mvar		3201.9	843.1	1960.1	0.0	0.0	-1764.1	-95.0	-64.4	806.6	33.3
area name	PSCOLORADO										
mw		5806.0	5191.0	6332.7	0.0	0.0	0.0	0.0	-1332.5	190.7	112.0
70 mvar		3667.3	1778.2	2372.6	0.0	0.0	0.0	-1671.6	296.9	780.4	33.3
area name	SIERRA										
mw		1901.7	1375.4	1719.1	0.0	0.0	0.0	0.0	-398.6	54.8	109.4
64 mvar		925.4	118.6	458.7	0.0	0.0	-188.3	69.6	59.6	-281.1	23.6
area name	W KOOTENAY										
mw		763.5	596.5	722.4	0.0	0.0	0.0	0.0	-150.4	24.6	104.6
52 mvar		450.0	96.9	210.2	0.0	0.0	-77.8	-130.7	-10.9	106.1	24.6
area name	WAPA R.M.										
mw		6091.6	5394.3	3608.3	0.0	0.0	0.0	0.0	1612.5	173.5	511.9
73 mvar		2883.8	260.9	1237.0	0.0	0.0	-296.5	-374.9	-311.4	6.7	61.5

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

		generation capacity	generation on-line	--- load categories ---- power	current	imped.	shunt	-- svd	-- inter	net losses	slack bus
area name	WAPA U.M.										
	mw	61.8	61.5	-102.1	0.0	0.0	0.0	0.0	147.1	16.5	61.5
63	mvar	34.0	-4.0	123.6	0.0	0.0	-78.9	1.0	-65.9	16.2	-4.0
TOTL	mw	98954.1	70824.1	60440.6	0.0	0.0	0.2	0.0	7081.8	3301.5	
	mvar	42394.4	10062.6	19741.2	0.0	0.0	-2051.3	-7400.9	-6.2	-220.2	

Area Interchange Summary

		mw	mvar
FROM AREA	54 ALBERTA		
TO AREA	50 B.C.HYDRO	-399.4	-37.1
TOTAL		-399.4	-37.1
FROM AREA	50 B.C.HYDRO		
TO AREA	54 ALBERTA	399.4	37.1
TO AREA	40 NORTHWEST	2299.2	-307.2
TO AREA	52 W KOOTENAY	150.4	10.9
TOTAL		2849.1	-259.1
FROM AREA	60 IDAHO		
TO AREA	40 NORTHWEST	-477.9	-238.0
TO AREA	65 PACE	768.7	167.4
TO AREA	64 SIERRA	130.3	-50.2
TOTAL		421.0	-120.7
FROM AREA	62 MONTANA		
TO AREA	40 NORTHWEST	1689.6	-626.2
TO AREA	65 PACE	475.2	-155.5
TO AREA	63 WAPA U.M.	84.8	22.6
TOTAL		2249.6	-759.1
FROM AREA	40 NORTHWEST		
TO AREA	50 B.C.HYDRO	-2299.2	307.2
TO AREA	60 IDAHO	477.9	238.0
TO AREA	26 LADWP	2806.7	604.4
TO AREA	62 MONTANA	-1689.6	626.2
TO AREA	30 PG AND E	4036.1	-460.3
TO AREA	64 SIERRA	182.2	-49.4
TOTAL		3514.2	1266.1
FROM AREA	65 PACE		
TO AREA	14 ARIZONA	-139.9	91.4
TO AREA	60 IDAHO	-768.7	-167.4
TO AREA	26 LADWP	-30.3	-167.2
TO AREA	62 MONTANA	-475.2	155.5
TO AREA	18 NEVADA	249.3	-56.8
TO AREA	64 SIERRA	33.0	13.5
TO AREA	19 WAPA L.C.	-8.2	39.6
TO AREA	73 WAPA R.M.	-290.8	26.9
TOTAL		-1430.8	-64.4
FROM AREA	70 PSCOLORADO		
TO AREA	73 WAPA R.M.	-1332.5	296.9
TOTAL		-1332.5	296.9
FROM AREA	64 SIERRA		
TO AREA	60 IDAHO	-130.3	50.2
TO AREA	26 LADWP	-48.8	2.4
TO AREA	40 NORTHWEST	-182.2	49.4
TO AREA	65 PACE	-33.0	-13.5
TO AREA	30 PG AND E	-16.3	-26.6
TO AREA	24 SOCALIF	12.0	-2.3

TOTAL		-398.6	59.6
FROM AREA	52 W KOOTENAY	mw	mvar
TO AREA	50 B.C.HYDRO	-150.4	-10.9
TOTAL		-150.4	-10.9
FROM AREA	73 WAPA R.M.	mw	mvar
TO AREA	10 NEW MEXICO	150.9	-10.7
TO AREA	65 PACE	290.8	-26.9
TO AREA	70 PSCOLORADO	1332.5	-296.9
TO AREA	19 WAPA L.C.	70.3	-20.1
TO AREA	63 WAPA U.M.	-231.9	43.3
TOTAL		1612.5	-311.4
FROM AREA	63 WAPA U.M.	mw	mvar
TO AREA	62 MONTANA	-84.8	-22.6
TO AREA	73 WAPA R.M.	231.9	-43.3
TOTAL		147.1	-65.9

AREA TIE LINE SUMMARY

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

---------from--------				---------to --------						
--no.--	--name--	-kv-		--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
54150	LANGDON2	500		50791	CBK500	500	1	-359.25	-36.45	f
54205	COLEMAN7	138		50776	NTL138	138	1	-14.17	-8.90	t
54273	POCATER7	138		50830	FRO T274	138	1	-26.01	8.20	t
from area 54 to area 50 B.C.HYDRO								-399.43	-37.15	
Total from area 54 ALBERTA								-399.43	-37.15	

---------from--------				---------to --------						
--no.--	--name--	-kv-		--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
62004	ANACOND	230		40457	GARRISON	230	1	-227.37	-42.59	f
62004	ANACOND	230		40457	GARRISON	230	2	-243.94	-56.95	f
62009	RATTLE S	161		40867	RATTLE S	230	1	-131.69	-22.03	t
62012	TOWN2	500		40453	GAR2EAST	500	2	1091.05	-242.61	t
62013	TOWN1	500		40451	GAR1EAST	500	1	1091.05	-242.61	t
62066	KERR	115		40391	ELMO	115	1	2.95	-13.70	f
62072	OVANDO	230		40457	GARRISON	230	1	-32.26	22.13	t
62072	OVANDO	230		40551	HOT SPR	230	1	68.41	-0.25	t
62085	CROWCR B	115		48055	BURKAVAB	115	1	33.43	-13.16	t
62086	THOMSON	115		48053	BURKAVAA	115	1	37.94	-14.49	t
from area 62 to area 40 NORTHWEST								1689.57	-626.25	
62030	PTRSNFLT	230		65025	AMPS	230	1	265.08	-94.45	t
62045	BLGS PHA	230		66750	YELOWTLP	230	1	73.97	14.77	t
62061	RMRK PHA	161		66755	YELOWTLP	161	1	15.01	-0.40	f
62084	DILLON S	161		65155	BIGGRASS	161	1	121.16	-75.38	t
from area 62 to area 65 PACE								475.23	-155.45	
90223	MTSGFALL	230		90208	MTSHAVRE	230	1	-17.50	-21.76	f
90224	MTSRNBW	230		90215	MTSVER	230	1	-15.44	-20.52	f
62027	SHELBY	115		63014	TIBERTAP	115	1	-11.74	0.33	f
62051	HARDIN	230		63002	CRSOVRUM	230	1	235.63	20.73	t
62056	HUNTLEY	230		63002	CRSOVRUM	230	1	-175.09	31.87	t
62060	COLSTRP	230		90204	MTSFTPCK	230	1	68.93	11.95	t
from area 62 to area 63 WAPA U.M.								84.79	22.60	
Total from area 62 MONTANA								2249.59	-759.10	

---------from--------				---------to --------						
--no.--	--name--	-kv-		--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
40145	BOUNDARY	230		50822	NLYPHS	230	1	-247.70	-11.09	f
40323	CUSTER W	500		50194	ING500	500	1	-1034.34	159.94	t
40323	CUSTER W	500		50194	ING500	500	2	-1017.19	158.38	t
from area 40 to area 50 B.C.HYDRO								-2299.23	307.22	
45029	BURNS	500		60240	MIDPOINT	500	1	48.95	340.68	t
45103	ENTERPRS	230		60150	HELLSCYN	230	1	71.71	-45.54	f
40507	HARNEY	115		61826	HINES	115	1	-11.50	15.12	f
40621	LAGRANDE	230		60192	LADD	230	1	93.56	-33.28	f
48197	LOLO	230		60278	IMNAHA	230	1	275.22	-39.01	t
from area 40 to area 60 IDAHO								477.95	237.97	
41311	CELILO1	500		26097	SYLMAR1	230	1	529.76	58.67	f
41313	CELILO3	230		26098	SYLMAR3	230	1	873.60	243.32	f
41312	CELILO2	500		26099	SYLMAR2	230	1	529.76	58.59	f
41314	CELILO4	230		26100	SYLMAR4	230	1	873.60	243.78	f
from area 40 to area 26 LADWP								2806.71	604.36	
48053	BURKAVAA	115		62086	THOMSON	115	1	-37.94	14.49	f
48055	BURKAVAB	115		62085	CROWCR B	115	1	-33.43	13.16	f
40391	ELMO	115		62066	KERR	115	1	-2.95	13.70	t
40451	GAR1EAST	500		62013	TOWN1	500	1	-1091.05	242.61	f
40453	GAR2EAST	500		62012	TOWN2	500	2	-1091.05	242.61	f
40457	GARRISON	230		62072	OVANDO	230	1	32.26	-22.13	f
40457	GARRISON	230		62004	ANACOND	230	1	227.37	42.59	t
40457	GARRISON	230		62004	ANACOND	230	2	243.94	56.95	t
40551	HOT SPR	230		62072	OVANDO	230	1	-68.41	0.25	f
40867	RATTLE S	230		62009	RATTLE S	161	1	131.69	22.03	f
from area 40 to area 62 MONTANA								-1689.57	626.25	
45035	CAPTJACK	500		30020	OLINDA	500	1	1427.36	-207.70	f
45087	DELTA	115		31468	CASCADE	115	1	72.62	-16.28	f

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   40687 MALIN     500        30005 ROUND MT  500  1            1262.40   -109.08   f
   40687 MALIN     500        30005 ROUND MT  500  2            1273.74   -127.19   f
from area  40 to area  30 PG AND E                              4036.11   -460.26

   40537 HIL TOP   230        64058 HIL TOP   345  1             182.24    -49.43   f
from area  40 to area  64 SIERRA                                 182.24    -49.43

Total from area  40 NORTHWEST                                   3514.21   1266.11

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   66235 PINTO PS  345        14101 FOURCORN  345  1            -139.90     91.44   t
from area  65 to area  14 ARIZONA                               -139.90     91.44

   65075 ANTLOPE   230        60073 BRADY     230  1             132.05    -84.57   f
   65135 BENLOMND  345        60060 BORAH     345  1            -437.27     -3.62   t
   65220 BRIDGER   230        60085 BRIDGER   345  1               6.76    -17.04   t
   65220 BRIDGER   230        60085 BRIDGER   345  2               6.86    -17.32   t
   65220 BRIDGER   230        60085 BRIDGER   345  3               6.76    -17.04   t
   65665 GOSHEN    345        60085 BRIDGER   345  1            -480.53   -103.57   f
   65665 GOSHEN    345        60190 KINPORT   345  1             154.91     34.80   t
   65670 GOSHEN    161        60030 BLACKFT   161  1              93.56     12.52   f
   65920 MALAD     138        60020 AMFLS     138  1             -78.08      2.95   t
   66565 TREASTON  230        60073 BRADY     230  1            -173.69     25.46   t
from area  65 to area  60 IDAHO                                 -768.68   -167.42

   65995 MONA      345        26043 INTERMT   345  1             -15.16    -83.59   f
   65995 MONA      345        26043 INTERMT   345  2             -15.16    -83.59   f
from area  65 to area  26 LADWP                                  -30.32   -167.17

   65025 AMPS      230        62030 PTRSNFLT  230  1            -265.08     94.45   f
   65155 BIGGRASS  161        62084 DILLON S  161  1            -121.16     75.38   f
   66750 YELOWTLP  230        62045 BLGS PHA  230  1             -73.97    -14.77   f
   66755 YELOWTLP  161        62061 RMRK PHA  161  1             -15.01      0.40   t
from area  65 to area  62 MONTANA                               -475.23    155.45

   66280 REDBUTTE  345        18002 HA PS     345  1             249.30    -56.76   f
from area  65 to area  18 NEVADA                                 249.30    -56.76

   66210 PAVANT    230        64124 UTAH-NEV  230  1              32.95     13.52   t
from area  65 to area  64 SIERRA                                  32.95     13.52

   66355 SIGURDPS  230        79031 GLENCANY  230  1              -8.21     39.58   t
from area  65 to area  19 WAPA L.C.                               -8.21     39.58

   65060 ANT MINE  230        73276 TEKLA     230  1               2.28     22.67   f
   65085 ASHLEY    138        79067 VERNAL    138  1             -83.46      6.86   t
   65192 BONANZA   138        79067 VERNAL    138  1              38.28      9.92   t
   65193 BONANZA   345        79005 BEARS     345  1            -435.06     16.45   f
   65305 CASPERPP  115        73167 REFNRYTP  115  1             -29.94     -8.27   f
   65305 CASPERPP  115        73042 CASPERLM  115  1               0.02    -10.54   t
   65420 DAVEJOHN  230        73107 LAR.RIVR  230  1              99.96    -19.58   f
   65420 DAVEJOHN  230        73190 STEGALL   230  1             102.03    -16.48   f
   65425 DAVEJOHN  115        73070 GLENRCKN  115  1              70.12      4.76   f
   65425 DAVEJOHN  115        73071 GLENRCKS  115  1              80.65      9.36   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  1             -43.23      3.77   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  2             -43.23      3.77   f
   66278 RANGELY   138        79001 ARTESIA   138  1              -8.91     -4.36   f
   66278 RANGELY   138        79046 MEEKER    138  1             -24.33      2.95   f
   66305 RIVERTON  230        73170 RIVERTON  115  1              -1.01      1.15   f
   66535 THERMOPL  230        73197 THERMOPL  115  1             -10.42     -5.86   t
   66540 THERPACE  115        73197 THERMOPL  115  1              11.79     -7.39   t
   66720 WORLAND   115        73222 WORLANTP  115  1             -23.70     10.61   t
   66725 WYODAK    230        73148 OSAGE     230  1             134.29    -17.86   t
   66725 WYODAK    230        73168 RENO      230  1             119.28      5.91   f
   66725 WYODAK    230        73294 HUGHES    230  1             125.56     -0.55   f
   66725 WYODAK    230        73282 WYODAK     69  1             -10.25     15.21   f
   66725 WYODAK    230        73282 WYODAK     69  2              -6.93     10.29   f
   66725 WYODAK    230        74016 WYGEN      14  1               0.00      0.00   f
   66750 YELOWTLP  230        73229 YELLOWBR  230  1            -354.54     -5.83   t
from area  65 to area  73 WAPA R.M.                             -290.76     26.95

Total from area  65 PACE                                       -1430.85    -64.42

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   70005 BRUSHCPP  115        73013 B.CK PS   115  1             118.31     23.52   f
   70005 BRUSHCPP  115        73013 B.CK PS   115  2             124.80     30.55   f
   70116 COBBLAKE  115        73044 COBBLKTP  115  1             -15.33     -1.45   f
   70122 COMANCHE  230        73477 FULLER    230  1              95.73     31.34   t
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70139	DANIELPK	230	73477	FULLER	230	1	-116.04	-18.37	t
70193	FTN VALL	115	73412	MIDWAYBR	115	1	4.51	-0.13	t
70205	GRANDJCT	230	79036	GRANDJCT	345	1	-51.29	-24.09	f
70256	LAPORTPS	115	73105	LAPORTE	115	1	-14.73	-6.24	t
70274	MALTA	230	73138	MT.ELBRT	230	1	-145.53	-4.44	f
70285	MIDWAYPS	115	73412	MIDWAYBR	115	1	18.58	-22.63	f
70286	MIDWAYPS	230	73413	MIDWAYBR	230	1	130.80	79.18	t
70287	MILL	115	73296	FRASER	115	1	-40.20	9.00	f
70308	PALMER	115	73414	MONUMENT	115	1	-47.52	17.63	t
70311	PAWNEE	230	73192	STORY	230	1	-239.76	-29.02	t
70327	PONCHA	115	79037	GUNNISON	115	1	-24.79	11.53	f
70350	RAWHIDE	24	73165	RAWHIDE	230	1	262.16	81.68	t
70358	RIFLE PS	230	79059	RIFLE WA	230	1	-84.55	7.94	f
70358	RIFLE PS	230	79250	AMATLAS	230	1	-75.90	-1.72	f
70375	SAN LUIS	230	79054	PONCHABR	230	1	-81.06	6.60	t
70410	ST.VRAIN	230	73116	LONGPEAK	230	1	-53.46	67.25	f
70470	WELD PS	115	73211	WELD LM	115	1	-20.74	61.63	f
70471	WELD PS	230	73212	WELD LM	230	1	-370.71	2.47	f
70474	WINDSOR	230	73011	AULT	230	1	-308.69	2.41	t
70476	WOODLAND	115	73400	EMIL AND	115	1	13.96	2.90	f
70525	MTHARRIS	138	79038	HAYDEN	138	1	-7.21	-1.37	t
79033	GOREPASS	230	79039	HAYDEN	230	1	-240.73	-19.37	t
79033	GOREPASS	230	73072	GOREPASS	138	1	3.07	3.33	f
79034	GRANDJCT	115	79048	MONTROSE	115	1	19.40	-3.75	t
79056	RIFLE CU	138	79046	MEEKER	138	1	-6.99	-3.53	f
79057	RIFLE CU	230	79059	RIFLE WA	230	1	1.24	-20.34	t
79058	RIFLE CU	345	79014	CRAIG	345	1	-305.94	2.15	f
79058	RIFLE CU	345	79036	GRANDJCT	345	1	276.67	-10.09	f
79091	WOLCOTTP	230	79039	HAYDEN	230	1	-177.12	1.40	f
79173	COLBRAN	115	79174	MOLINA-L	115	1	0.00	-0.54	f
70351	RAWHIDEA	14	73165	RAWHIDE	230	1	50.81	40.56	t
70550	W CANON	115	73551	W CANON	230	1	-24.22	-19.12	t
from area 70 to area 73 WAPA R.M.							-1332.45	296.87	

Total from area 70 PSCOLORADO -1332.45 296.87

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
79060	SANJN PS	345	10292	SAN_JUAN	345	1	150.95	-10.73	t
from area 73 to area 10 NEW MEXICO							150.95	-10.73	
73042	CASPERLM	115	65305	CASPERPP	115	1	-0.02	10.54	f
73070	GLENRCKN	115	65425	DAVEJOHN	115	1	-70.12	-4.76	t
73071	GLENRCKS	115	65425	DAVEJOHN	115	1	-80.65	-9.36	t
73107	LAR.RIVR	230	65420	DAVEJOHN	230	1	-99.96	19.58	t
73148	OSAGE	230	66725	WYODAK	230	1	-134.29	17.86	f
73167	REFNRYTP	115	65305	CASPERPP	115	1	29.94	8.27	t
73168	RENO	230	66725	WYODAK	230	1	-119.28	-5.91	t
73170	RIVERTON	115	66305	RIVERTON	230	1	1.01	-1.15	t
73190	STEGALL	230	65420	DAVEJOHN	230	1	-102.03	16.48	t
73197	THERMOPL	115	66540	THERPACE	115	1	-11.79	7.39	f
73197	THERMOPL	115	66535	THERMOPL	230	1	10.42	5.86	f
73222	WORLANTP	115	66720	WORLAND	115	1	23.70	-10.61	f
73229	YELLOWBR	230	66750	YELOWTLP	230	1	354.54	5.83	f
73276	TEKLA	230	65060	ANT MINE	230	1	-2.28	-22.67	t
73282	WYODAK	69	66725	WYODAK	230	1	10.25	-15.21	t
73282	WYODAK	69	66725	WYODAK	230	2	6.93	-10.29	t
73294	HUGHES	230	66725	WYODAK	230	1	-125.56	0.55	t
79001	ARTESIA	138	66278	RANGELY	138	1	8.91	4.36	t
79005	BEARS	345	65193	BONANZA	345	1	435.06	-16.45	t
79026	FLAMGORG	138	65565	FLAMGORG	230	1	43.23	-3.77	t
79026	FLAMGORG	138	65565	FLAMGORG	230	2	43.23	-3.77	t
79046	MEEKER	138	66278	RANGELY	138	1	24.33	-2.95	t
79067	VERNAL	138	65085	ASHLEY	138	1	83.46	-6.86	f
79067	VERNAL	138	65192	BONANZA	138	1	-38.28	-9.92	f
74016	WYGEN	14	66725	WYODAK	230	1	0.00	0.00	t
from area 73 to area 65 PACE							290.76	-26.95	
73011	AULT	230	70474	WINDSOR	230	1	308.69	-2.41	f
73013	B.CK PS	115	70005	BRUSHCPP	115	1	-118.31	-23.52	t
73013	B.CK PS	115	70005	BRUSHCPP	115	2	-124.80	-30.55	t
73044	COBBLKTP	115	70116	COBBLAKE	115	1	15.33	1.45	t
73072	GOREPASS	138	79033	GOREPASS	230	1	-3.07	-3.33	t
73105	LAPORTE	115	70256	LAPORTPS	115	1	14.73	6.24	f
73116	LONGPEAK	230	70410	ST.VRAIN	230	1	53.46	-67.25	t
73138	MT.ELBRT	230	70274	MALTA	230	1	145.53	4.44	t
73165	RAWHIDE	230	70350	RAWHIDE	24	1	-262.16	-81.68	f
73165	RAWHIDE	230	70351	RAWHIDEA	14	1	-50.81	-40.56	f
73192	STORY	230	70311	PAWNEE	230	1	239.76	29.02	f
73211	WELD LM	115	70470	WELD PS	115	1	20.74	-61.63	t
73212	WELD LM	230	70471	WELD PS	230	1	370.71	-2.47	t

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   73296 FRASER    115        70287 MILL      115  1             40.20     -9.00   t
   73400 EMIL AND  115        70476 WOODLAND  115  1            -13.96     -2.90   t
   73412 MIDWAYBR  115        70193 FTN VALL  115  1             -4.51      0.13   f
   73412 MIDWAYBR  115        70285 MIDWAYPS  115  1            -18.58     22.63   t
   73413 MIDWAYBR  230        70286 MIDWAYPS  230  1           -130.80    -79.18   f
   73414 MONUMENT  115        70308 PALMER    115  1             47.52    -17.63   f
   73477 FULLER    230        70122 COMANCHE  230  1            -95.73    -31.34   f
   73477 FULLER    230        70139 DANIELPK  230  1            116.04     18.37   f
   79014 CRAIG     345        79058 RIFLE CU  345  1            305.94     -2.15   t
   79036 GRANDJCT  345        79058 RIFLE CU  345  1           -276.67     10.09   t
   79036 GRANDJCT  345        70205 GRANDJCT  230  1             51.29     24.09   t
   79037 GUNNISON  115        70327 PONCHA    115  1             24.79    -11.53   t
   79038 HAYDEN    138        70525 MTHARRIS  138  1              7.21      1.37   f
   79039 HAYDEN    230        79033 GOREPASS  230  1            240.73     19.37   f
   79039 HAYDEN    230        79091 WOLCOTTP  230  1            177.12     -1.40   t
   79046 MEEKER    138        79056 RIFLE CU  138  1              6.99      3.53   t
   79048 MONTROSE  115        79034 GRANDJCT  115  1            -19.40      3.75   f
   79054 PONCHABR  230        70375 SAN LUIS  230  1             81.06     -6.60   f
   79059 RIFLE WA  230        70358 RIFLE PS  230  1             84.55     -7.94   t
   79059 RIFLE WA  230        79057 RIFLE CU  230  1             -1.24     20.34   f
   79174 MOLINA-L  115        79173 COLBRAN   115  1             -0.00      0.54   t
   79250 AMATLAS   230        70358 RIFLE PS  230  1             75.90      1.72   t
   73551 W CANON   230        70550 W CANON   115  1             24.22     19.12   f
from area  73 to area  70 PSCOLORADO                           1332.45   -296.87

   79061 SHIP PS   230        79063 SHIPROCK  230  1             74.35     -9.26   t
   79260 ELPASOTP  115        79105 GLADETAP  115  1             -4.09    -10.89   t
from area  73 to area  19 WAPA L.C.                               70.26    -20.15

   73229 YELLOWBR  230        63001 CROS PHA  230  1           -231.89     43.25   f
from area  73 to area  63 WAPA U.M.                             -231.89     43.25

Total from area  73 WAPA R.M.                                   1612.53   -311.44

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   90204 MTSFTPCK  230        62060 COLSTRP   230  1            -68.93    -11.95   f
   90208 MTSHAVRE  230        90223 MTSGFALL  230  1             17.50     21.76   t
   90215 MTSVER    230        90224 MTSRNBW   230  1             15.44     20.52   t
   63002 CRSOVRUM  230        62051 HARDIN    230  1           -235.63    -20.73   f
   63002 CRSOVRUM  230        62056 HUNTLEY   230  1            175.09    -31.87   f
   63014 TIBERTAP  115        62027 SHELBY    115  1             11.74     -0.33   t
from area  63 to area  62 MONTANA                                -84.79    -22.60

   63001 CROS PHA  230        73229 YELLOWBR  230  1            231.89    -43.25   t
from area  63 to area  73 WAPA R.M.                              231.89    -43.25

Total from area  63 WAPA U.M.                                    147.10    -65.86
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MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Summation of selected system

	-----MW----	----MVAR---		
Generation	70824.109	10062.643	Generators	2564
Actual Load	60440.602	19741.215	Loads	6822
Net actual shunt	0.235	-2051.252	Shunts	1297
Net actual svd	0.000	-7400.880	Svd	587
Loss	3301.487	-220.230	Buses	13198
			Lines	10962
			Transformers	5151
MVA-miles	6640666.0	993853.6	DC buses	6
Miles	46985.316		DC converters	10
			DC lines	3

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area 54 [ALBERTA]

	-----MW----	----MVAR---		
Generation	7862.734	857.073	Generators	142
Actual Load	7899.199	2641.000	Loads	512
Net actual shunt	0.000	-22.487	Shunts	9
Net actual svd	0.000	-1851.933	Svd	76
Net Interchange	-399.432	-37.149	Buses	992
Sched Interchange	-400.000		Lines	781
Loss	362.965	127.649	Transformers	406
MVA-miles	1111696.1	226119.9	DC buses	0
Miles	18637.697		DC converters	0
			DC lines	0
Loss at 13.20 Kv	1.733	25.322		
Loss at 13.80 Kv	3.366	88.111		
Loss at 14.40 Kv	0.019	2.275		
Loss at 25.00 Kv	1.931	27.273		
Loss at 34.00 Kv	0.053	0.877		
Loss at 69.00 Kv	18.965	-3.363		
Loss at 138.00 Kv	151.495	-263.405		
Loss at 240.00 Kv	167.688	-572.779		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	17.714	823.337		
Largest mismatch MVA	0.0097	0.0513		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area 50 [B.C.HYDRO]

	-----MW----	----MVAR---		
Generation	10254.991	988.293	Generators	112
Actual Load	6889.125	2565.790	Loads	395
Net actual shunt	0.000	2954.596	Shunts	104
Net actual svd	0.000	2140.052	Svd	125
Net Interchange	2849.102	-259.135	Buses	1054
Sched Interchange	2849.900		Lines	718
Loss	516.761	-6413.018	Transformers	645
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.306	7.906		
Loss at 13.80 Kv	10.042	491.137		
Loss at 34.00 Kv	0.000	0.002		
Loss at 46.00 Kv	0.302	0.084		
Loss at 132.00 Kv	36.999	106.103		
Loss at 138.00 Kv	15.168	-120.426		
Loss at 230.00 Kv	52.769	-618.959		
Loss at 500.00 Kv	343.886	-6945.593		
Loss at other Kv	57.290	666.733		
Largest mismatch MVA	0.0296	0.0483		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area 60 [IDAHO]

-----MW---- ----MVAR---

Generation	3594.514	380.940	Generators	62
Actual Load	2984.000	711.600	Loads	64
Net actual shunt	0.000	-593.952	Shunts	15
Net actual svd	0.000	0.000	Svd	0
Net Interchange	420.990	-120.709	Buses	157
Sched Interchange	420.000		Lines	120
Loss	189.523	384.000	Transformers	96
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.272	5.838		
Loss at 13.80 Kv	3.430	119.467		
Loss at 14.40 Kv	0.882	34.334		
Loss at 34.50 Kv	0.000	0.000		
Loss at 100.00 Kv	0.543	22.953		
Loss at 115.00 Kv	0.432	0.341		
Loss at 138.00 Kv	19.847	-5.606		
Loss at 161.00 Kv	1.564	2.007		
Loss at 230.00 Kv	94.470	85.248		
Loss at 345.00 Kv	63.894	-13.352		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	4.191	132.770		
Largest mismatch MVA	0.0023	0.0063		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area 62 [MONTANA]

	-----MW----	----MVAR---		
Generation	3892.875	280.893	Generators	22
Actual Load	1422.895	610.184	Loads	200
Net actual shunt	0.235	-116.806	Shunts	56
Net actual svd	0.000	-721.249	Svd	12
Net Interchange	2249.585	-759.099	Buses	314
Sched Interchange	2250.000		Lines	317
Loss	220.159	1267.862	Transformers	89
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.000	36.743		
Loss at 69.00 Kv	0.596	2.605		
Loss at 100.00 Kv	21.996	-31.853		
Loss at 115.00 Kv	3.600	-14.082		
Loss at 161.00 Kv	53.981	73.123		
Loss at 230.00 Kv	44.625	45.060		
Loss at 500.00 Kv	93.407	900.489		
Loss at other Kv	1.953	255.777		
Largest mismatch MVA	0.0032	0.0102		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area 40 [NORTHWEST]

	-----MW----	----MVAR---		
Generation	27425.115	4461.641	Generators	384
Actual Load	22671.295	6850.328	Loads	1652
Net actual shunt	0.000	-1867.041	Shunts	43
Net actual svd	0.000	-4766.140	Svd	160
Net Interchange	3514.210	1266.106	Buses	2740
Sched Interchange	3514.000		Lines	2710
Loss	1239.617	2978.401	Transformers	654
MVA-miles	4938313.0	629058.9	DC buses	4
Miles	18469.418		DC converters	4
			DC lines	2
Loss at 11.00 Kv	0.000	0.608		
Loss at 13.20 Kv	0.000	4.936		
Loss at 13.80 Kv	4.788	207.682		
Loss at 14.40 Kv	0.284	13.007		
Loss at 25.00 Kv	3.137	163.491		
Loss at 34.50 Kv	0.346	6.210		
Loss at 69.00 Kv	15.543	43.473		
Loss at 100.00 Kv	0.119	-0.023		
Loss at 115.00 Kv	224.079	524.458		
Loss at 230.00 Kv	362.976	1830.917		
Loss at 345.00 Kv	16.292	-171.609		

```
Loss at 500.00 Kv         486.372     -964.808
Loss at other Kv          125.679     1320.056

Largest mismatch MVA       0.0327       0.0382

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area  65 [PACE                            ]

                      -----MW----  ----MVAR---
Generation               5175.209      843.124        Generators           52
Actual Load              6293.716     1960.150        Loads               274
Net actual shunt            0.000    -1764.140        Shunts               74
Net actual svd              0.000      -95.030        Svd                   2
Net Interchange         -1430.847      -64.417        Buses               566
Sched Interchange       -1431.000                     Lines               407
Loss                      312.337      806.563        Transformers        337

MVA-miles                     5.0          1.6        DC buses              0
Miles                       1.900                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           0.939       31.500
Loss at  34.50 Kv           1.002        7.463
Loss at  46.00 Kv           6.341      137.420
Loss at  69.00 Kv           1.663       22.678
Loss at 100.00 Kv           0.056        1.042
Loss at 115.00 Kv           3.170       -8.563
Loss at 138.00 Kv          73.963      193.338
Loss at 161.00 Kv          21.719       32.632
Loss at 230.00 Kv         111.413      321.337
Loss at 345.00 Kv          87.989      -31.032
Loss at 500.00 Kv           0.000        0.000
Loss at other Kv            4.084       98.749

Largest mismatch MVA       0.0082       0.0245

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area  70 [PSCOLORADO                      ]

                      -----MW----  ----MVAR---
Generation               5190.964     1778.242        Generators           66
Actual Load              6332.696     2372.604        Loads               362
Net actual shunt            0.000        0.000        Shunts                0
Net actual svd              0.000    -1671.630        Svd                  43
Net Interchange         -1332.453      296.872        Buses               501
Sched Interchange       -1332.800                     Lines               461
Loss                      190.730      780.403        Transformers        147

MVA-miles                29553.8       6012.7        DC buses              0
Miles                    564.500                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           4.005      136.097
Loss at  14.40 Kv           0.080        0.798
Loss at  25.00 Kv           0.010        0.140
Loss at  46.00 Kv           0.196        0.010
Loss at  69.00 Kv           7.164        1.516
Loss at 100.00 Kv           0.031       -0.493
Loss at 115.00 Kv          32.750      -38.860
Loss at 138.00 Kv           0.151       -6.104
Loss at 230.00 Kv         138.916      446.092
Loss at 345.00 Kv           0.002        0.116
Loss at 500.00 Kv           0.000        0.000
Loss at other Kv            7.426      241.090

Largest mismatch MVA       0.0115       0.0197

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area  64 [SIERRA                          ]

                      -----MW----  ----MVAR---
Generation               1375.351      118.624        Generators           22
Actual Load              1719.091      458.744        Loads               121
Net actual shunt            0.000     -188.294        Shunts               30
Net actual svd              0.000       69.647        Svd                   5
Net Interchange          -398.570       59.590        Buses               275
Sched Interchange        -399.000                     Lines               197
Loss                       54.830     -281.064        Transformers        117
```

```
MVA-miles                 64390.7      38902.3        DC buses              0
Miles                    1042.600                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           2.540       51.387
Loss at  69.00 Kv           0.000        0.000
Loss at 115.00 Kv           0.479       -6.159
Loss at 230.00 Kv           1.628     -102.320
Loss at 345.00 Kv           8.728     -445.100
Loss at other Kv           41.455      221.129

Largest mismatch MVA       0.0055       0.0112

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area  52 [W KOOTENAY                      ]

                       -----MW----  ----MVAR---
Generation                596.550       96.912        Generators           20
Actual Load               722.400      210.200        Loads                64
Net actual shunt            0.000      -77.759        Shunts               27
Net actual svd              0.000     -130.666        Svd                   4
Net Interchange          -150.436      -10.937        Buses               260
Sched Interchange        -149.900                     Lines               165
Loss                       24.586      106.074        Transformers        117

MVA-miles                 30760.9       4879.5        DC buses              0
Miles                     986.000                     DC converters         0
                                                      DC lines              0
Loss at  13.20 Kv          -0.000        8.258
Loss at  13.80 Kv           0.000        0.000
Loss at  14.40 Kv           0.000       29.911
Loss at  25.00 Kv           0.000        0.000
Loss at 138.00 Kv           0.397       -0.458
Loss at 161.00 Kv           9.043       11.277
Loss at 230.00 Kv           1.516       -8.884
Loss at other Kv           13.630       65.969

Largest mismatch MVA       0.0014       0.0089

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area  73 [WAPA R.M.                       ]

                       -----MW----  ----MVAR---
Generation               5394.305      260.870        Generators           80
Actual Load              3608.290     1237.018        Loads               355
Net actual shunt            0.000     -296.495        Shunts                4
Net actual svd              0.000     -374.913        Svd                  53
Net Interchange          1612.532     -311.443        Buses               620
Sched Interchange        1612.000                     Lines               567
Loss                      173.477        6.715        Transformers        174

MVA-miles                465946.4      88878.6        DC buses              0
Miles                    7283.200                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           6.223       91.887
Loss at  34.50 Kv           0.315        4.024
Loss at  69.00 Kv           5.631      -10.029
Loss at 115.00 Kv          74.773      -77.782
Loss at 138.00 Kv           5.679      -25.678
Loss at 230.00 Kv          37.470     -269.778
Loss at 345.00 Kv          36.113      -31.229
Loss at other Kv            7.273      325.300

Largest mismatch MVA       0.0177       0.0396

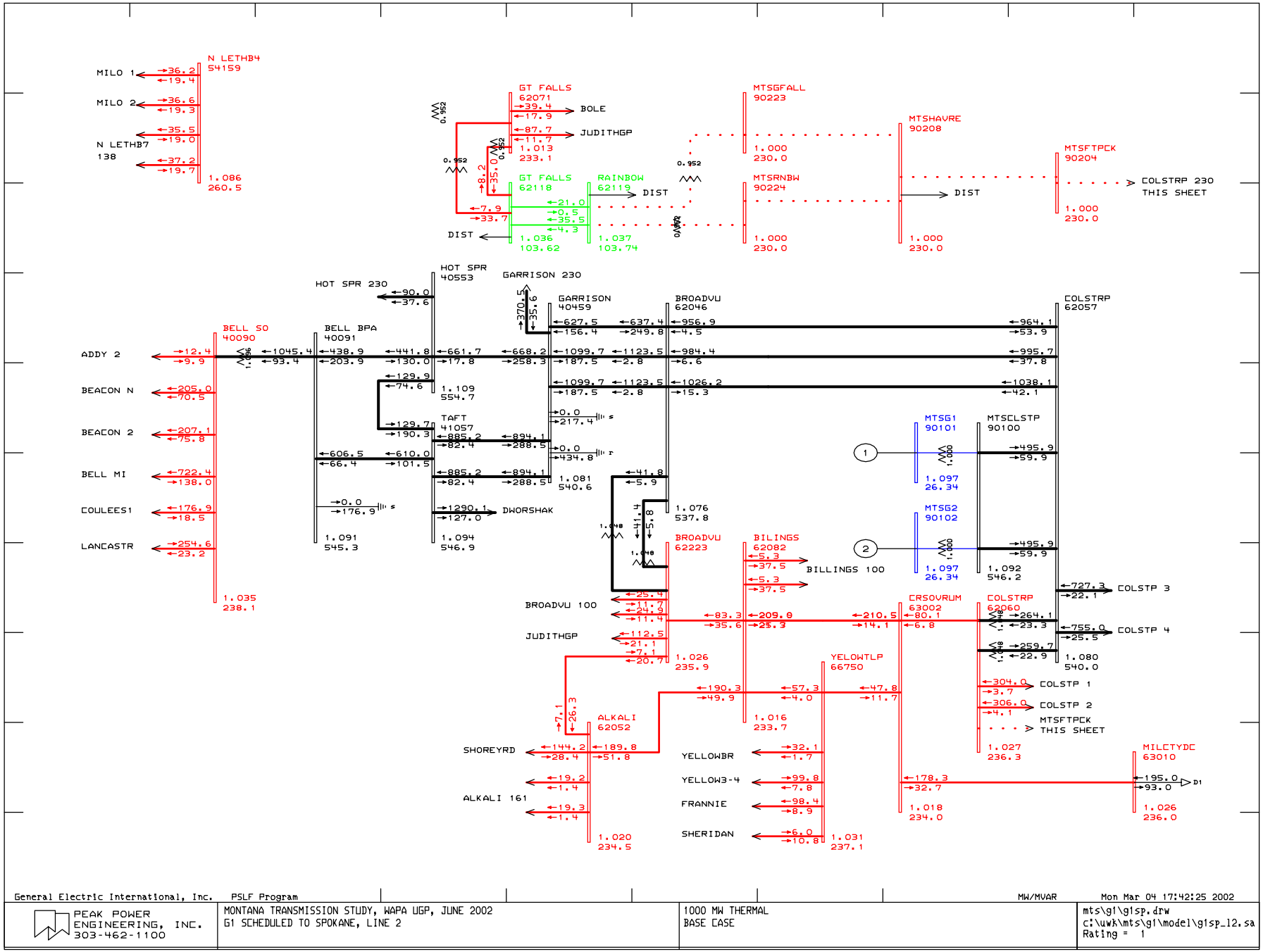
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 1

Area  63 [WAPA U.M.                       ]

                       -----MW----  ----MVAR---
Generation                 61.501       -3.968        Generators            1
Actual Load              -102.100      123.600        Loads                17
Net actual shunt            0.000      -78.876        Shunts                1
Net actual svd              0.000        0.981        Svd                   4
Net Interchange           147.100      -65.857        Buses                21
Sched Interchange         147.000                     Lines                13
Loss                       16.501       16.184        Transformers          3
```

MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.297	8.287		
Loss at 115.00 Kv	0.426	-5.843		
Loss at 161.00 Kv	0.000	0.000		
Loss at 230.00 Kv	15.778	13.740		
Largest mismatch MVA	0.0001	0.0011		

B.5 spl2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19.4
MILO 2
36.6
19.3
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19.0
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138
37.2
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1.086
260.5
GT FALLS
62071
39.4
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BOLE
87.7
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JUDITHGP
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RAINBOW
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MTSGFALL
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230.0
MTSRNBW
90224
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230.0
MTSHAVRE
90208
DIST
1.000
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MTSFTPCK
90204
COLSTRP 230
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HOT SPR 230
90.0
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HOT SPR
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GARRISON 230
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249.8
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40091
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General Electric International, Inc.
PSLF Program
MW/MVAR
Mon Mar 04 17:42:25 2002
PEAK POWER
ENGINEERING, INC.
303-462-1100
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2
1000 MW THERMAL
BASE CASE
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Rating = 1

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Percent Loading Summary -- using rating 1 - 100.0 percent of rating

----------from----------				---------- to ----------								rate	per cent
--no.--	--name--	-kv-	-ar-	--no.--	--name--	-kv-	-ar-	ck	---mw---	-mvar-	-mva--	------	loading
54083	E EDMON9	138	54	55938	STEL TAP	138	54	22	197.9	1.5	197.9	468.6A	169.9 F
54503	STELCOA9	138	54	55938	STEL TAP	138	54	22	-197.3	-0.1	197.3	497.9A	159.8 F
55015	DOME EA9	14	54	55525	163ST2	240	54	T2	-66.0	-5.3	66.2	45.0M	148.3 T
54506	BELLAMY4	240	54	54518	ARGYLL E	240	54	04	81.2	84.2	117.0	240.6A	134.0 T
54062	BARDO 7	138	54	54065	N HOLDE9	138	54	74	82.0	-53.0	97.7	355.6A	111.9 F
54154	E CALGAR	240	54	54161	SARCEE 4	240	54	16	-91.2	365.6	376.8	801.1A	110.9 T
54681	NEVIS 7	138	54	54823	NEVIS 9	138	54	1	33.2	15.6	36.7	33.3M	110.2 F
50459	KIT287	287	50	51075	KIT B5	13	50	5	80.3	23.6	83.7	79.0M	106.0 F
54290	BALZAC G	138	54	55290	BALZAC 1	14	54	T1	107.1	13.1	107.9	105.0M	102.8 F
41304	COUGAR T	7	40	46211	COUGAR T	115	40	1	28.0	-7.9	29.1	30.0M	100.8 T
54079	MILLAR 7	138	54	55102	MILLARA9	14	54	T2	55.6	29.0	62.7	62.5M	100.4 F

```
Processing file c:\uwk\mts\base\rvoltlsbs.out
Processing file c:\uwk\mts\g1\rvoltspl2.out

Compvolt found the following for comparisons:
     477 Voltage Violations read from c:\uwk\mts\base\rvoltlsbs.out
     484 Voltage Violations read from c:\uwk\mts\g1\rvoltspl2.out


**** VOLTS:  NEW ****
Component                   w/o Prj         w/ Prj  Rating
50464 TKW500    500   0.95 <= pu <= 1.05    1.0527  1.00 pu kV
50541 KDS230    230   0.95 <= pu <= 1.05    1.0503  1.00 pu kV
50561 WSN500    500   0.95 <= pu <= 1.05    1.0505  1.00 pu kV
42312 CASCADEP  230   0.95 <= pu <= 1.05    1.0505  1.00 pu kV
40551 HOT SPR   230   0.95 <= pu <= 1.05    1.0537  1.00 pu kV

**** VOLTS: WORSE ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS: BETTER ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS:  AWAY ****
Component             w/o Prj      w/ Prj          Rating
62033 ANA BPA   115   1.0511  0.95 <= pu <= 1.05   1.00 pu kV
47165 HANLY R1  115   1.0509  0.95 <= pu <= 1.05   1.00 pu kV
40887 RINGOLD   115   1.0500  0.95 <= pu <= 1.05   1.00 pu kV
```

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

overvoltage summary > 1.100000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54054	LAMOURE4	240	1.1046	54081	METIS644	240	1.1120	54090	BICKERD4	240	1.1205
54103	DEERLAN4	240	1.1029	54121	ELLERSLI	240	1.1124	54126	WABAMUN4	240	1.1072
54128	SUNDANM9	240	1.1080	54129	E EDMON4	240	1.1083	54130	N CALDE4	240	1.1056
54131	N BARRH4	240	1.1049	54150	LANGDON2	500	1.1250	54329	KEEPHIL4	240	1.1222
54441	946/947X	240	1.1124	54505	JASPER 4	240	1.1078	54506	BELLAMY4	240	1.1213
54509	ARGYLL W	240	1.1206	54512	DOME T29	240	1.1119	54513	LAMBTON4	240	1.1090
54514	CLOVERB4	240	1.1050	54518	ARGYLL E	240	1.1201	54519	CASTLTX2	240	1.1045
54521	PETROLIA	240	1.1140	54524	GENESEE4	240	1.1210	54675	PAINTRT7	240	1.1015
54681	NEVIS 7	138	1.1099	54806	946/947N	240	1.1083	54844	709S702T	138	1.1092
54978	EAST IN4	240	1.1085	55891	904AL TP	240	1.1085	55969	770S701T	138	1.1087
51017	KMS230	230	1.1120	62012	TOWN2	500	1.1034	62013	TOWN1	500	1.1034
40451	GAR1EAST	500	1.1203	40453	GAR2EAST	500	1.1203	40553	HOT SPR	500	1.1095

overvoltage summary > 1.050000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
90100	MTSCLSTP	500	1.0924	54003	COLINTO9	138	1.0523	54007	BOYLE 9	138	1.0564
54012	FOX CREE	138	1.0666	54013	KAYBOB 9	138	1.0717	54014	GULF RO9	138	1.0819
54015	MTN COA9	138	1.0653	54016	FLATBUS9	138	1.0542	54017	COLD CR7	138	1.0666
54019	WESGEN T	138	1.0531	54020	EDSON A9	138	1.0624	54021	WESGEN 7	138	1.0556
54054	LAMOURE4	240	1.1046	54069	JARROW 9	138	1.0542	54073	IPPL ST9	138	1.0585
54075	SEDGEWI9	138	1.0508	54076	BUFFALO9	138	1.0545	54077	BIGSTON4	240	1.0949
54078	CHEVRON7	138	1.0717	54081	METIS644	240	1.1120	54082	BICKERD7	138	1.0718
54090	BICKERD4	240	1.1205	54097	BIG HOR9	138	1.0675	54103	DEERLAN4	240	1.1029
54111	SANDHIL7	138	1.0794	54121	ELLERSLI	240	1.1124	54125	SUNDANL9	138	1.0654
54126	WABAMUN4	240	1.1072	54128	SUNDANM9	240	1.1080	54129	E EDMON4	240	1.1083
54130	N CALDE4	240	1.1056	54131	N BARRH4	240	1.1049	54134	DALEHUR9	138	1.0656
54139	GAETZ 4	240	1.0751	54141	HIGHVAL9	138	1.0652	54142	WILLESD4	240	1.0883
54144	RED DEE4	240	1.0671	54147	BENALTO4	240	1.0665	54148	E CROSS4	240	1.0574
54150	LANGDON2	500	1.1250	54153	BRAZEAU4	240	1.0977	54155	SAGITAW4	240	1.0591
54157	PEIGAN 4	240	1.0705	54159	N LETHB4	240	1.0856	54200	848S901T	240	1.0730
54232	PANCAN 9	138	1.0792	54233	DOME EM7	138	1.0794	54258	PLAMOND9	138	1.0551
54259	LAC LA 9	138	1.0996	54260	WINEFRE9	138	1.0966	54269	COALSPU7	138	1.0846
54281	MILO 2	240	1.0684	54285	LEISMER9	240	1.0825	54287	GREGG R9	138	1.0959
54298	ALB NEWS	240	1.0502	54302	MARIONA9	138	1.0652	54308	FLATLK-3	138	1.0559
54325	CHEV KG9	138	1.0717	54326	COAL VA9	138	1.0834	54329	KEEPHIL4	240	1.1222
54335	W BROOK4	240	1.0589	54362	EDGERTO7	138	1.0548	54381	FLATLK-1	138	1.0558
54412	BENBOW 9	138	1.0717	54441	946/947X	240	1.1124	54505	JASPER 4	240	1.1078
54506	BELLAMY4	240	1.1213	54509	ARGYLL W	240	1.1206	54512	DOME T29	240	1.1119
54513	LAMBTON4	240	1.1090	54514	CLOVERB4	240	1.1050	54518	ARGYLL E	240	1.1201
54519	CASTLTX2	240	1.1045	54521	PETROLIA	240	1.1140	54524	GENESEE4	240	1.1210
54557	WESLY C4	240	1.0613	54558	WESLY C7	138	1.0651	54559	CARMON 9	138	1.0630
54560	PEACE/29	138	1.0623	54561	DIASHOW7	138	1.0623	54567	FRIEDEN7	138	1.0537
54571	MERCER 9	138	1.0735	54572	MERC TAP	138	1.0738	54576	CRYST L7	138	1.0749
54578	SADHL TP	138	1.0598	54579	SADDLE 9	138	1.0529	54580	FLYSHT/2	138	1.0630
54581	WAP JCT7	138	1.0513	54584	ALBRIGHT	138	1.0569	54585	P&G 7	138	1.0570
54588	BIG MTN7	138	1.0614	54589	DOME CU7	138	1.0736	54590	BRDGE C7	138	1.0619
54593	DONNELL9	138	1.0661	54594	TAP7L487	138	1.0690	54595	TRIANGL7	138	1.0645
54596	VALLEYV9	138	1.0777	54598	BEZANSON	138	1.0756	54599	L. SMOKY	240	1.0645

54600	L.SMOKY7	138	1.0840	54601	STURGEO7	138	1.0838	54606	SIMONET9	138	1.0843
54607	FOXCRK/2	138	1.0643	54608	GOOSE R9	138	1.0662	54612	RUTH LA7	138	1.0925
54613	RUTH LK7	138	1.0929	54618	PARS CR7	138	1.0897	54619	HANGSTO9	138	1.0871
54621	MITS E.4	240	1.0748	54622	MITS E.7	138	1.0980	54623	AEC MILL	138	1.0970
54624	OTAUWAU7	138	1.0978	54632	LOU CR.4	240	1.0638	54633	LOU CR.7	138	1.0596
54634	SARHLK/2	138	1.0532	54636	ESSO JU7	138	1.0543	54637	MORSE RV	138	1.0548
54639	VIRGINI9	138	1.0521	54643	WOLF LK9	138	1.0698	54646	MARG LK4	240	1.0781
54647	MARG LK7	138	1.0829	54648	LACOREY9	138	1.0806	54649	ETHEL L7	138	1.0671
54652	BONNY 9	138	1.0838	54654	BONN SVC	138	1.0838	54655	WHITFISH	240	1.0951
54656	WHITBY 7	138	1.0841	54657	VILNA 9	138	1.0819	54663	IRISH C9	138	1.0616
54665	BUFALOTP	138	1.0545	54666	VERMILO7	138	1.0596	54670	HILL 9	138	1.0685
54675	PAINTRT7	240	1.1015	54680	NEVIS 4	240	1.0776	54681	NEVIS 7	138	1.1099
54685	3HILLS/3	138	1.0615	54691	MICH. C9	138	1.0997	54693	WINT HI9	138	1.0934
54694	BULLPON9	138	1.0872	54700	MCNEILL	138	1.0795	54701	OYEN 7	138	1.0600
54707	SHEER 14	240	1.0545	54709	ANDERSO4	240	1.0547	54710	ANDERSON	138	1.0846
54711	SHEER 24	240	1.0535	54714	JAROW TP	138	1.0542	54715	BAT. RV7	138	1.0809
54721	BAT RV79	240	1.0990	54723	CORDEL 4	240	1.0990	54729	PRIM TAP	138	1.0650
54730	PRIMROSE	138	1.0710	54798	800S701T	138	1.0612	54802	STURGEO9	138	1.0860
54806	946/947N	240	1.1083	54809	732S901T	240	1.0752	54814	717S701T	138	1.0634
54818	VERMILA9	138	1.0803	54819	TER 70A9	138	1.0630	54822	766S901T	240	1.0624
54823	NEVIS 9	138	1.0747	54827	MONITOR9	138	1.0519	54828	767S701T	138	1.0935
54836	MILNERB9	138	1.0720	54838	848S902T	240	1.0734	54840	732S902T	240	1.0517
54844	709S702T	138	1.1092	54847	BAT RV80	240	1.0990	54962	KAYBOBTP	138	1.0717
54978	EAST IN4	240	1.1085	54983	MARION T	138	1.0653	54984	HIGHVL T	138	1.0652
54988	CROSSF T	240	1.0574	54995	W.GRN TP	240	1.0883	55003	SANDYPT9	138	1.0794
55007	ALGAR-39	138	1.0918	55008	MARIANA7	138	1.0931	55072	SYNC_D04	240	1.0652
55073	AURORA 4	240	1.0698	55117	CLAIR L	138	1.0736	55118	POPLAR 7	138	1.0599
55147	MILNERC9	138	1.0825	55226	WABASCA9	240	1.0677	55260	EMP LIQ7	138	1.0774
55272	FIELDGA9	138	1.0534	55280	BRINTNEL	240	1.0629	55352	GRND CTR	138	1.0684
55367	VEGREVL9	138	1.0539	55515	PRIMROSE	138	1.0563	55820	FICKLE 9	138	1.0675
55891	904AL TP	240	1.1085	55909	DALEH TP	138	1.0656	55910	OBED TAP	138	1.0656
55911	EMPLIQTP	138	1.0779	55912	740L JNC	138	1.0846	55913	G.ROBB T	138	1.0825
55924	CH KGT T	138	1.0717	55943	MILO 1	240	1.0684	55969	770S701T	138	1.1087
50010	COM132	132	1.0509	50016	CKY230	230	1.0519	50020	CMS230	230	1.0500
50036	RBW230	230	1.0582	50037	PEM230	230	1.0614	50038	RBW230-1	230	1.0573
50182	ARN132	132	1.0664	50185	ALZ230	230	1.0603	50186	ROS230	230	1.0712
50187	BRT230	230	1.0685	50188	BUT230	230	1.0500	50190	CBN230	230	1.0523
50191	ROS360	360	1.0526	50192	WAH360	360	1.0530	50193	BRT360	360	1.0500
50313	VIT132	132	1.0703	50314	PVO133	132	1.0698	50315	PVO132	132	1.0702
50316	LDY132	132	1.0523	50318	JPT132	132	1.0714	50319	COC132	132	1.0680
50320	HMC132	132	1.0678	50321	PHY132	132	1.0565	50322	CFT132	132	1.0660
50323	DMR132	132	1.0836	50324	PAL132	132	1.0665	50325	GCL132	132	1.0680
50326	NFD132	132	1.0724	50327	ASH132	132	1.0717	50328	PUN132	132	1.0563
50330	LDR132	132	1.0500	50334	KGH132	132	1.0608	50335	UTA132	132	1.0611
50336	PVL132-2	132	1.0730	50337	LDY122	132	1.0711	50338	CMX132	132	1.0577
50339	PVL132	132	1.0731	50342	SCA132	132	1.0500	50343	KSH132-2	132	1.0731
50344	SHA1	132	1.0714	50345	KSH132	132	1.0725	50346	SHA2	132	1.0756
50347	GOW132	132	1.0861	50348	GTP132	132	1.0900	50349	CLD132	132	1.0939
50350	SOO132	132	1.0953	50351	JOR132	132	1.0990	50352	PML132	132	1.0591
50353	WOS132	132	1.0560	50354	GLSTP17	132	1.0747	50355	GLSTP18	132	1.0718
50356	DND132	132	1.0854	50357	LTZ115	132	1.0712	50358	LTZ116	132	1.0712
50359	JHT132	132	1.0500	50377	LDYTP138	132	1.0525	50381	PVLTP116	132	1.0731
50382	HWDTP122	132	1.0715	50383	LDYTP122	132	1.0711	50385	CMXTP102	132	1.0558
50386	CMXTP101	132	1.0597	50387	PVLTP115	132	1.0731	50390	KSHTP11	132	1.0727
50391	KSHTP14	132	1.0734	50393	SHATP10	132	1.0715	50394	SHATP14	132	1.0756

50395	SALTP17	132	1.0732	50396	SALTP18	132	1.0732	50399	LTZTP115	132	1.0712
50400	LTZTP116	132	1.0712	50403	CMX132-2	132	1.0542	50460	KMO287	287	1.0528
50463	SKA500	500	1.0524	50464	TKW500	500	1.0527	50541	KDS230	230	1.0503
50545	BLW230	230	1.0738	50546	SCK230	230	1.0676	50547	HMH230	230	1.0642
50548	BLM230	230	1.0525	50549	QNT230	230	1.0518	50550	QRP230	230	1.0735
50551	TLR230	230	1.0523	50553	BCR230	230	1.0523	50554	RBF230	230	1.0747
50556	LAP230	230	1.0501	50557	SNK230	230	1.0517	50560	KDS500	500	1.0612
50561	WSN500	500	1.0505	50562	GLN500	500	1.0595	50677	MCK138	138	1.0532
50678	AVO138	138	1.0553	50679	BLU138	138	1.0623	50680	VLM138	138	1.0688
50686	SCO138	138	1.0681	50687	ABA138	138	1.0680	50701	REV500	500	1.0500
50729	PRI138TP	138	1.0680	50782	CBK230	230	1.0502	50783	SEL230	230	1.0546
50785	SEV230	230	1.0533	50786	INV230	230	1.0515	50789	AAL230	230	1.0517
50791	CBK500	500	1.0802	50792	SEL500	500	1.0500	50899	ABA138TP	138	1.0680
50913	HWD132-2	132	1.0693	50914	HWDTP112	132	1.0693	50922	DNDTAP	132	1.0860
50923	HSY-PH	132	1.0903	50924	ESQ-PH	132	1.0854	50928	SCG IPP	132	1.0500
50932	IPH132	132	1.0678	50933	JUL132	132	1.0577	50934	JULTP130	132	1.0608
51017	KMS230	230	1.1120	51019	OYR132B1	132	1.0540	51020	OYR132B2	132	1.0563
51021	OYR T101	132	1.0545	51022	OYR T119	132	1.0570	51024	QLC132B1	132	1.0756
51025	QLC132B2	132	1.0755	51040	ICG132	132	1.0500	51045	ALH230	230	1.0554
51051	PGS132	132	1.0698	51052	PGS-105T	132	1.0698	51053	PGS-114T	132	1.0698
60085	BRIDGER	345	1.0500	60240	MIDPOINT	500	1.0601	62012	TOWN2	500	1.1034
62013	TOWN1	500	1.1034	62046	BROADVU	500	1.0756	62053	BROADV&2	500	1.0715
62054	BROADV&1	500	1.0723	62057	COLSTRP	500	1.0800	40045	ALLSTON	500	1.0771
40051	ALVEY	500	1.0813	40061	ASHE	500	1.0800	41184	BALD MT	115	1.0514
40091	BELL BPA	500	1.0907	40111	BIG EDDY	500	1.0803	43049	BOARD F	500	1.0800
47013	BRIDGPRT	115	1.0528	40155	BUCKLEY	500	1.0830	45029	BURNS	500	1.0669
45035	CAPTJACK	500	1.0750	46209	CARMEN	115	1.0525	42315	CASCADEP	115	1.0589
42312	CASCADEP	230	1.0505	41311	CELILO1	500	1.0801	41312	CELILO2	500	1.0801
40233	CHIEF JO	500	1.0800	42316	CLE ELUM	115	1.0593	40269	CONNEL T	115	1.0510
40271	CONNELL	115	1.0540	40287	COULEE	500	1.0818	40302	COVINGT4	500	1.0771
40306	COVINGT5	500	1.0776	43123	COYOTE	500	1.0831	40323	CUSTER W	500	1.0522
45095	DIXONVLE	500	1.0779	40369	DWORSHAK	500	1.0690	42395	EASTON	115	1.0608
40381	ECHOLAKE	500	1.0823	40451	GAR1EAST	500	1.1203	40453	GAR2EAST	500	1.1203
40459	GARRISON	500	1.0813	40485	GREEN PT	115	1.0520	40489	GRIZZLY	500	1.0720
40499	HANFORD	500	1.0877	40517	HATTON T	115	1.0522	40521	HATWAI	500	1.0689
45137	HERMIST	230	1.0509	41212	HILLS CR	115	1.0500	40551	HOT SPR	230	1.0537
40553	HOT SPR	500	1.1095	42405	HYAK	115	1.0616	40585	JOHN DAY	500	1.0800
40601	KEELER	500	1.0762	45262	KFALLS	500	1.0791	42411	KITTITAS	115	1.0616
40629	LANE	500	1.0717	40665	LIT GOOS	500	1.0805	40679	LOW GRAN	500	1.0793
40683	LOW MON	500	1.0800	40687	MALIN	500	1.0731	40693	MAPLE VL	500	1.0840
40699	MARION	500	1.0806	40711	MCLOUGLN	500	1.0804	40721	MCNARY	345	1.0512
40723	MCNARY	500	1.0813	45197	MERIDINP	500	1.0797	40749	MONROE	500	1.0777
42429	NCLE ELM	115	1.0590	40797	OLYMPIA	500	1.0799	40809	OSTRNDER	500	1.0798
40821	PAUL	500	1.0800	40827	PEARL	500	1.0801	40837	PONDROSA	500	1.0752
40869	RAVER	500	1.0808	43485	ROUND BU	500	1.0690	40913	SACJAWEA	500	1.0811
40917	SACJWA T	500	1.0815	40941	SANTIAM	500	1.0804	40949	SATSOP	500	1.0820
40957	SCHULTZ	500	1.0932	40973	SICKLER	500	1.0845	40989	SLATT	500	1.0824
41043	SUMMER L	500	1.0722	45289	SWIFT	230	1.0500	41051	TACOMA	500	1.0817
41057	TAFT	500	1.0937	41095	TROUTDAL	500	1.0827	41103	UNDRWOOD	115	1.0514
41113	VANTAGE	500	1.0912	47099	WELLS	115	1.0607	42467	WOLDALE	115	1.0604
42314	X-POINT	200	1.0604	65510	EMERY	345	1.0500	64074	MILLERS	120	1.0568
64165	SQAW VLY	120	1.0606	64182	SANDIA	120	1.0567	64229	SUMMIT 2	115	1.0507
52226	PRI138	138	1.0689	52229	KER138	138	1.0759	52230	HED138	138	1.0738
52291	DKL138	138	1.0576	52300	LEE138T3	138	1.0574	52301	LEE138T4	138	1.0574
52302	LEE138C	138	1.0574	52303	JOR138TP	138	1.0570	52304	DGB138	138	1.0562

52306	SEX138	138	1.0577	52307	GLE138	138	1.0578	52308	REC138	138	1.0581
52309	SAU138	138	1.0566	52310	SPR138TP	138	1.0566	52313	HOL138	138	1.0565
52314	OKM138	138	1.0558	52319	JOR138	138	1.0568	52426	MAS138	138	1.0738
52809	LEE-T3	230	1.0582	52810	LEE-T4A	230	1.0575	52811	LEE-T4B	230	1.0593
52812	LEE-T4C	230	1.0579	52813	LEE-T4D	230	1.0580	52815	PRI-T2	138	1.0721

undervoltage summary < 0.900000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)

undervoltage summary < 0.950000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54551	RING CK7	138	0.9484	54796	791S701T	138	0.9196	54835	791S702T	138	0.9260
50781	NTL VR	138	0.9447								

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

		generation capacity	generation on-line	load categories power	load categories current	load categories imped.	shunt	-- svd --	net inter	losses	slack bus
area name	ALBERTA										
	mw	10743.6	6887.3	6274.4	0.0	0.0	0.0	0.0	200.4	412.4	37.5
54	mvar	4941.5	852.3	1997.1	0.0	0.0	-21.7	-1195.6	-19.2	91.8	20.4
area name	B.C.HYDRO										
	mw	14043.0	8265.0	6035.1	0.0	0.0	0.0	0.0	1800.2	429.8	271.2
50	mvar	6475.0	205.7	2359.8	0.0	0.0	2931.0	2569.7	-357.2	-7297.7	-5.5
area name	IDAHO										
	mw	4676.4	3195.1	1955.0	0.0	0.0	0.0	0.0	1066.2	173.9	179.7
60	mvar	2192.5	580.9	501.3	0.0	0.0	-96.9	0.0	-385.0	561.4	26.5
area name	MONTANA										
	mw	4502.2	4055.3	1207.7	0.0	0.0	0.4	0.0	2701.3	145.9	787.3
62	mvar	1929.0	222.2	524.8	0.0	0.0	-122.4	-5.5	-643.3	253.5	67.6
area name	NORTHWEST										
	mw	43404.3	16523.6	16651.6	0.0	0.0	0.0	0.0	-746.7	618.7	502.2
40	mvar	15534.6	185.7	5157.0	0.0	0.0	-1710.6	2478.9	1336.3	-6860.9	-321.0
area name	PACE										
	mw	6242.0	5529.7	4750.0	0.0	0.0	0.0	0.0	590.4	189.3	78.7
65	mvar	3201.9	539.1	1528.0	0.0	0.0	-527.6	0.0	-170.9	-290.4	12.5
area name	PSCOLORADO										
	mw	5792.0	4236.4	4858.1	0.0	0.0	0.0	0.0	-742.9	121.2	104.4
70	mvar	3667.3	623.7	1835.0	0.0	0.0	0.0	-1397.7	50.7	135.8	3.9
area name	SIERRA										
	mw	1901.7	1069.5	1075.2	0.0	0.0	0.0	0.0	-36.0	30.4	99.5
64	mvar	925.4	-25.4	280.4	0.0	0.0	-158.5	73.9	18.9	-240.2	7.7
area name	W KOOTENAY										
	mw	763.5	498.0	486.1	0.0	0.0	0.0	0.0	0.6	11.4	98.0
52	mvar	450.0	1.5	160.7	0.0	0.0	-79.1	-71.9	-15.5	7.3	-5.5
area name	WAPA R.M.										
	mw	6091.6	3957.8	2784.2	0.0	0.0	0.0	0.0	1050.7	122.9	412.9
73	mvar	2883.8	-177.2	950.8	0.0	0.0	-299.3	-176.9	-213.4	-438.5	16.6

		generation capacity	generation on-line	--- load categories ---- power	current	imped.	shunt	-- svd	-- inter	net losses	slack bus
area name		WAPA U.M.									
	mw	61.8	28.9	-120.2	0.0	0.0	0.0	0.0	140.7	8.4	28.9
63	mvar	34.0	1.7	117.5	0.0	0.0	-79.0	3.2	-6.0	-34.0	1.7
TOTL	mw	98222.1	54246.5	45957.1	0.0	0.0	0.4	0.0	6024.9	2264.2	
	mvar	42235.0	3009.9	15412.5	0.0	0.0	-164.1	2278.1	-404.7	-14111.9	

Area Interchange Summary

		mw	mvar
FROM AREA	54 ALBERTA		
TO AREA	50 B.C.HYDRO	200.4	-19.2
TOTAL		200.4	-19.2
FROM AREA	50 B.C.HYDRO		
TO AREA	54 ALBERTA	-200.4	19.2
TO AREA	40 NORTHWEST	2001.2	-391.9
TO AREA	52 W KOOTENAY	-0.6	15.5
TOTAL		1800.2	-357.2
FROM AREA	60 IDAHO		
TO AREA	40 NORTHWEST	990.5	-345.2
TO AREA	65 PACE	203.7	-19.5
TO AREA	64 SIERRA	-128.0	-20.2
TOTAL		1066.2	-385.0
FROM AREA	62 MONTANA		
TO AREA	40 NORTHWEST	2731.1	-638.1
TO AREA	65 PACE	63.3	-4.9
TO AREA	63 WAPA U.M.	-93.0	-0.3
TOTAL		2701.3	-643.3
FROM AREA	40 NORTHWEST		
TO AREA	50 B.C.HYDRO	-2001.2	391.9
TO AREA	60 IDAHO	-990.5	345.2
TO AREA	26 LADWP	1956.0	411.8
TO AREA	62 MONTANA	-2731.1	638.1
TO AREA	30 PG AND E	2890.4	-430.5
TO AREA	64 SIERRA	129.6	-20.3
TOTAL		-746.7	1336.3
FROM AREA	65 PACE		
TO AREA	14 ARIZONA	279.6	31.8
TO AREA	60 IDAHO	-203.7	19.5
TO AREA	26 LADWP	67.5	-131.6
TO AREA	62 MONTANA	-63.3	4.9
TO AREA	18 NEVADA	141.9	-80.4
TO AREA	64 SIERRA	24.3	9.0
TO AREA	19 WAPA L.C.	181.6	-29.7
TO AREA	73 WAPA R.M.	162.4	5.5
TOTAL		590.4	-170.9
FROM AREA	70 PSCOLORADO		
TO AREA	73 WAPA R.M.	-742.9	50.7
TOTAL		-742.9	50.7
FROM AREA	64 SIERRA		
TO AREA	60 IDAHO	128.0	20.2
TO AREA	26 LADWP	-31.3	6.4
TO AREA	40 NORTHWEST	-129.6	20.3
TO AREA	65 PACE	-24.3	-9.0
TO AREA	30 PG AND E	9.2	-16.2
TO AREA	24 SOCALIF	12.0	-2.7

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   TOTAL                                          -36.0       18.9

 FROM AREA   52 W KOOTENAY                          mw        mvar
   TO AREA   50 B.C.HYDRO                            0.6      -15.5
   TOTAL                                             0.6      -15.5

 FROM AREA   73 WAPA R.M.                           mw        mvar
   TO AREA   10 NEW MEXICO                         340.1      -97.4
   TO AREA   65 PACE                              -162.4       -5.5
   TO AREA   70 PSCOLORADO                         742.9      -50.7
   TO AREA   19 WAPA L.C.                          177.8      -66.2
   TO AREA   63 WAPA U.M.                          -47.7        6.3
   TOTAL                                          1050.7     -213.4

 FROM AREA   63 WAPA U.M.                           mw        mvar
   TO AREA   62 MONTANA                             93.0        0.3
   TO AREA   73 WAPA R.M.                           47.7       -6.3
   TOTAL                                           140.7       -6.0
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AREA TIE LINE SUMMARY

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
54150	LANGDON2	500	50791	CBK500	500	1	193.42	4.08	f
54205	COLEMAN7	138	50776	NTL138	138	1	6.20	-20.63	t
54273	POCATER7	138	50830	FRO T274	138	1	0.81	-2.69	t
from area 54 to area 50 B.C.HYDRO							200.43	-19.24	
Total from area 54 ALBERTA							200.43	-19.24	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
62004	ANACOND	230	40457	GARRISON	230	1	-95.30	5.70	f
62004	ANACOND	230	40457	GARRISON	230	2	-103.55	1.78	f
62009	RATTLE S	161	40867	RATTLE S	230	1	-71.09	-37.29	t
62012	TOWN2	500	40453	GAR2EAST	500	2	1099.72	-355.72	t
62013	TOWN1	500	40451	GAR1EAST	500	1	1099.72	-355.72	t
62046	BROADVU	500	40459	GARRISON	500	1	627.45	156.36	t
62066	KERR	115	40391	ELMO	115	1	15.29	-22.29	f
62072	OVANDO	230	40457	GARRISON	230	1	-49.19	19.59	t
62072	OVANDO	230	40551	HOT SPR	230	1	103.29	-10.37	t
62085	CROWCR B	115	48055	BURKAVAB	115	1	51.65	-20.17	t
62086	THOMSON	115	48053	BURKAVAA	115	1	53.06	-20.00	t
from area 62 to area 40 NORTHWEST							2731.06	-638.13	
62030	PTRSNFLT	230	65025	AMPS	230	1	106.17	6.13	t
62045	BLGS PHA	230	66750	YELOWTLP	230	1	-57.27	-3.98	t
62061	RMRK PHA	161	66755	YELOWTLP	161	1	-27.25	-4.47	f
62084	DILLON S	161	65155	BIGGRASS	161	1	41.61	-2.62	t
from area 62 to area 65 PACE							63.25	-4.95	
62023	GT FALLS	161	63008	HAVRE	161	1	18.44	-10.65	f
62024	RAINBOW	161	63015	VERONA	161	1	16.71	-10.86	f
62027	SHELBY	115	63014	TIBERTAP	115	1	2.23	0.25	f
62051	HARDIN	230	63002	CRSOVRUM	230	1	80.11	6.85	t
62056	HUNTLEY	230	63002	CRSOVRUM	230	1	-210.52	14.15	t
from area 62 to area 63 WAPA U.M.							-93.04	-0.26	
Total from area 62 MONTANA							2701.28	-643.34	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
40145	BOUNDARY	230	50822	NLYPHS	230	1	-135.52	-13.92	f
40323	CUSTER W	500	50194	ING500	500	1	-940.65	204.11	t
40323	CUSTER W	500	50194	ING500	500	2	-925.01	201.74	t
from area 40 to area 50 B.C.HYDRO							-2001.18	391.93	
45029	BURNS	500	60240	MIDPOINT	500	1	-1044.11	358.77	t
45103	ENTERPRS	230	60150	HELLSCYN	230	1	-24.47	-10.83	f
40507	HARNEY	115	61826	HINES	115	1	-16.88	11.18	f
40621	LAGRANDE	230	60192	LADD	230	1	1.60	-9.49	f
48197	LOLO	230	60278	IMNAHA	230	1	93.40	-4.39	t
from area 40 to area 60 IDAHO							-990.46	345.23	
41311	CELILO1	500	26097	SYLMAR1	230	1	388.82	62.88	f
41313	CELILO3	230	26098	SYLMAR3	230	1	589.18	142.99	f
41312	CELILO2	500	26099	SYLMAR2	230	1	388.82	62.86	f
41314	CELILO4	230	26100	SYLMAR4	230	1	589.18	143.10	f
from area 40 to area 26 LADWP							1956.00	411.82	
48053	BURKAVAA	115	62086	THOMSON	115	1	-53.06	20.00	f
48055	BURKAVAB	115	62085	CROWCR B	115	1	-51.65	20.17	f
40391	ELMO	115	62066	KERR	115	1	-15.29	22.29	t
40451	GAR1EAST	500	62013	TOWN1	500	1	-1099.72	355.72	f
40453	GAR2EAST	500	62012	TOWN2	500	2	-1099.72	355.72	f
40457	GARRISON	230	62072	OVANDO	230	1	49.19	-19.59	f
40457	GARRISON	230	62004	ANACOND	230	1	95.30	-5.70	t
40457	GARRISON	230	62004	ANACOND	230	2	103.55	-1.78	t
40459	GARRISON	500	62046	BROADVU	500	1	-627.45	-156.36	f
40551	HOT SPR	230	62072	OVANDO	230	1	-103.29	10.37	f
40867	RATTLE S	230	62009	RATTLE S	161	1	71.09	37.29	f
from area 40 to area 62 MONTANA							-2731.06	638.13	
45035	CAPTJACK	500	30020	OLINDA	500	1	1065.14	-146.50	f

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   45087 DELTA     115        31468 CASCADE   115  1             71.00    -19.30   f
   40687 MALIN     500        30005 ROUND MT  500  1            873.53   -124.38   f
   40687 MALIN     500        30005 ROUND MT  500  2            880.76   -140.33   f
from area  40 to area  30 PG AND E                             2890.43   -430.51

   40537 HIL TOP   230        64058 HIL TOP   345  1            129.60    -20.28   f
from area  40 to area  64 SIERRA                                129.60    -20.28

Total from area  40 NORTHWEST                                  -746.67   1336.33

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   66235 PINTO PS  345        14101 FOURCORN  345  1            279.63     31.77   t
from area  65 to area  14 ARIZONA                               279.63     31.77

   65075 ANTLOPE   230        60073 BRADY     230  1             63.17    -23.78   f
   65135 BENLOMND  345        60060 BORAH     345  1            -11.33     96.32   t
   65220 BRIDGER   230        60085 BRIDGER   345  1             -7.26     -3.66   t
   65220 BRIDGER   230        60085 BRIDGER   345  2             -7.38     -3.72   t
   65220 BRIDGER   230        60085 BRIDGER   345  3             -7.26     -3.66   t
   65665 GOSHEN    345        60085 BRIDGER   345  1           -600.00    -60.70   f
   65665 GOSHEN    345        60190 KINPORT   345  1            323.63      1.95   t
   65670 GOSHEN    161        60030 BLACKFT   161  1             85.15     -2.77   f
   65920 MALAD     138        60020 AMFLS     138  1            -20.13      0.81   t
   66565 TREASTON  230        60073 BRADY     230  1            -22.27     18.76   t
from area  65 to area  60 IDAHO                                -203.70     19.54

   65995 MONA      345        26043 INTERMT   345  1             33.76    -65.80   f
   65995 MONA      345        26043 INTERMT   345  2             33.76    -65.80   f
from area  65 to area  26 LADWP                                  67.52   -131.60

   65025 AMPS      230        62030 PTRSNFLT  230  1           -106.17     -6.13   f
   65155 BIGGRASS  161        62084 DILLON S  161  1            -41.61      2.62   f
   66750 YELOWTLP  230        62045 BLGS PHA  230  1             57.27      3.98   f
   66755 YELOWTLP  161        62061 RMRK PHA  161  1             27.25      4.47   t
from area  65 to area  62 MONTANA                               -63.25      4.95

   66280 REDBUTTE  345        18002 HA PS     345  1            141.94    -80.41   f
from area  65 to area  18 NEVADA                                141.94    -80.41

   66210 PAVANT    230        64124 UTAH-NEV  230  1             24.27      9.04   t
from area  65 to area  64 SIERRA                                 24.27      9.04

   66355 SIGURDPS  230        79031 GLENCANY  230  1            181.56    -29.70   t
from area  65 to area  19 WAPA L.C.                             181.56    -29.70

   65060 ANT MINE  230        73276 TEKLA     230  1             37.06     12.68   f
   65085 ASHLEY    138        79067 VERNAL    138  1            -48.00      5.37   t
   65192 BONANZA   138        79067 VERNAL    138  1             47.54     -2.71   t
   65193 BONANZA   345        79005 BEARS     345  1           -183.96    -11.23   f
   65305 CASPERPP  115        73167 REFNRYTP  115  1            -38.90     -0.13   f
   65305 CASPERPP  115        73042 CASPERLM  115  1              0.08     -8.21   t
   65420 DAVEJOHN  230        73107 LAR.RIVR  230  1             84.91    -20.13   f
   65420 DAVEJOHN  230        73190 STEGALL   230  1             88.90    -18.16   f
   65425 DAVEJOHN  115        73070 GLENRCKN  115  1             71.01     -2.93   f
   65425 DAVEJOHN  115        73071 GLENRCKS  115  1             81.00     -0.12   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  1            -51.37      9.15   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  2            -51.37      9.15   f
   66278 RANGELY   138        79001 ARTESIA   138  1             -6.02     -6.15   f
   66278 RANGELY   138        79046 MEEKER    138  1             19.22     -4.79   f
   66305 RIVERTON  230        73170 RIVERTON  115  1              4.77      5.22   f
   66535 THERMOPL  230        73197 THERMOPL  115  1              2.84      6.03   t
   66540 THERPACE  115        73197 THERMOPL  115  1              6.86      4.48   t
   66720 WORLAND   115        73222 WORLANTP  115  1             -5.37      4.24   t
   66725 WYODAK    230        73148 OSAGE     230  1            102.61    -11.95   t
   66725 WYODAK    230        73168 RENO      230  1             53.57     -0.79   f
   66725 WYODAK    230        73294 HUGHES    230  1            107.11     -2.53   f
   66725 WYODAK    230        73282 WYODAK     69  1             11.61     13.90   f
   66725 WYODAK    230        73282 WYODAK     69  2              7.85      9.40   f
   66725 WYODAK    230        74016 WYGEN      14  1              0.00      0.00   f
   66750 YELOWTLP  230        73229 YELLOWBR  230  1           -179.52     15.78   t
from area  65 to area  73 WAPA R.M.                             162.40      5.54

Total from area  65 PACE                                        590.37   -170.88

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   70005 BRUSHCPP  115        73013 B.CK PS   115  1             42.00      2.51   f
   70005 BRUSHCPP  115        73013 B.CK PS   115  2             44.57      4.63   f
   70116 COBBLAKE  115        73044 COBBLKTP  115  1            -11.50     -1.09   f
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70122	COMANCHE	230	73477	FULLER	230	1	85.06	17.01	t
70139	DANIELPK	230	73477	FULLER	230	1	-22.49	2.03	t
70193	FTN VALL	115	73412	MIDWAYBR	115	1	11.66	-5.82	t
70205	GRANDJCT	230	79036	GRANDJCT	345	1	-20.99	-11.78	f
70256	LAPORTPS	115	73105	LAPORTE	115	1	-13.32	-5.92	t
70274	MALTA	230	73138	MT.ELBRT	230	1	-69.85	6.64	f
70285	MIDWAYPS	115	73412	MIDWAYBR	115	1	20.14	-43.14	f
70286	MIDWAYPS	230	73413	MIDWAYBR	230	1	152.95	51.20	t
70287	MILL	115	73296	FRASER	115	1	-35.26	5.40	f
70308	PALMER	115	73414	MONUMENT	115	1	-14.23	3.35	t
70311	PAWNEE	230	73192	STORY	230	1	-88.65	-29.64	t
70327	PONCHA	115	79037	GUNNISON	115	1	-3.42	4.00	f
70350	RAWHIDE	24	73165	RAWHIDE	230	1	262.21	33.66	t
70358	RIFLE PS	230	79059	RIFLE WA	230	1	-67.41	27.77	f
70358	RIFLE PS	230	79250	AMATLAS	230	1	-49.95	-13.48	f
70375	SAN LUIS	230	79054	PONCHABR	230	1	-59.93	13.28	t
70410	ST.VRAIN	230	73116	LONGPEAK	230	1	-30.96	32.15	f
70470	WELD PS	115	73211	WELD LM	115	1	-16.11	122.25	f
70471	WELD PS	230	73212	WELD LM	230	1	-272.27	-84.59	f
70474	WINDSOR	230	73011	AULT	230	1	-223.84	-11.86	t
70476	WOODLAND	115	73400	EMIL AND	115	1	11.48	-0.06	f
70525	MTHARRIS	138	79038	HAYDEN	138	1	-5.59	-1.05	t
79033	GOREPASS	230	79039	HAYDEN	230	1	-187.89	-0.70	t
79033	GOREPASS	230	73072	GOREPASS	138	1	-3.17	5.47	f
79034	GRANDJCT	115	79048	MONTROSE	115	1	30.27	-6.70	t
79056	RIFLE CU	138	79046	MEEKER	138	1	-44.80	0.72	f
79057	RIFLE CU	230	79059	RIFLE WA	230	1	0.88	-52.97	t
79058	RIFLE CU	345	79014	CRAIG	345	1	-403.09	-19.93	f
79058	RIFLE CU	345	79036	GRANDJCT	345	1	398.06	20.97	f
79091	WOLCOTTP	230	79039	HAYDEN	230	1	-151.95	6.49	f
79173	COLBRAN	115	79174	MOLINA-L	115	1	0.00	-0.52	f
70351	RAWHIDEA	14	73165	RAWHIDE	230	1	0.00	0.00	t
70550	W CANON	115	73551	W CANON	230	1	-5.48	-19.61	t
from area 70 to area 73 WAPA R.M.							-742.86	50.65	

Total from area 70 PSCOLORADO -742.86 50.65

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
79060	SANJN PS	345	10292	SAN_JUAN	345	1	340.11	-97.36	t
from area 73 to area 10 NEW MEXICO							340.11	-97.36	
73042	CASPERLM	115	65305	CASPERPP	115	1	-0.08	8.21	f
73070	GLENRCKN	115	65425	DAVEJOHN	115	1	-71.01	2.93	t
73071	GLENRCKS	115	65425	DAVEJOHN	115	1	-81.00	0.12	t
73107	LAR.RIVR	230	65420	DAVEJOHN	230	1	-84.91	20.13	t
73148	OSAGE	230	66725	WYODAK	230	1	-102.61	11.95	f
73167	REFNRYTP	115	65305	CASPERPP	115	1	38.90	0.13	t
73168	RENO	230	66725	WYODAK	230	1	-53.57	0.79	t
73170	RIVERTON	115	66305	RIVERTON	230	1	-4.77	-5.22	t
73190	STEGALL	230	65420	DAVEJOHN	230	1	-88.90	18.16	t
73197	THERMOPL	115	66540	THERPACE	115	1	-6.86	-4.48	f
73197	THERMOPL	115	66535	THERMOPL	230	1	-2.84	-6.03	f
73222	WORLANTP	115	66720	WORLAND	115	1	5.37	-4.24	f
73229	YELLOWBR	230	66750	YELOWTLP	230	1	179.52	-15.78	f
73276	TEKLA	230	65060	ANT MINE	230	1	-37.06	-12.68	t
73282	WYODAK	69	66725	WYODAK	230	1	-11.61	-13.90	t
73282	WYODAK	69	66725	WYODAK	230	2	-7.85	-9.40	t
73294	HUGHES	230	66725	WYODAK	230	1	-107.11	2.53	t
79001	ARTESIA	138	66278	RANGELY	138	1	6.02	6.15	t
79005	BEARS	345	65193	BONANZA	345	1	183.96	11.23	t
79026	FLAMGORG	138	65565	FLAMGORG	230	1	51.37	-9.15	t
79026	FLAMGORG	138	65565	FLAMGORG	230	2	51.37	-9.15	t
79046	MEEKER	138	66278	RANGELY	138	1	-19.22	4.79	t
79067	VERNAL	138	65085	ASHLEY	138	1	48.00	-5.37	f
79067	VERNAL	138	65192	BONANZA	138	1	-47.54	2.71	f
74016	WYGEN	14	66725	WYODAK	230	1	0.00	0.00	t
from area 73 to area 65 PACE							-162.40	-5.54	
73011	AULT	230	70474	WINDSOR	230	1	223.84	11.86	f
73013	B.CK PS	115	70005	BRUSHCPP	115	1	-42.00	-2.51	t
73013	B.CK PS	115	70005	BRUSHCPP	115	2	-44.57	-4.63	t
73044	COBBLKTP	115	70116	COBBLAKE	115	1	11.50	1.09	t
73072	GOREPASS	138	79033	GOREPASS	230	1	3.17	-5.47	t
73105	LAPORTE	115	70256	LAPORTPS	115	1	13.32	5.92	f
73116	LONGPEAK	230	70410	ST.VRAIN	230	1	30.96	-32.15	t
73138	MT.ELBRT	230	70274	MALTA	230	1	69.85	-6.64	t
73165	RAWHIDE	230	70350	RAWHIDE	24	1	-262.21	-33.66	f
73165	RAWHIDE	230	70351	RAWHIDEA	14	1	-0.00	-0.00	f
73192	STORY	230	70311	PAWNEE	230	1	88.65	29.64	f
73211	WELD LM	115	70470	WELD PS	115	1	16.11	-122.25	t

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   73212 WELD  LM  230        70471 WELD  PS  230  1             272.27     84.59   t
   73296 FRASER    115        70287 MILL      115  1              35.26     -5.40   t
   73400 EMIL AND  115        70476 WOODLAND  115  1             -11.48      0.06   t
   73412 MIDWAYBR  115        70193 FTN VALL  115  1             -11.66      5.82   f
   73412 MIDWAYBR  115        70285 MIDWAYPS  115  1             -20.14     43.14   t
   73413 MIDWAYBR  230        70286 MIDWAYPS  230  1            -152.95    -51.20   f
   73414 MONUMENT  115        70308 PALMER    115  1              14.23     -3.35   f
   73477 FULLER    230        70122 COMANCHE  230  1             -85.06    -17.01   f
   73477 FULLER    230        70139 DANIELPK  230  1              22.49     -2.03   f
   79014 CRAIG     345        79058 RIFLE CU  345  1             403.09     19.93   t
   79036 GRANDJCT  345        79058 RIFLE CU  345  1            -398.06    -20.97   t
   79036 GRANDJCT  345        70205 GRANDJCT  230  1              20.99     11.78   t
   79037 GUNNISON  115        70327 PONCHA    115  1               3.42     -4.00   t
   79038 HAYDEN    138        70525 MTHARRIS  138  1               5.59      1.05   f
   79039 HAYDEN    230        79033 GOREPASS  230  1             187.89      0.70   f
   79039 HAYDEN    230        79091 WOLCOTTP  230  1             151.95     -6.49   t
   79046 MEEKER    138        79056 RIFLE CU  138  1              44.80     -0.72   t
   79048 MONTROSE  115        79034 GRANDJCT  115  1             -30.27      6.70   f
   79054 PONCHABR  230        70375 SAN LUIS  230  1              59.93    -13.28   f
   79059 RIFLE WA  230        70358 RIFLE PS  230  1              67.41    -27.77   t
   79059 RIFLE WA  230        79057 RIFLE CU  230  1              -0.88     52.97   f
   79174 MOLINA-L  115        79173 COLBRAN   115  1              -0.00      0.52   t
   79250 AMATLAS   230        70358 RIFLE PS  230  1              49.95     13.48   t
   73551 W CANON   230        70550 W CANON   115  1               5.48     19.61   f
from area  73 to area  70 PSCOLORADO                              742.86    -50.65

   79061 SHIP PS   230        79063 SHIPROCK  230  1             151.74    -44.67   t
   79260 ELPASOTP  115        79105 GLADETAP  115  1              26.06    -21.53   t
from area  73 to area  19 WAPA L.C.                               177.80    -66.20

   73229 YELLOWBR  230        63001 CROS PHA  230  1             -47.66      6.31   f
from area  73 to area  63 WAPA U.M.                               -47.66      6.31

Total from area  73 WAPA R.M.                                    1050.71   -213.44

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   63002 CRSOVRUM  230        62051 HARDIN    230  1             -80.11     -6.85   f
   63002 CRSOVRUM  230        62056 HUNTLEY   230  1             210.52    -14.15   f
   63008 HAVRE     161        62023 GT FALLS  161  1             -18.44     10.65   t
   63014 TIBERTAP  115        62027 SHELBY    115  1              -2.23     -0.25   t
   63015 VERONA    161        62024 RAINBOW   161  1             -16.71     10.86   t
from area  63 to area  62 MONTANA                                  93.04      0.26

   63001 CROS PHA  230        73229 YELLOWBR  230  1              47.66     -6.31   t
from area  63 to area  73 WAPA R.M.                                47.66     -6.31

Total from area  63 WAPA U.M.                                     140.69     -6.05
```

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Summation of selected system

	-----MW----	----MVAR---		
Generation	54246.543	3009.940	Generators	2550
Actual Load	45957.066	15412.540	Loads	6820
Net actual shunt	0.404	-164.144	Shunts	1294
Net actual svd	0.000	2278.113	Svd	589
Loss	2264.193	-14111.910	Buses	13167
			Lines	10968
			Transformers	5124
MVA-miles	4662905.0	1052995.6	DC buses	6
Miles	46968.402		DC converters	10
			DC lines	3

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area 54 [ALBERTA]

	-----MW----	----MVAR---		
Generation	6887.254	852.321	Generators	136
Actual Load	6274.402	1997.100	Loads	517
Net actual shunt	0.000	-21.744	Shunts	9
Net actual svd	0.000	-1195.582	Svd	76
Net Interchange	200.427	-19.236	Buses	989
Sched Interchange	200.000		Lines	782
Loss	412.425	91.791	Transformers	406
MVA-miles	1164664.4	291556.8	DC buses	0
Miles	18668.695		DC converters	0
			DC lines	0
Loss at 13.20 Kv	1.466	19.090		
Loss at 13.80 Kv	3.240	76.348		
Loss at 14.40 Kv	0.440	14.459		
Loss at 25.00 Kv	1.465	16.921		
Loss at 34.00 Kv	0.046	0.759		
Loss at 69.00 Kv	14.503	-22.350		
Loss at 138.00 Kv	157.628	-309.271		
Loss at 240.00 Kv	217.491	-426.243		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	16.147	722.078		
Largest mismatch MVA	0.0133	0.0354		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area 50 [B.C.HYDRO]

	-----MW----	----MVAR---		
Generation	8265.008	205.661	Generators	106
Actual Load	6035.052	2359.838	Loads	395
Net actual shunt	0.000	2931.001	Shunts	104
Net actual svd	0.000	2569.722	Svd	125
Net Interchange	1800.185	-357.156	Buses	1054
Sched Interchange	1800.000		Lines	719
Loss	429.773	-7297.745	Transformers	644
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.045	1.965		
Loss at 13.80 Kv	6.641	398.971		
Loss at 34.00 Kv	0.000	0.002		
Loss at 46.00 Kv	0.301	0.082		
Loss at 132.00 Kv	25.091	36.407		
Loss at 138.00 Kv	11.191	-136.189		
Loss at 230.00 Kv	39.342	-775.183		
Loss at 500.00 Kv	300.798	-7297.427		
Loss at other Kv	46.366	473.629		
Largest mismatch MVA	0.0376	0.0345		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area 60 [IDAHO]

-----MW---- ----MVAR---

Generation	3195.085	580.856	Generators	49
Actual Load	1955.000	501.300	Loads	64
Net actual shunt	0.000	-96.872	Shunts	2
Net actual svd	0.000	0.000	Svd	0
Net Interchange	1066.192	-384.955	Buses	156
Sched Interchange	1066.000		Lines	120
Loss	173.894	561.383	Transformers	96
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.271	5.818		
Loss at 13.80 Kv	1.179	44.320		
Loss at 14.40 Kv	0.391	15.230		
Loss at 34.50 Kv	0.000	0.000		
Loss at 100.00 Kv	0.990	89.776		
Loss at 115.00 Kv	0.439	0.374		
Loss at 138.00 Kv	14.852	-56.259		
Loss at 161.00 Kv	1.292	1.201		
Loss at 230.00 Kv	15.850	-295.791		
Loss at 345.00 Kv	133.624	593.174		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	5.008	163.540		
Largest mismatch MVA	0.0026	0.0065		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area 62 [MONTANA]

	-----MW----	----MVAR---		
Generation	4055.281	222.167	Generators	22
Actual Load	1207.745	524.807	Loads	200
Net actual shunt	0.404	-122.363	Shunts	56
Net actual svd	0.000	-5.538	Svd	11
Net Interchange	2701.279	-643.340	Buses	312
Sched Interchange	2701.000		Lines	318
Loss	145.852	253.545	Transformers	89
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	-0.000	39.369		
Loss at 69.00 Kv	0.528	1.655		
Loss at 100.00 Kv	14.372	-51.238		
Loss at 115.00 Kv	3.524	-14.642		
Loss at 161.00 Kv	13.693	-83.423		
Loss at 230.00 Kv	17.129	-149.782		
Loss at 500.00 Kv	94.818	250.862		
Loss at other Kv	1.788	260.745		
Largest mismatch MVA	0.0056	0.0347		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area 40 [NORTHWEST]

	-----MW----	----MVAR---		
Generation	16523.623	185.673	Generators	290
Actual Load	16651.566	5157.048	Loads	1663
Net actual shunt	0.000	-1710.640	Shunts	46
Net actual svd	0.000	2478.856	Svd	165
Net Interchange	-746.675	1336.328	Buses	2740
Sched Interchange	-747.000		Lines	2712
Loss	618.713	-6860.862	Transformers	632
MVA-miles	2992152.3	638605.8	DC buses	4
Miles	18402.309		DC converters	4
			DC lines	2
Loss at 11.00 Kv	-0.000	0.222		
Loss at 13.20 Kv	0.000	2.267		
Loss at 13.80 Kv	4.456	149.963		
Loss at 14.40 Kv	-0.000	0.000		
Loss at 25.00 Kv	3.298	174.345		
Loss at 34.50 Kv	0.069	-0.966		
Loss at 69.00 Kv	7.557	3.080		
Loss at 100.00 Kv	0.120	-0.223		
Loss at 115.00 Kv	131.137	-24.195		
Loss at 230.00 Kv	150.016	-744.817		
Loss at 345.00 Kv	6.793	-316.908		

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Loss at 500.00 Kv         254.802    -6961.260
Loss at other Kv           60.466      857.636

Largest mismatch MVA       0.0298       0.0575

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area  65 [PACE                           ]

                      -----MW----  ----MVAR---
Generation               5529.667      539.076        Generators           53
Actual Load              4749.998     1528.040        Loads               273
Net actual shunt            0.000     -527.637        Shunts               51
Net actual svd              0.000        0.000        Svd                   2
Net Interchange           590.372     -170.880        Buses               564
Sched Interchange         590.300                     Lines               408
Loss                      189.296     -290.439        Transformers        336

MVA-miles                     3.4          1.1        DC buses              0
Miles                       1.900                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           0.810       22.699
Loss at  34.50 Kv           1.010        7.104
Loss at  46.00 Kv           3.908       70.486
Loss at  69.00 Kv           0.729        8.207
Loss at 100.00 Kv           0.017        0.585
Loss at 115.00 Kv           2.782       -8.604
Loss at 138.00 Kv          40.489       34.916
Loss at 161.00 Kv           7.656      -25.727
Loss at 230.00 Kv          64.707      -99.131
Loss at 345.00 Kv          64.749     -359.372
Loss at other Kv            2.440       58.396

Largest mismatch MVA       0.0104       0.0526

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area  70 [PSCOLORADO                     ]

                      -----MW----  ----MVAR---
Generation               4236.393      623.745        Generators           46
Actual Load              4858.050     1835.016        Loads               358
Net actual shunt            0.000        0.000        Shunts                0
Net actual svd              0.000    -1397.672        Svd                  43
Net Interchange          -742.856       50.651        Buses               500
Sched Interchange        -743.800                     Lines               461
Loss                      121.208      135.773        Transformers        147

MVA-miles                 22713.9       6370.6        DC buses              0
Miles                     564.500                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           2.115       74.409
Loss at  14.40 Kv           0.081        0.808
Loss at  25.00 Kv           0.013        0.165
Loss at  46.00 Kv           0.190        0.001
Loss at  69.00 Kv           3.827      -11.931
Loss at 100.00 Kv           0.007       -0.107
Loss at 115.00 Kv          21.246     -103.635
Loss at 138.00 Kv           0.664       -3.665
Loss at 230.00 Kv          85.996      -45.848
Loss at 345.00 Kv           0.000        0.003
Loss at other Kv            7.070      225.571

Largest mismatch MVA       0.0058       0.0329

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area  64 [SIERRA                         ]

                      -----MW----  ----MVAR---
Generation               1069.541      -25.440        Generators           19
Actual Load              1075.167      280.355        Loads               115
Net actual shunt            0.000     -158.517        Shunts               23
Net actual svd              0.000       73.937        Svd                   5
Net Interchange           -36.028       18.947        Buses               275
Sched Interchange         -36.000                     Lines               197
Loss                       30.402     -240.176        Transformers        117

MVA-miles                 52041.8      27850.0        DC buses              0
```

Miles	1042.600		DC converters	0
			DC lines	0
Loss at 13.80 Kv	1.783	32.638		
Loss at 69.00 Kv	0.000	0.000		
Loss at 115.00 Kv	0.298	-7.509		
Loss at 230.00 Kv	0.926	-112.815		
Loss at 345.00 Kv	6.870	-183.812		
Loss at other Kv	20.526	31.322		
Largest mismatch MVA	0.0101	0.0144		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area 52 [W KOOTENAY]

	-----MW----	----MVAR---		
Generation	498.040	1.454	Generators	18
Actual Load	486.100	160.700	Loads	65
Net actual shunt	0.000	-79.145	Shunts	27
Net actual svd	0.000	-71.876	Svd	4
Net Interchange	0.569	-15.540	Buses	260
Sched Interchange	0.000		Lines	166
Loss	11.370	7.314	Transformers	116
MVA-miles	18563.9	6187.7	DC buses	0
Miles	1005.200		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.000	9.140		
Loss at 13.80 Kv	0.000	0.000		
Loss at 14.40 Kv	-0.000	22.037		
Loss at 25.00 Kv	0.000	0.000		
Loss at 138.00 Kv	0.104	-8.430		
Loss at 161.00 Kv	2.006	-19.736		
Loss at 230.00 Kv	0.699	-19.567		
Loss at other Kv	8.561	23.870		
Largest mismatch MVA	0.0009	0.0040		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area 73 [WAPA R.M.]

	-----MW----	----MVAR---		
Generation	3957.769	-177.227	Generators	74
Actual Load	2784.180	950.836	Loads	356
Net actual shunt	0.000	-299.277	Shunts	4
Net actual svd	0.000	-176.925	Svd	53
Net Interchange	1050.710	-213.439	Buses	620
Sched Interchange	1050.700		Lines	567
Loss	122.871	-438.454	Transformers	174
MVA-miles	412765.3	82423.6	DC buses	0
Miles	7283.200		DC converters	0
			DC lines	0
Loss at 13.80 Kv	3.825	48.754		
Loss at 34.50 Kv	0.149	2.098		
Loss at 69.00 Kv	3.015	-20.132		
Loss at 115.00 Kv	43.754	-233.436		
Loss at 138.00 Kv	3.385	-37.162		
Loss at 230.00 Kv	30.085	-347.593		
Loss at 345.00 Kv	34.287	-45.111		
Loss at other Kv	4.372	194.128		
Largest mismatch MVA	0.0055	0.0653		

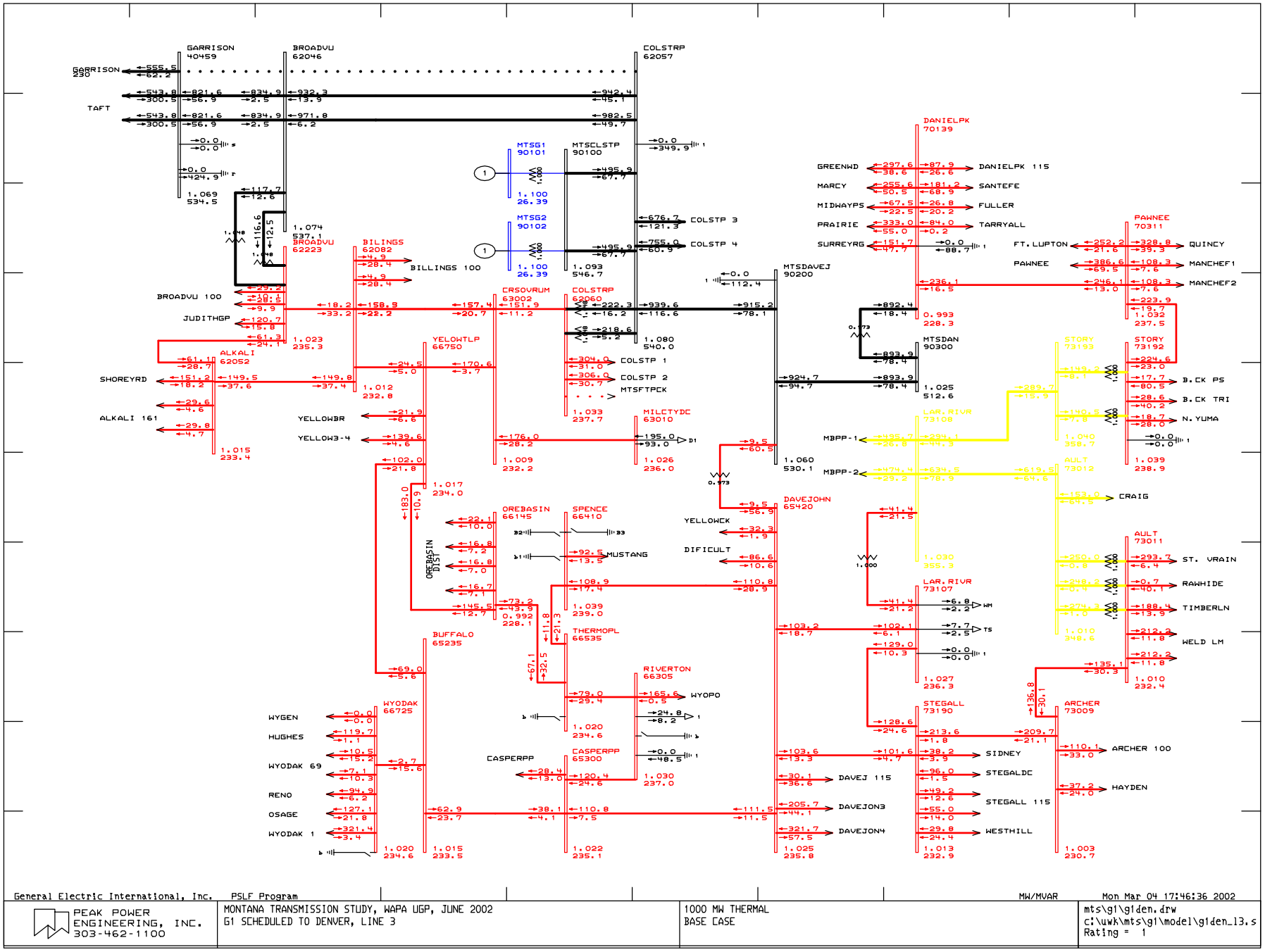
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SPOKANE, LINE 2

Area 63 [WAPA U.M.]

	-----MW----	----MVAR---		
Generation	28.882	1.654	Generators	1
Actual Load	-120.200	117.500	Loads	17
Net actual shunt	0.000	-78.951	Shunts	1
Net actual svd	0.000	3.190	Svd	4
Net Interchange	140.693	-6.045	Buses	21
Sched Interchange	141.000		Lines	12
Loss	8.388	-34.038	Transformers	3
MVA-miles	0.0	0.0	DC buses	0

Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.041	1.536		
Loss at 115.00 Kv	0.040	-6.857		
Loss at 161.00 Kv	0.576	-50.498		
Loss at 230.00 Kv	7.731	21.782		
Largest mismatch MVA	0.0001	0.0016		

B.6 denl3



General Electric International, Inc. PSLF Program MW/MVAR Mon Mar 04 17:46:36 2002

PEAK POWER ENGINEERING, INC. 303-462-1100

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

1000 MW THERMAL
BASE CASE

mts\g1\g1den.drw
c:\uwk\mts\g1\model\g1den_13.s
Rating = 1

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Percent Loading Summary -- using rating 1 - 100.0 percent of rating

----------from----------				---------- to ----------									rate	per cent	
--no.--	--name--	-kv-	-ar-	--no.--	--name--	-kv-	-ar-	ck	---mw---	-mvar-	-mva--	------	loading		
54611	RUTH LK8	69	54	54839	RUTH LK1	138	54	1	57.9	13.8	59.5	45.0M	132.3	T
64026	CARSON	120	64	64027	CARSON T	120	64	1	-56.1	-6.3	56.5	216.5A	131.7	F
55015	DOME EA9	14	54	55525	163ST2	240	54	T2	-57.3	-4.6	57.5	45.0M	128.6	T
64194	DAYTON	120	64	64254	DAYTON	25	64	1	16.6	6.5	17.8	14.0M	127.5	F
79026	FLAMGORG	138	73	79029	FLAMGORG	69	73	1	22.1	6.0	22.9	19.0M	120.4	F
64099	SPAN SPG	120	64	64114	TRACY	120	64	1	-127.9	-2.9	127.9	514.8A	118.5	F
64091	RENO	120	64	64263	RENO	25	64	1	50.3	20.5	54.3	46.7M	116.3	F
70249	LAJUNTAW	115	70	70250	LAJUNTAW	69	70	1	26.3	12.4	29.0	25.0M	116.1	F
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	1	50.2	20.3	54.2	46.7M	116.0	F
64091	RENO	120	64	64263	RENO	25	64	2	50.2	20.4	54.2	46.7M	116.0	F
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	2	47.8	19.3	51.6	46.7M	110.4	F
64202	HAN CRTP	120	64	64203	TWN CRTP	120	64	1	74.2	19.8	76.8	356.0A	109.1	F
64201	PINSN TP	120	64	64202	HAN CRTP	120	64	1	74.6	20.6	77.4	356.0A	109.1	F
64200	REDHOUSE	120	64	64201	PINSN TP	120	64	1	75.9	23.6	79.5	356.0A	109.0	T
64129	VALMY	120	64	64200	REDHOUSE	120	64	1	77.0	26.3	81.4	356.0A	108.7	T
54234	CASTLE R	138	54	55972	CASTLE-1	25	54	1	-50.0	21.0	54.2	50.0M	108.4	F
50459	KIT287	287	50	51075	KIT B5	13	50	5	80.3	24.1	83.8	79.0M	106.1	F
54232	PANCAN 9	138	54	55386	EMPRESS9	25	54	T1	15.7	1.0	15.7	15.0M	104.7	F
64114	TRACY	120	64	64118	TRACY G2	14	64	1	-82.5	-4.1	82.6	81.0M	104.0	T
48319	PLEASANT	115	40	48355	RATHDRUM	115	40	1	-84.1	-16.3	85.6	430.8A	103.5	F
43017	BEAVER	14	40	43021	BEAVER	230	40	1	356.8	44.1	359.6	348.0M	103.3	F
54052	BLUERIDG	138	54	55281	BLUERDGE	14	54	T1	20.8	15.2	25.7	25.0M	102.9	F
54154	E CALGAR	240	54	54189	ENMX2SD9	138	54	T1	234.1	-169.4	289.0	300.0M	102.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	12	155.0	-10.0	155.3	155.0M	101.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	34	155.0	-10.0	155.3	155.0M	101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	78	155.0	-10.0	155.3	155.0M	101.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	DE	155.0	-10.0	155.3	155.0M	101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	BC	155.0	-10.0	155.3	155.0M	101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	56	155.0	-10.0	155.3	155.0M	101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	9A	155.0	-10.0	155.3	155.0M	101.8	T
46733	LAGRND5	14	40	46735	LGBK5	115	40	1	40.0	6.8	40.6	40.0M	101.4	F
41304	COUGAR T	7	40	46211	COUGAR T	115	40	1	28.0	-8.3	29.2	30.0M	101.3	T

```
Processing file c:\uwk\mts\base\rvolthsbs.out
Processing file c:\uwk\mts\g1\rvoltdenl3.out

Compvolt found the following for comparisons:
     349 Voltage Violations read from c:\uwk\mts\base\rvolthsbs.out
     338 Voltage Violations read from c:\uwk\mts\g1\rvoltdenl3.out


**** VOLTS:  NEW ****
Component                   w/o Prj         w/ Prj  Rating
90200 MTSDAVEJ  500   0.95 <= pu <= 1.05    1.0601  1.00 pu kV

**** VOLTS: WORSE ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS: BETTER ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS:  AWAY ****
Component             w/o Prj      w/ Prj          Rating
50314 PVO133    132   1.0507  0.95 <= pu <= 1.05   1.00 pu kV
50330 LDR132    132   1.0504  0.95 <= pu <= 1.05   1.00 pu kV
50343 KSH132-2  132   1.0501  0.95 <= pu <= 1.05   1.00 pu kV
50346 SHA2      132   1.0504  0.95 <= pu <= 1.05   1.00 pu kV
50391 KSHTP14   132   1.0504  0.95 <= pu <= 1.05   1.00 pu kV
50394 SHATP14   132   1.0504  0.95 <= pu <= 1.05   1.00 pu kV
50691 NIC230    230   1.0502  0.95 <= pu <= 1.05   1.00 pu kV
62033 ANA BPA   115   1.0568  0.95 <= pu <= 1.05   1.00 pu kV
40485 GREEN PT  115   1.0520  0.95 <= pu <= 1.05   1.00 pu kV
45337 WEED JPS  115   1.0507  0.95 <= pu <= 1.05   1.00 pu kV
```

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

overvoltage summary > 1.100000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54090	BICKERD4	240	1.1047	54153	BRAZEAU4	240	1.1053	54329	KEEPHIL4	240	1.1116
54524	GENESEE4	240	1.1086	54681	NEVIS 7	138	1.1101	54802	STURGEO9	138	1.1003
55969	770S701T	138	1.1052	51017	KMS230	230	1.1079				

overvoltage summary > 1.050000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
90200	MTSDAVEJ	500	1.0601	54012	FOX CREE	138	1.0510	54013	KAYBOB 9	138	1.0517
54014	GULF RO9	138	1.0592	54021	WESGEN 7	138	1.0507	54050	RBCUPIL7	138	1.0507
54054	LAMOURE4	240	1.0795	54073	IPPL ST9	138	1.0575	54077	BIGSTON4	240	1.0600
54078	CHEVRON7	138	1.0515	54081	METIS644	240	1.0853	54082	BICKERD7	138	1.0557
54090	BICKERD4	240	1.1047	54097	BIG HOR9	138	1.0817	54098	STRACHA9	138	1.0577
54103	DEERLAN4	240	1.0820	54121	ELLERSLI	240	1.0759	54125	SUNDANL9	138	1.0543
54126	WABAMUN4	240	1.0869	54128	SUNDANM9	240	1.0965	54129	E EDMON4	240	1.0708
54130	N CALDE4	240	1.0645	54131	N BARRH4	240	1.0836	54139	GAETZ 4	240	1.0597
54141	HIGHVAL9	138	1.0538	54142	WILLESD4	240	1.0961	54144	RED DEE4	240	1.0636
54147	BENALTO4	240	1.0767	54148	E CROSS4	240	1.0585	54150	LANGDON2	500	1.0533
54152	JANET 4	240	1.0533	54153	BRAZEAU4	240	1.1053	54157	PEIGAN 4	240	1.0748
54159	N LETHB4	240	1.0648	54184	SARCEE 7	138	1.0530	54195	RUNDLE S	138	1.0504
54223	WARE JCT	240	1.0511	54249	RP05103S	138	1.0669	54261	SPRAY S	138	1.0508
54269	COALSPU7	138	1.0609	54281	MILO 2	240	1.0605	54285	LEISMER9	240	1.0749
54287	GREGG R9	138	1.0701	54302	MARIONA9	138	1.0540	54325	CHEV KG9	138	1.0515
54326	COAL VA9	138	1.0582	54329	KEEPHIL4	240	1.1116	54335	W BROOK4	240	1.0550
54384	ENMX28S9	138	1.0523	54412	BENBOW 9	138	1.0517	54441	946/947X	240	1.0759
54444	SPRINGB9	138	1.0505	54505	JASPER 4	240	1.0658	54506	BELLAMY4	240	1.0757
54509	ARGYLL W	240	1.0758	54512	DOME T29	240	1.0764	54513	LAMBTON4	240	1.0705
54514	CLOVERB4	240	1.0694	54518	ARGYLL E	240	1.0760	54519	CASTLTX2	240	1.0705
54521	PETROLIA	240	1.0746	54524	GENESEE4	240	1.1086	54542	RBW LAK7	138	1.0505
54546	CHINCHA7	138	1.0575	54547	KEG RVR7	138	1.0561	54548	KEMP RV9	138	1.0578
54549	HOTCHKS7	138	1.0596	54552	CADOTTE9	138	1.0585	54553	NORCEN 9	138	1.0552
54554	LUBICON7	138	1.0582	54555	CRANBER9	138	1.0591	54558	WESLY C7	138	1.0791
54559	CARMON 9	138	1.0767	54560	PEACE/29	138	1.0753	54561	DIASHOW7	138	1.0736
54589	DOME CU7	138	1.0672	54593	DONNELL9	138	1.0669	54594	TAP7L487	138	1.0686
54595	TRIANGL7	138	1.0619	54596	VALLEYV9	138	1.0782	54600	L.SMOKY7	138	1.0848
54601	STURGEO7	138	1.0844	54606	SIMONET9	138	1.0846	54607	FOXCRK/2	138	1.0515
54608	GOOSE R9	138	1.0666	54612	RUTH LA7	138	1.0600	54613	RUTH LK7	138	1.0603
54618	PARS CR7	138	1.0508	54621	MITS E.4	240	1.0565	54622	MITS E.7	138	1.0892
54623	AEC MILL	138	1.0881	54624	OTAUWAU7	138	1.0890	54633	LOU CR.7	138	1.0570
54634	SARHLK/2	138	1.0511	54636	ESSO JU7	138	1.0519	54637	MORSE RV	138	1.0524
54639	VIRGINI9	138	1.0529	54643	WOLF LK9	138	1.0708	54646	MARG LK4	240	1.0740
54647	MARG LK7	138	1.0861	54648	LACOREY9	138	1.0682	54652	BONNY 9	138	1.0543
54654	BONN SVC	138	1.0543	54655	WHITFISH	240	1.0857	54675	PAINTRT7	240	1.0896
54680	NEVIS 4	240	1.0748	54681	NEVIS 7	138	1.1101	54685	3HILLS/3	138	1.0581
54691	MICH. C9	138	1.0735	54693	WINT HI9	138	1.0749	54694	BULLPON9	138	1.0750
54707	SHEER 14	240	1.0625	54709	ANDERSO4	240	1.0630	54710	ANDERSON	138	1.0850
54711	SHEER 24	240	1.0625	54715	BAT. RV7	138	1.0821	54721	BAT RV79	240	1.0926
54723	CORDEL 4	240	1.0926	54729	PRIM TAP	138	1.0652	54730	PRIMROSE	138	1.0712
54796	791S701T	138	1.0628	54802	STURGEO9	138	1.1003	54806	946/947N	240	1.0708
54809	732S901T	240	1.0667	54818	VERMILA9	138	1.0797	54822	766S901T	240	1.0628
54823	NEVIS 9	138	1.0878	54835	791S702T	138	1.0631	54836	MILNERB9	138	1.0779

54844	709S702T	138	1.0731	54847	BAT RV80	240	1.0926	54848	791S703T	138	1.0530
54962	KAYBOBTP	138	1.0517	54963	CANMORE9	138	1.0506	54978	EAST IN4	240	1.0705
54983	MARION T	138	1.0541	54984	HIGHVL T	138	1.0538	54988	CROSSF T	240	1.0585
54995	W.GRN TP	240	1.0961	55012	BASSET 7	138	1.0562	55013	HAIGRIVE	138	1.0572
55067	FTNELSON	138	1.0665	55072	SYNC_D04	240	1.0563	55073	AURORA 4	240	1.0619
55075	SEAL LK9	138	1.0643	55147	MILNERC9	138	1.0880	55226	WABASCA9	240	1.0532
55272	FIELDGA9	138	1.0513	55280	BRINTNEL	240	1.0504	55515	PRIMROSE	138	1.0564
55763	BC BORDE	138	1.0627	55891	904AL TP	240	1.0705	55894	SARCEE M	138	1.0512
55912	740L JNC	138	1.0609	55913	G.ROBB T	138	1.0600	55924	CH KGT T	138	1.0515
55943	MILO 1	240	1.0605	55969	770S701T	138	1.1052	50010	COM132	132	1.0721
50020	CMS230	230	1.0500	50036	RBW230	230	1.0548	50037	PEM230	230	1.0585
50038	RBW230-1	230	1.0533	50182	ARN132	132	1.0818	50185	ALZ230	230	1.0517
50186	ROS230	230	1.0617	50187	BRT230	230	1.0697	50188	BUT230	230	1.0500
50193	BRT360	360	1.0500	50313	VIT132	132	1.0511	50315	PVO132	132	1.0505
50323	DMR132	132	1.0543	50331	GLD132	132	1.0514	50334	KGH132	132	1.0523
50335	UTA132	132	1.0526	50342	SCA132	132	1.0500	50347	GOW132	132	1.0508
50348	GTP132	132	1.0543	50349	CLD132	132	1.0560	50350	SOO132	132	1.0567
50351	JOR132	132	1.0603	50352	PML132	132	1.0512	50353	WOS132	132	1.0531
50354	GLSTP17	132	1.0554	50355	GLSTP18	132	1.0541	50356	DND132	132	1.0512
50395	SALTP17	132	1.0540	50396	SALTP18	132	1.0542	50447	TKW138	138	1.0533
50463	SKA500	500	1.0631	50464	TKW500	500	1.0687	50540	GMS230	230	1.0548
50541	KDS230	230	1.0543	50545	BLW230	230	1.0654	50546	SCK230	230	1.0596
50547	HMH230	230	1.0579	50548	BLM230	230	1.0587	50549	QNT230	230	1.0579
50550	QRP230	230	1.0651	50551	TLR230	230	1.0585	50553	BCR230	230	1.0585
50554	RBF230	230	1.0663	50556	LAP230	230	1.0569	50557	SNK230	230	1.0589
50558	GMS500	500	1.0500	50560	KDS500	500	1.0618	50561	WSN500	500	1.0500
50562	GLN500	500	1.0679	50653	NIC138	138	1.0526	50655	VVW138	138	1.0507
50656	SVA138	138	1.0518	50659	BDM138	138	1.0510	50660	WGS138	138	1.0609
50661	MON138	138	1.0581	50672	BKL138	138	1.0516	50679	BLU138	138	1.0535
50680	VLM138	138	1.0587	50686	SCO138	138	1.0677	50687	ABA138	138	1.0582
50700	MCA500	500	1.0500	50701	REV500	500	1.0500	50729	PRI138TP	138	1.0677
50776	NTL138	138	1.0539	50783	SEL230	230	1.0590	50785	SEV230	230	1.0581
50792	SEL500	500	1.0500	50899	ABA138TP	138	1.0582	50902	BDM138TP	138	1.0510
50922	DNDTAP	132	1.0519	50923	HSY-PH	132	1.0546	50924	ESQ-PH	132	1.0512
50928	SCG IPP	132	1.0680	50934	JULTP130	132	1.0523	51017	KMS230	230	1.1079
51045	ALH230	230	1.0579	60085	BRIDGER	345	1.0500	60240	MIDPOINT	500	1.0686
90100	MTSCLSTP	500	1.0935	62012	TOWN2	500	1.0928	62013	TOWN1	500	1.0928
62046	BROADVU	500	1.0742	62053	BROADV&2	500	1.0684	62054	BROADV&1	500	1.0691
62057	COLSTRP	500	1.0800	40045	ALLSTON	500	1.0727	40051	ALVEY	500	1.0826
40061	ASHE	500	1.0800	40091	BELL BPA	500	1.0619	40111	BIG EDDY	500	1.0768
43049	BOARD F	500	1.0840	40139	BONNVILE	115	1.0500	47013	BRIDGPRT	115	1.0537
40155	BUCKLEY	500	1.0778	45029	BURNS	500	1.0548	45035	CAPTJACK	500	1.0769
46209	CARMEN	115	1.0612	41311	CELILO1	500	1.0767	41312	CELILO2	500	1.0767
40233	CHIEF JO	500	1.0800	40287	COULEE	500	1.0810	40302	COVINGT4	500	1.0753
40306	COVINGT5	500	1.0759	43115	COYO M1	500	1.0556	43123	COYOTE	500	1.0846
45095	DIXONVLE	500	1.0823	40369	DWORSHAK	500	1.0709	40381	ECHOLAKE	500	1.0785
40451	GAR1EAST	500	1.0842	40453	GAR2EAST	500	1.0842	40459	GARRISON	500	1.0689
40489	GRIZZLY	500	1.0744	40499	HANFORD	500	1.0817	40521	HATWAI	500	1.0696
45137	HERMIST	230	1.0509	41212	HILLS CR	115	1.0500	40553	HOT SPR	500	1.0687
40585	JOHN DAY	500	1.0850	40601	KEELER	500	1.0829	45262	KFALLS	500	1.0800
40629	LANE	500	1.0723	40665	LIT GOOS	500	1.0800	40679	LOW GRAN	500	1.0800
40683	LOW MON	500	1.0800	40687	MALIN	500	1.0754	40693	MAPLE VL	500	1.0775
40699	MARION	500	1.0815	40711	MCLOUGLN	500	1.0705	40721	MCNARY	345	1.0510
40723	MCNARY	500	1.0799	45197	MERIDINP	500	1.0796	40749	MONROE	500	1.0795
40797	OLYMPIA	500	1.0791	40809	OSTRNDER	500	1.0729	40821	PAUL	500	1.0800

40827	PEARL	500	1.0801	40837	PONDROSA	500	1.0795	40869	RAVER	500	1.0797
43485	ROUND BU	500	1.0710	40913	SACJAWEA	500	1.0754	40917	SACJWA T	500	1.0767
40941	SANTIAM	500	1.0807	40949	SATSOP	500	1.0799	40957	SCHULTZ	500	1.0844
40973	SICKLER	500	1.0795	40989	SLATT	500	1.0811	41043	SUMMER L	500	1.0781
45289	SWIFT	230	1.0500	41051	TACOMA	500	1.0794	41057	TAFT	500	1.0786
41095	TROUTDAL	500	1.0649	41113	VANTAGE	500	1.0751	47099	WELLS	115	1.0628
66225	PINTO	345	1.0511	66235	PINTO PS	345	1.0502	52226	PRI138	138	1.0677
52229	KER138	138	1.0714	52230	HED138	138	1.0703	52426	MAS138	138	1.0703
52815	PRI-T2	138	1.0685								

undervoltage summary < 0.900000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)

undervoltage summary < 0.950000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
50781	NTL VR	138	0.9499	48069	CHESTER	115	0.9429	48165	IRVIN	115	0.9471
48310	OPORTUNE	115	0.9476	48299	OPPORTUN	115	0.9450	48306	OTIS	230	0.9366
70249	LAJUNTAW	115	0.9328	64072	MEYERS	120	0.9483	64092	RND HILL	120	0.9465
64102	STATELIN	120	0.9456	64203	TWN CRTP	120	0.9452				

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

	generation capacity	generation on-line	load categories power	load categories current	load categories imped.	shunt	-- svd --	net inter	losses	slack bus
area name ALBERTA										
mw	10743.6	7862.7	7899.2	0.0	0.0	0.0	0.0	-399.4	363.0	59.3
54 mvar	4916.5	857.3	2641.0	0.0	0.0	-22.5	-1851.8	-37.1	127.7	11.7
area name B.C.HYDRO										
mw	14693.0	10252.3	6889.1	0.0	0.0	0.0	0.0	2849.8	513.4	198.7
50 mvar	6719.0	945.7	2565.8	0.0	0.0	2956.2	2142.1	-273.5	-6444.8	9.3
area name IDAHO										
mw	4676.4	4111.3	2984.0	0.0	0.0	0.0	0.0	919.9	207.4	144.0
60 mvar	2192.5	458.7	711.6	0.0	0.0	-595.5	0.0	-304.2	646.8	0.7
area name MONTANA										
mw	4502.2	3948.7	1422.9	0.0	0.0	0.3	0.0	2368.2	157.3	736.7
62 mvar	1929.0	643.4	610.2	0.0	0.0	-120.8	425.1	-388.7	229.9	204.4
area name NORTHWEST										
mw	43502.3	27341.3	22671.3	0.0	0.0	0.0	0.0	3514.2	1155.8	579.3
40 mvar	15475.0	3860.9	6850.3	0.0	0.0	-1861.3	-4063.7	1044.1	1891.5	31.5
area name PACE										
mw	6212.0	5584.7	6293.7	0.0	0.0	0.0	0.0	-980.9	271.9	163.7
65 mvar	3201.9	695.9	1960.1	0.0	0.0	-1763.0	-48.5	-126.3	561.1	31.7
area name PSCOLORADO										
mw	5806.0	4186.3	6332.7	0.0	0.0	0.0	0.0	-2331.3	184.9	90.7
70 mvar	3667.3	1448.2	2372.6	0.0	0.0	0.0	-1657.8	443.5	289.9	35.6
area name SIERRA										
mw	1901.7	1376.0	1719.1	0.0	0.0	0.0	0.0	-399.0	55.9	110.0
64 mvar	925.4	127.2	458.7	0.0	0.0	-187.9	69.5	58.3	-271.3	24.3
area name W KOOTENAY										
mw	763.5	596.5	722.4	0.0	0.0	0.0	0.0	-150.5	24.6	104.6
52 mvar	450.0	99.2	210.2	0.0	0.0	-77.9	-130.7	-8.8	106.4	25.1
area name WAPA R.M.										
mw	6091.6	5378.7	3608.3	0.0	0.0	0.0	0.0	1612.2	158.3	496.3
73 mvar	2883.8	158.8	1237.0	0.0	0.0	-296.0	-278.1	-434.8	-69.4	55.5

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

		generation capacity	generation on-line	--- load categories ---- power	current	imped.	shunt	-- svd	-- inter	net losses	slack bus
area name		WAPA U.M.									
	mw	61.8	55.8	-102.1	0.0	0.0	0.0	0.0	146.8	11.0	55.8
63	mvar	34.0	6.6	123.6	0.0	0.0	-79.0	-16.6	-33.2	11.7	6.6
TOTL	mw	98954.1	70694.4	60440.6	0.0	0.0	0.3	0.0	7150.0	3103.5	
	mvar	42394.4	9301.8	19741.2	0.0	0.0	-2047.5	-5410.5	-60.7	-2920.6	

Area Interchange Summary

		mw	mvar
FROM AREA	54 ALBERTA		
TO AREA	50 B.C.HYDRO	-399.4	-37.1
TOTAL		-399.4	-37.1
FROM AREA	50 B.C.HYDRO		
TO AREA	54 ALBERTA	399.4	37.1
TO AREA	40 NORTHWEST	2299.8	-319.4
TO AREA	52 W KOOTENAY	150.5	8.8
TOTAL		2849.8	-273.5
FROM AREA	60 IDAHO		
TO AREA	40 NORTHWEST	-71.4	-290.0
TO AREA	65 PACE	855.9	37.9
TO AREA	64 SIERRA	135.4	-52.1
TOTAL		919.9	-304.2
FROM AREA	62 MONTANA		
TO AREA	40 NORTHWEST	1158.6	-376.2
TO AREA	65 PACE	1188.3	-17.6
TO AREA	63 WAPA U.M.	21.4	5.1
TOTAL		2368.2	-388.7
FROM AREA	40 NORTHWEST		
TO AREA	50 B.C.HYDRO	-2299.8	319.4
TO AREA	60 IDAHO	71.4	290.0
TO AREA	26 LADWP	2806.7	607.2
TO AREA	62 MONTANA	-1158.6	376.2
TO AREA	30 PG AND E	3907.2	-499.5
TO AREA	64 SIERRA	187.4	-49.2
TOTAL		3514.2	1044.1
FROM AREA	65 PACE		
TO AREA	14 ARIZONA	-36.0	92.8
TO AREA	60 IDAHO	-855.9	-37.9
TO AREA	26 LADWP	-32.0	-163.7
TO AREA	62 MONTANA	-1188.3	17.6
TO AREA	18 NEVADA	251.2	-58.2
TO AREA	70 PSCOLORADO	924.7	-94.7
TO AREA	64 SIERRA	32.7	13.4
TO AREA	19 WAPA L.C.	42.3	31.7
TO AREA	73 WAPA R.M.	-119.7	72.6
TOTAL		-980.9	-126.3
FROM AREA	70 PSCOLORADO		
TO AREA	65 PACE	-924.7	94.7
TO AREA	73 WAPA R.M.	-1406.5	348.8
TOTAL		-2331.3	443.5
FROM AREA	64 SIERRA		
TO AREA	60 IDAHO	-135.4	52.1
TO AREA	26 LADWP	-47.2	1.8
TO AREA	40 NORTHWEST	-187.4	49.2
TO AREA	65 PACE	-32.7	-13.4

TO AREA	30 PG AND E	-9.2	-28.7
TO AREA	24 SOCALIF	12.8	-2.7
TOTAL		-399.0	58.3

FROM AREA	52 W KOOTENAY	mw	mvar
TO AREA	50 B.C.HYDRO	-150.5	-8.8
TOTAL		-150.5	-8.8

FROM AREA	73 WAPA R.M.	mw	mvar
TO AREA	10 NEW MEXICO	173.8	-16.8
TO AREA	65 PACE	119.7	-72.6
TO AREA	70 PSCOLORADO	1406.5	-348.8
TO AREA	19 WAPA L.C.	80.3	-24.6
TO AREA	63 WAPA U.M.	-168.2	28.0
TOTAL		1612.2	-434.8

FROM AREA	63 WAPA U.M.	mw	mvar
TO AREA	62 MONTANA	-21.4	-5.1
TO AREA	73 WAPA R.M.	168.2	-28.0
TOTAL		146.8	-33.2

AREA TIE LINE SUMMARY

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
54150	LANGDON2	500	50791	CBK500	500	1	-359.35	-36.34	f
54205	COLEMAN7	138	50776	NTL138	138	1	-14.11	-8.93	t
54273	POCATER7	138	50830	FRO T274	138	1	-25.97	8.19	t
from area 54 to area 50 B.C.HYDRO							-399.43	-37.07	
Total from area 54 ALBERTA							-399.43	-37.07	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
62004	ANACOND	230	40457	GARRISON	230	1	-200.84	-10.89	f
62004	ANACOND	230	40457	GARRISON	230	2	-216.83	-21.36	f
62009	RATTLE S	161	40867	RATTLE S	230	1	-122.70	-34.62	t
62012	TOWN2	500	40453	GAR2EAST	500	2	821.58	-150.71	t
62013	TOWN1	500	40451	GAR1EAST	500	1	821.58	-150.71	t
62066	KERR	115	40391	ELMO	115	1	1.22	-12.68	f
62072	OVANDO	230	40457	GARRISON	230	1	-37.16	17.22	t
62072	OVANDO	230	40551	HOT SPR	230	1	32.51	11.65	t
62085	CROWCR B	115	48055	BURKAVAB	115	1	26.52	-11.64	t
62086	THOMSON	115	48053	BURKAVAA	115	1	32.70	-12.43	t
from area 62 to area 40 NORTHWEST							1158.57	-376.17	
62030	PTRSNFLT	230	65025	AMPS	230	1	217.43	-53.88	t
62045	BLGS PHA	230	66750	YELOWTLP	230	1	-24.53	5.05	t
62057	COLSTRP	500	90200	MTSDAVEJ	500	1	915.23	78.09	t
62061	RMRK PHA	161	66755	YELOWTLP	161	1	-16.61	-3.06	f
62084	DILLON S	161	65155	BIGGRASS	161	1	96.76	-43.84	t
from area 62 to area 65 PACE							1188.28	-17.65	
62023	GT FALLS	161	63008	HAVRE	161	1	13.91	-12.23	f
62024	RAINBOW	161	63015	VERONA	161	1	12.83	-11.99	f
62027	SHELBY	115	63014	TIBERTAP	115	1	0.10	-2.55	f
62051	HARDIN	230	63002	CRSOVRUM	230	1	151.95	11.24	t
62056	HUNTLEY	230	63002	CRSOVRUM	230	1	-157.39	20.66	t
from area 62 to area 63 WAPA U.M.							21.40	5.14	
Total from area 62 MONTANA							2368.25	-388.67	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
40145	BOUNDARY	230	50822	NLYPHS	230	1	-290.55	-3.44	f
40323	CUSTER W	500	50194	ING500	500	1	-1013.04	162.22	t
40323	CUSTER W	500	50194	ING500	500	2	-996.25	160.60	t
from area 40 to area 50 B.C.HYDRO							-2299.84	319.39	
45029	BURNS	500	60240	MIDPOINT	500	1	-233.01	366.60	t
45103	ENTERPRS	230	60150	HELLSCYN	230	1	28.01	-35.72	f
40507	HARNEY	115	61826	HINES	115	1	-13.49	15.72	f
40621	LAGRANDE	230	60192	LADD	230	1	69.71	-29.11	f
48197	LOLO	230	60278	IMNAHA	230	1	220.19	-27.48	t
from area 40 to area 60 IDAHO							71.41	290.02	
41311	CELILO1	500	26097	SYLMAR1	230	1	529.59	58.93	f
41313	CELILO3	230	26098	SYLMAR3	230	1	873.74	244.48	f
41312	CELILO2	500	26099	SYLMAR2	230	1	529.59	58.86	f
41314	CELILO4	230	26100	SYLMAR4	230	1	873.74	244.92	f
from area 40 to area 26 LADWP							2806.66	607.19	
48053	BURKAVAA	115	62086	THOMSON	115	1	-32.70	12.43	f
48055	BURKAVAB	115	62085	CROWCR B	115	1	-26.52	11.64	f
40391	ELMO	115	62066	KERR	115	1	-1.22	12.68	t
40451	GAR1EAST	500	62013	TOWN1	500	1	-821.58	150.71	f
40453	GAR2EAST	500	62012	TOWN2	500	2	-821.58	150.71	f
40457	GARRISON	230	62072	OVANDO	230	1	37.16	-17.22	f
40457	GARRISON	230	62004	ANACOND	230	1	200.84	10.89	t
40457	GARRISON	230	62004	ANACOND	230	2	216.83	21.36	t
40551	HOT SPR	230	62072	OVANDO	230	1	-32.51	-11.65	f
40867	RATTLE S	230	62009	RATTLE S	161	1	122.70	34.62	f
from area 40 to area 62 MONTANA							-1158.57	376.17	
45035	CAPTJACK	500	30020	OLINDA	500	1	1381.19	-222.61	f
45087	DELTA	115	31468	CASCADE	115	1	71.52	-15.32	f

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   40687 MALIN     500        30005 ROUND MT  500  1            1221.80   -121.80   f
   40687 MALIN     500        30005 ROUND MT  500  2            1232.64   -139.78   f
from area  40 to area  30 PG AND E                              3907.16   -499.51

   40537 HIL TOP   230        64058 HIL TOP   345  1             187.36    -49.19   f
from area  40 to area  64 SIERRA                                 187.36    -49.19

Total from area  40 NORTHWEST                                   3514.18   1044.06

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   66235 PINTO PS  345        14101 FOURCORN  345  1             -36.00     92.76   t
from area  65 to area  14 ARIZONA                                -36.00     92.76

   65075 ANTLOPE   230        60073 BRADY     230  1             108.30    -41.83   f
   65135 BENLOMND  345        60060 BORAH     345  1            -349.52     17.60   t
   65220 BRIDGER   230        60085 BRIDGER   345  1             -45.90     -7.04   t
   65220 BRIDGER   230        60085 BRIDGER   345  2             -46.66     -7.14   t
   65220 BRIDGER   230        60085 BRIDGER   345  3             -45.90     -7.04   t
   65665 GOSHEN    345        60085 BRIDGER   345  1            -589.18    -58.31   f
   65665 GOSHEN    345        60190 KINPORT   345  1             221.32     27.43   t
   65670 GOSHEN    161        60030 BLACKFT   161  1             100.79     11.40   f
   65920 MALAD     138        60020 AMFLS     138  1             -66.74      2.45   t
   66565 TREASTON  230        60073 BRADY     230  1            -142.42     24.62   t
from area  65 to area  60 IDAHO                                 -855.92    -37.86

   65995 MONA      345        26043 INTERMT   345  1             -16.00    -81.83   f
   65995 MONA      345        26043 INTERMT   345  2             -16.00    -81.83   f
from area  65 to area  26 LADWP                                  -32.00   -163.66

   90200 MTSDAVEJ  500        62057 COLSTRP   500  1            -915.23    -78.09   f
   65025 AMPS      230        62030 PTRSNFLT  230  1            -217.43     53.88   f
   65155 BIGGRASS  161        62084 DILLON S  161  1             -96.76     43.84   f
   66750 YELOWTLP  230        62045 BLGS PHA  230  1              24.53     -5.05   f
   66755 YELOWTLP  161        62061 RMRK PHA  161  1              16.61      3.06   t
from area  65 to area  62 MONTANA                               -1188.28     17.65

   66280 REDBUTTE  345        18002 HA PS     345  1             251.22    -58.18   f
from area  65 to area  18 NEVADA                                 251.22    -58.18

   90200 MTSDAVEJ  500        90300 MTSDAN    500  1             924.74    -94.75   f
from area  65 to area  70 PSCOLORADO                             924.74    -94.75

   66210 PAVANT    230        64124 UTAH-NEV  230  1              32.71     13.35   t
from area  65 to area  64 SIERRA                                  32.71     13.35

   66355 SIGURDPS  230        79031 GLENCANY  230  1              42.34     31.72   t
from area  65 to area  19 WAPA L.C.                               42.34     31.72

   65060 ANT MINE  230        73276 TEKLA     230  1              26.26     19.15   f
   65085 ASHLEY    138        79067 VERNAL    138  1             -80.24      5.95   t
   65192 BONANZA   138        79067 VERNAL    138  1              47.52      6.30   t
   65193 BONANZA   345        79005 BEARS     345  1            -337.33     -0.35   f
   65305 CASPERPP  115        73167 REFNRYTP  115  1             -33.76     -4.58   f
   65305 CASPERPP  115        73042 CASPERLM  115  1              -2.63     -5.36   t
   65420 DAVEJOHN  230        73107 LAR.RIVR  230  1             103.23    -18.74   f
   65420 DAVEJOHN  230        73190 STEGALL   230  1             103.61    -13.33   f
   65425 DAVEJOHN  115        73070 GLENRCKN  115  1              73.57      2.79   f
   65425 DAVEJOHN  115        73071 GLENRCKS  115  1              84.73      6.72   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  1             -43.97      5.80   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  2             -43.97      5.80   f
   66278 RANGELY   138        79001 ARTESIA   138  1              -7.92     -5.03   f
   66278 RANGELY   138        79046 MEEKER    138  1              -5.94     -1.37   f
   66305 RIVERTON  230        73170 RIVERTON  115  1               5.96     10.43   f
   66535 THERMOPL  230        73197 THERMOPL  115  1              -0.02      9.27   t
   66540 THERPACE  115        73197 THERMOPL  115  1              12.04      8.62   t
   66720 WORLAND   115        73222 WORLANTP  115  1             -13.92      9.71   t
   66725 WYODAK    230        73148 OSAGE     230  1             125.75    -16.60   t
   66725 WYODAK    230        73168 RENO      230  1              94.92      6.21   f
   66725 WYODAK    230        73294 HUGHES    230  1             119.68     -1.05   f
   66725 WYODAK    230        73282 WYODAK     69  1             -10.50     15.21   f
   66725 WYODAK    230        73282 WYODAK     69  2              -7.10     10.29   f
   66725 WYODAK    230        74016 WYGEN      14  1               0.00      0.00   f
   66750 YELOWTLP  230        73229 YELLOWBR  230  1            -329.67     16.81   t
from area  65 to area  73 WAPA R.M.                              -119.71     72.64

Total from area  65 PACE                                         -980.90   -126.33

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter
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   90300 MTSDAN    500        90200 MTSDAVEJ  500  1            -924.74     94.75   t
from area  70 to area  65 PACE                                 -924.74     94.75

   70005 BRUSHCPP  115        73013 B.CK PS   115  1              95.65     29.74   f
   70005 BRUSHCPP  115        73013 B.CK PS   115  2             100.40     36.11   f
   70116 COBBLAKE  115        73044 COBBLKTP  115  1             -15.33     -1.44   f
   70122 COMANCHE  230        73477 FULLER    230  1              58.46     34.89   t
   70139 DANIELPK  230        73477 FULLER    230  1             -26.94     -6.22   t
   70193 FTN VALL  115        73412 MIDWAYBR  115  1              -6.72      1.69   t
   70205 GRANDJCT  230        79036 GRANDJCT  345  1             -52.65    -23.52   f
   70256 LAPORTPS  115        73105 LAPORTE   115  1             -14.73     -6.26   t
   70274 MALTA     230        73138 MT.ELBRT  230  1            -145.53      1.32   f
   70285 MIDWAYPS  115        73412 MIDWAYBR  115  1               2.47    -20.99   f
   70286 MIDWAYPS  230        73413 MIDWAYBR  230  1              89.11     91.82   t
   70287 MILL      115        73296 FRASER    115  1             -40.10     10.20   f
   70308 PALMER    115        73414 MONUMENT  115  1             -30.34     11.20   t
   70311 PAWNEE    230        73192 STORY     230  1            -224.61    -23.03   t
   70327 PONCHA    115        79037 GUNNISON  115  1             -25.04     10.66   f
   70350 RAWHIDE    24        73165 RAWHIDE   230  1             207.79     83.00   t
   70358 RIFLE PS  230        79059 RIFLE WA  230  1             -87.57      5.20   f
   70358 RIFLE PS  230        79250 AMATLAS   230  1             -75.90     -3.93   f
   70375 SAN LUIS  230        79054 PONCHABR  230  1             -83.39      5.36   t
   70410 ST.VRAIN  230        73116 LONGPEAK  230  1             -29.93     69.31   f
   70470 WELD  PS  115        73211 WELD  LM  115  1             -31.29     76.39   f
   70471 WELD  PS  230        73212 WELD  LM  230  1            -358.59     -7.63   f
   70474 WINDSOR   230        73011 AULT      230  1            -293.69      6.45   t
   70476 WOODLAND  115        73400 EMIL AND  115  1              19.99     -2.29   f
   70525 MTHARRIS  138        79038 HAYDEN    138  1              -7.21     -1.37   t
   79033 GOREPASS  230        79039 HAYDEN    230  1            -247.06    -15.73   t
   79033 GOREPASS  230        73072 GOREPASS  138  1               4.34      3.85   f
   79034 GRANDJCT  115        79048 MONTROSE  115  1              20.49     -3.98   t
   79056 RIFLE CU  138        79046 MEEKER    138  1             -20.80     -1.80   f
   79057 RIFLE CU  230        79059 RIFLE WA  230  1               7.50    -19.53   t
   79058 RIFLE CU  345        79014 CRAIG     345  1            -334.00     -1.34   f
   79058 RIFLE CU  345        79036 GRANDJCT  345  1             304.42     -6.47   f
   79091 WOLCOTTP  230        79039 HAYDEN    230  1            -176.67     -1.02   f
   79173 COLBRAN   115        79174 MOLINA-L  115  1              -0.00     -0.54   f
   70351 RAWHIDEA   14        73165 RAWHIDE   230  1              40.98     39.22   t
   70550 W CANON   115        73551 W CANON   230  1             -30.02    -20.56   t
from area  70 to area  73 WAPA R.M.                           -1406.53    348.78

Total from area  70 PSCOLORADO                                -2331.27    443.53

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   79060 SANJN PS  345        10292 SAN_JUAN  345  1             173.80    -16.83   t
from area  73 to area  10 NEW MEXICO                             173.80    -16.83

   73042 CASPERLM  115        65305 CASPERPP  115  1               2.63      5.36   f
   73070 GLENRCKN  115        65425 DAVEJOHN  115  1             -73.57     -2.79   t
   73071 GLENRCKS  115        65425 DAVEJOHN  115  1             -84.73     -6.72   t
   73107 LAR.RIVR  230        65420 DAVEJOHN  230  1            -103.23     18.74   t
   73148 OSAGE     230        66725 WYODAK    230  1            -125.75     16.60   f
   73167 REFNRYTP  115        65305 CASPERPP  115  1              33.76      4.58   t
   73168 RENO      230        66725 WYODAK    230  1             -94.92     -6.21   t
   73170 RIVERTON  115        66305 RIVERTON  230  1              -5.96    -10.43   t
   73190 STEGALL   230        65420 DAVEJOHN  230  1            -103.61     13.33   t
   73197 THERMOPL  115        66540 THERPACE  115  1             -12.04     -8.62   f
   73197 THERMOPL  115        66535 THERMOPL  230  1               0.02     -9.27   f
   73222 WORLANTP  115        66720 WORLAND   115  1              13.92     -9.71   f
   73229 YELLOWBR  230        66750 YELOWTLP  230  1             329.67    -16.81   f
   73276 TEKLA     230        65060 ANT MINE  230  1             -26.26    -19.15   t
   73282 WYODAK     69        66725 WYODAK    230  1              10.50    -15.21   t
   73282 WYODAK     69        66725 WYODAK    230  2               7.10    -10.29   t
   73294 HUGHES    230        66725 WYODAK    230  1            -119.68      1.05   t
   79001 ARTESIA   138        66278 RANGELY   138  1               7.92      5.03   t
   79005 BEARS     345        65193 BONANZA   345  1             337.33      0.35   t
   79026 FLAMGORG  138        65565 FLAMGORG  230  1              43.97     -5.80   t
   79026 FLAMGORG  138        65565 FLAMGORG  230  2              43.97     -5.80   t
   79046 MEEKER    138        66278 RANGELY   138  1               5.94      1.37   t
   79067 VERNAL    138        65085 ASHLEY    138  1              80.24     -5.95   f
   79067 VERNAL    138        65192 BONANZA   138  1             -47.52     -6.30   f
   74016 WYGEN      14        66725 WYODAK    230  1               0.00      0.00   t
from area  73 to area  65 PACE                                   119.71    -72.64

   73011 AULT      230        70474 WINDSOR   230  1             293.69     -6.45   f
   73013 B.CK PS   115        70005 BRUSHCPP  115  1             -95.65    -29.74   t
   73013 B.CK PS   115        70005 BRUSHCPP  115  2            -100.40    -36.11   t
   73044 COBBLKTP  115        70116 COBBLAKE  115  1              15.33      1.44   t
   73072 GOREPASS  138        79033 GOREPASS  230  1              -4.34     -3.85   t
   73105 LAPORTE   115        70256 LAPORTPS  115  1              14.73      6.26   f
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   73116 LONGPEAK  230        70410 ST.VRAIN  230  1             29.93    -69.31   t
   73138 MT.ELBRT  230        70274 MALTA     230  1            145.53     -1.32   t
   73165 RAWHIDE   230        70350 RAWHIDE    24  1           -207.79    -83.00   f
   73165 RAWHIDE   230        70351 RAWHIDEA   14  1            -40.98    -39.22   f
   73192 STORY     230        70311 PAWNEE    230  1            224.61     23.03   f
   73211 WELD  LM  115        70470 WELD  PS  115  1             31.29    -76.39   t
   73212 WELD  LM  230        70471 WELD  PS  230  1            358.59      7.63   t
   73296 FRASER    115        70287 MILL      115  1             40.10    -10.20   t
   73400 EMIL AND  115        70476 WOODLAND  115  1            -19.99      2.29   t
   73412 MIDWAYBR  115        70193 FTN VALL  115  1              6.72     -1.69   f
   73412 MIDWAYBR  115        70285 MIDWAYPS  115  1             -2.47     20.99   t
   73413 MIDWAYBR  230        70286 MIDWAYPS  230  1            -89.11    -91.82   f
   73414 MONUMENT  115        70308 PALMER    115  1             30.34    -11.20   f
   73477 FULLER    230        70122 COMANCHE  230  1            -58.46    -34.89   f
   73477 FULLER    230        70139 DANIELPK  230  1             26.94      6.22   f
   79014 CRAIG     345        79058 RIFLE CU  345  1            334.00      1.34   t
   79036 GRANDJCT  345        79058 RIFLE CU  345  1           -304.42      6.47   t
   79036 GRANDJCT  345        70205 GRANDJCT  230  1             52.65     23.52   t
   79037 GUNNISON  115        70327 PONCHA    115  1             25.04    -10.66   t
   79038 HAYDEN    138        70525 MTHARRIS  138  1              7.21      1.37   f
   79039 HAYDEN    230        79033 GOREPASS  230  1            247.06     15.73   f
   79039 HAYDEN    230        79091 WOLCOTTP  230  1            176.67      1.02   t
   79046 MEEKER    138        79056 RIFLE CU  138  1             20.80      1.80   t
   79048 MONTROSE  115        79034 GRANDJCT  115  1            -20.49      3.98   f
   79054 PONCHABR  230        70375 SAN LUIS  230  1             83.39     -5.36   f
   79059 RIFLE WA  230        70358 RIFLE PS  230  1             87.57     -5.20   t
   79059 RIFLE WA  230        79057 RIFLE CU  230  1             -7.50     19.53   f
   79174 MOLINA-L  115        79173 COLBRAN   115  1              0.00      0.54   t
   79250 AMATLAS   230        70358 RIFLE PS  230  1             75.90      3.93   t
   73551 W CANON   230        70550 W CANON   115  1             30.02     20.56   f
from area  73 to area  70 PSCOLORADO                           1406.53   -348.78

   79061 SHIP PS   230        79063 SHIPROCK  230  1             81.92    -15.01   t
   79260 ELPASOTP  115        79105 GLADETAP  115  1             -1.58     -9.59   t
from area  73 to area  19 WAPA L.C.                              80.34    -24.60

   73229 YELLOWBR  230        63001 CROS PHA  230  1           -168.24     28.03   f
from area  73 to area  63 WAPA U.M.                            -168.24     28.03

Total from area  73 WAPA R.M.                                  1612.15   -434.82

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   63002 CRSOVRUM  230        62051 HARDIN    230  1           -151.95    -11.24   f
   63002 CRSOVRUM  230        62056 HUNTLEY   230  1            157.39    -20.66   f
   63008 HAVRE     161        62023 GT FALLS  161  1            -13.91     12.23   t
   63014 TIBERTAP  115        62027 SHELBY    115  1             -0.10      2.55   t
   63015 VERONA    161        62024 RAINBOW   161  1            -12.83     11.99   t
from area  63 to area  62 MONTANA                               -21.40     -5.14

   63001 CROS PHA  230        73229 YELLOWBR  230  1            168.24    -28.03   t
from area  63 to area  73 WAPA R.M.                             168.24    -28.03

Total from area  63 WAPA U.M.                                   146.84    -33.16
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MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Summation of selected system

	-----MW----	----MVAR---		
Generation	70694.398	9301.824	Generators	2564
Actual Load	60440.602	19741.215	Loads	6822
Net actual shunt	0.309	-2047.505	Shunts	1297
Net actual svd	0.000	-5410.523	Svd	587
Loss	3103.499	-2920.567	Buses	13198
			Lines	10963
			Transformers	5151
MVA-miles	6326799.0	974795.5	DC buses	6
Miles	46985.316		DC converters	10
			DC lines	3

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area 54 [ALBERTA]

	-----MW----	----MVAR---		
Generation	7862.734	857.315	Generators	142
Actual Load	7899.199	2641.000	Loads	512
Net actual shunt	0.000	-22.487	Shunts	9
Net actual svd	0.000	-1851.842	Svd	76
Net Interchange	-399.433	-37.073	Buses	992
Sched Interchange	-400.000		Lines	781
Loss	362.966	127.720	Transformers	406
MVA-miles	1111697.8	226107.3	DC buses	0
Miles	18637.697		DC converters	0
			DC lines	0
Loss at 13.20 Kv	1.733	25.322		
Loss at 13.80 Kv	3.367	88.112		
Loss at 14.40 Kv	0.019	2.275		
Loss at 25.00 Kv	1.931	27.273		
Loss at 34.00 Kv	0.053	0.877		
Loss at 69.00 Kv	18.966	-3.351		
Loss at 138.00 Kv	151.493	-263.388		
Loss at 240.00 Kv	167.690	-572.741		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	17.714	823.339		
Largest mismatch MVA	0.0175	0.0661		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area 50 [B.C.HYDRO]

	-----MW----	----MVAR---		
Generation	10252.261	945.729	Generators	112
Actual Load	6889.125	2565.790	Loads	395
Net actual shunt	0.000	2956.192	Shunts	104
Net actual svd	0.000	2142.081	Svd	125
Net Interchange	2849.760	-273.484	Buses	1054
Sched Interchange	2849.900		Lines	718
Loss	513.373	-6444.849	Transformers	645
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.307	7.918		
Loss at 13.80 Kv	10.054	491.625		
Loss at 34.00 Kv	0.000	0.002		
Loss at 46.00 Kv	0.302	0.084		
Loss at 132.00 Kv	37.164	107.801		
Loss at 138.00 Kv	15.101	-120.800		
Loss at 230.00 Kv	53.024	-615.070		
Loss at 500.00 Kv	340.160	-6982.992		
Loss at other Kv	57.260	666.582		
Largest mismatch MVA	0.0342	0.0264		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area 60 [IDAHO]

	-----MW----	----MVAR---

Generation	4111.303	458.658	Generators	62
Actual Load	2984.000	711.600	Loads	64
Net actual shunt	0.000	-595.502	Shunts	15
Net actual svd	0.000	0.000	Svd	0
Net Interchange	919.908	-304.238	Buses	157
Sched Interchange	920.000		Lines	120
Loss	207.395	646.798	Transformers	96
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.272	5.839		
Loss at 13.80 Kv	3.371	115.916		
Loss at 14.40 Kv	0.878	34.181		
Loss at 34.50 Kv	0.000	0.000		
Loss at 100.00 Kv	0.588	27.240		
Loss at 115.00 Kv	0.439	0.383		
Loss at 138.00 Kv	19.722	-4.729		
Loss at 161.00 Kv	1.804	2.745		
Loss at 230.00 Kv	73.541	-27.790		
Loss at 345.00 Kv	101.526	323.483		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	5.254	169.529		
Largest mismatch MVA	0.0021	0.0104		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area 62 [MONTANA]

	-----MW----	----MVAR---		
Generation	3948.730	643.357	Generators	22
Actual Load	1422.895	610.184	Loads	200
Net actual shunt	0.309	-120.754	Shunts	56
Net actual svd	0.000	425.102	Svd	13
Net Interchange	2368.246	-388.674	Buses	314
Sched Interchange	2368.000		Lines	317
Loss	157.278	229.884	Transformers	89
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	-0.000	36.957		
Loss at 69.00 Kv	0.538	2.587		
Loss at 100.00 Kv	16.021	-43.968		
Loss at 115.00 Kv	2.409	-17.355		
Loss at 161.00 Kv	32.096	-5.953		
Loss at 230.00 Kv	25.597	-66.024		
Loss at 500.00 Kv	78.802	72.901		
Loss at other Kv	1.817	250.740		
Largest mismatch MVA	0.0028	0.0092		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area 40 [NORTHWEST]

	-----MW----	----MVAR---		
Generation	27341.311	3860.890	Generators	384
Actual Load	22671.295	6850.328	Loads	1652
Net actual shunt	0.000	-1861.254	Shunts	43
Net actual svd	0.000	-4063.709	Svd	159
Net Interchange	3514.181	1044.056	Buses	2740
Sched Interchange	3514.000		Lines	2710
Loss	1155.820	1891.476	Transformers	654
MVA-miles	4620865.0	612587.6	DC buses	4
Miles	18469.418		DC converters	4
			DC lines	2
Loss at 11.00 Kv	0.000	0.615		
Loss at 13.20 Kv	-0.000	4.929		
Loss at 13.80 Kv	4.803	207.733		
Loss at 14.40 Kv	0.286	13.131		
Loss at 25.00 Kv	3.168	165.781		
Loss at 34.50 Kv	0.348	6.276		
Loss at 69.00 Kv	15.003	42.912		
Loss at 100.00 Kv	0.120	-0.150		
Loss at 115.00 Kv	218.946	505.868		
Loss at 230.00 Kv	341.650	1661.879		
Loss at 345.00 Kv	16.052	-175.472		

Loss at 500.00 Kv	430.490	-1853.898
Loss at other Kv	124.954	1311.872
Largest mismatch MVA	0.0428	0.1202

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area 65 [PACE]

	-----MW----	----MVAR---		
Generation	5584.727	695.855	Generators	52
Actual Load	6293.716	1960.150	Loads	274
Net actual shunt	0.000	-1762.980	Shunts	74
Net actual svd	0.000	-48.506	Svd	2
Net Interchange	-980.903	-126.331	Buses	566
Sched Interchange	-981.200		Lines	409
Loss	271.918	561.143	Transformers	338
MVA-miles	5.0	1.6	DC buses	0
Miles	1.900		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.872	28.218		
Loss at 34.50 Kv	0.990	7.416		
Loss at 46.00 Kv	6.339	137.391		
Loss at 69.00 Kv	1.665	22.718		
Loss at 100.00 Kv	0.056	1.037		
Loss at 115.00 Kv	2.992	-9.337		
Loss at 138.00 Kv	70.676	195.856		
Loss at 161.00 Kv	15.503	4.798		
Loss at 230.00 Kv	80.951	63.943		
Loss at 345.00 Kv	87.795	7.021		
Loss at 500.00 Kv	0.006	3.518		
Loss at other Kv	4.073	98.563		
Largest mismatch MVA	0.0052	0.0267		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area 70 [PSCOLORADO]

	-----MW----	----MVAR---		
Generation	4186.317	1448.214	Generators	66
Actual Load	6332.696	2372.604	Loads	362
Net actual shunt	0.000	0.000	Shunts	0
Net actual svd	0.000	-1657.754	Svd	43
Net Interchange	-2331.273	443.526	Buses	501
Sched Interchange	-2332.000		Lines	461
Loss	184.886	289.909	Transformers	148
MVA-miles	27970.5	6365.2	DC buses	0
Miles	564.500		DC converters	0
			DC lines	0
Loss at 13.80 Kv	3.123	92.062		
Loss at 14.40 Kv	0.052	0.519		
Loss at 25.00 Kv	0.014	0.175		
Loss at 46.00 Kv	0.195	0.008		
Loss at 69.00 Kv	6.890	-1.018		
Loss at 100.00 Kv	0.018	-0.280		
Loss at 115.00 Kv	31.292	-48.656		
Loss at 138.00 Kv	0.276	-5.435		
Loss at 230.00 Kv	105.095	167.690		
Loss at 345.00 Kv	0.002	0.119		
Loss at 500.00 Kv	32.312	-76.370		
Loss at other Kv	5.617	161.095		
Largest mismatch MVA	0.0105	0.0243		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area 64 [SIERRA]

	-----MW----	----MVAR---		
Generation	1375.955	127.246	Generators	22
Actual Load	1719.091	458.744	Loads	121
Net actual shunt	0.000	-187.924	Shunts	30
Net actual svd	0.000	69.494	Svd	5
Net Interchange	-399.026	58.288	Buses	275
Sched Interchange	-399.000		Lines	197
Loss	55.890	-271.343	Transformers	117

```
MVA-miles                 65214.1      38334.6        DC buses              0
Miles                    1042.600                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           2.547       51.533
Loss at  69.00 Kv           0.000        0.000
Loss at 115.00 Kv           0.479       -6.145
Loss at 230.00 Kv           1.581     -102.384
Loss at 345.00 Kv           9.285     -439.037
Loss at other Kv           41.999      224.690

Largest mismatch MVA       0.0091       0.0199

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area  52 [W KOOTENAY                      ]

                       -----MW----  ----MVAR---
Generation                596.550       99.209        Generators           20
Actual Load               722.400      210.200        Loads                64
Net actual shunt            0.000      -77.887        Shunts               27
Net actual svd              0.000     -130.683        Svd                   4
Net Interchange          -150.490       -8.829        Buses               260
Sched Interchange        -149.900                     Lines               165
Loss                       24.640      106.408        Transformers        117

MVA-miles                 30815.5       4870.5        DC buses              0
Miles                     986.000                     DC converters         0
                                                      DC lines              0
Loss at  13.20 Kv           0.000        8.258
Loss at  13.80 Kv           0.000        0.000
Loss at  14.40 Kv          -0.000       29.965
Loss at  25.00 Kv           0.000        0.000
Loss at 138.00 Kv           0.397       -0.481
Loss at 161.00 Kv           9.043       11.278
Loss at 230.00 Kv           1.523       -8.738
Loss at other Kv           13.678       66.126

Largest mismatch MVA       0.0014       0.0041

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area  73 [WAPA R.M.                       ]

                       -----MW----  ----MVAR---
Generation               5378.744      158.801        Generators           80
Actual Load              3608.290     1237.018        Loads               355
Net actual shunt            0.000     -295.958        Shunts                4
Net actual svd              0.000     -278.105        Svd                  53
Net Interchange          1612.152     -434.821        Buses               620
Sched Interchange        1612.000                     Lines               567
Loss                      158.307      -69.382        Transformers        174

MVA-miles                470231.0      86528.7        DC buses              0
Miles                    7283.200                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           6.198       91.330
Loss at  34.50 Kv           0.313        4.043
Loss at  69.00 Kv           5.406      -11.221
Loss at 115.00 Kv          63.558     -121.480
Loss at 138.00 Kv           4.559      -31.039
Loss at 230.00 Kv          36.024     -278.813
Loss at 345.00 Kv          35.027      -45.137
Loss at other Kv            7.222      322.934

Largest mismatch MVA       0.0245       0.0245

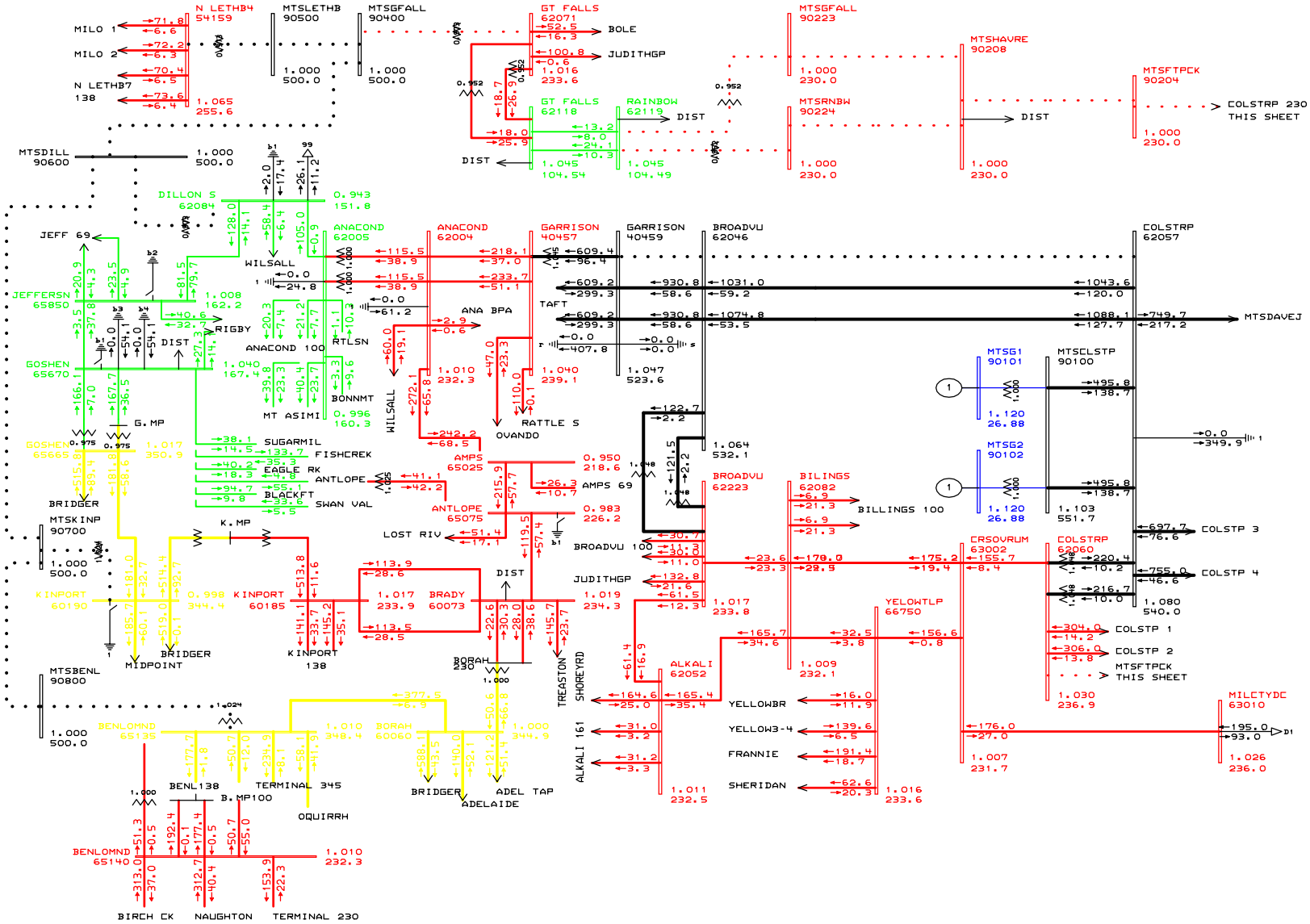
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO DENVER, LINE 3

Area  63 [WAPA U.M.                       ]

                       -----MW----  ----MVAR---
Generation                 55.762        6.551        Generators            1
Actual Load              -102.100      123.600        Loads                17
Net actual shunt            0.000      -78.951        Shunts                1
Net actual svd              0.000      -16.602        Svd                   4
Net Interchange           146.836      -33.163        Buses                21
Sched Interchange         147.000                     Lines                12
Loss                       11.026       11.668        Transformers          3
```

MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.223	6.311		
Loss at 115.00 Kv	0.026	-6.871		
Loss at 161.00 Kv	0.958	-46.456		
Loss at 230.00 Kv	9.820	58.683		
Largest mismatch MVA	0.0001	0.0003		

B.7 slcl3



General Electric International, Inc. PSLF Program MW/MVAR Mon Mar 04 10:46:25 2002

PEAK POWER ENGINEERING, INC. 303-462-1100

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

1000 MW THERMAL
BASE CASE

mts\g1\g1slc.drw
c:\uwk\mts\g1\model\g1slc_l3.s
Rating = 1

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Percent Loading Summary -- using rating 1 - 100.0 percent of rating

----------from----------				---------- to ----------									rate	per cent	
--no.--	--name--	-kv-	-ar-	--no.--	--name--	-kv-	-ar-	ck	---mw---	-mvar-	-mva--	------		loading	
54611	RUTH LK8	69	54	54839	RUTH LK1	138	54	1	57.9	13.8	59.5	45.0M		132.3	T
64026	CARSON	120	64	64027	CARSON T	120	64	1	-56.1	-6.3	56.5	216.5A		131.7	F
55015	DOME EA9	14	54	55525	163ST2	240	54	T2	-57.3	-4.6	57.5	45.0M		128.6	T
64194	DAYTON	120	64	64254	DAYTON	25	64	1	16.6	6.5	17.8	14.0M		127.5	F
65193	BONANZA	345	65	65995	MONA	345	65	1	768.6	88.3	773.7	1087.8A		121.2	F
79026	FLAMGORG	138	73	79029	FLAMGORG	69	73	1	22.1	6.1	22.9	19.0M		120.6	F
64099	SPAN SPG	120	64	64114	TRACY	120	64	1	-127.7	-2.8	127.7	514.8A		118.3	F
64091	RENO	120	64	64263	RENO	25	64	1	50.3	20.5	54.3	46.7M		116.3	F
70249	LAJUNTAW	115	70	70250	LAJUNTAW	69	70	1	26.3	12.4	29.0	25.0M		116.1	F
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	1	50.2	20.3	54.2	46.7M		116.0	F
64091	RENO	120	64	64263	RENO	25	64	2	50.2	20.3	54.2	46.7M		116.0	F
65850	JEFFERSN	161	65	65860	JFRSNPHA	161	65	1	-81.5	79.7	114.0	100.0M		114.0	F
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	2	47.8	19.3	51.6	46.7M		110.4	F
66050	NAUGHTON	230	65	66055	NAUGT G1	18	65	1	-204.9	-10.4	205.1	190.0M		109.9	T
64202	HAN CRTP	120	64	64203	TWN CRTP	120	64	1	74.2	19.8	76.8	356.0A		109.1	F
64201	PINSN TP	120	64	64202	HAN CRTP	120	64	1	74.6	20.6	77.4	356.0A		109.0	F
64200	REDHOUSE	120	64	64201	PINSN TP	120	64	1	75.9	23.6	79.5	356.0A		108.9	T
64129	VALMY	120	64	64200	REDHOUSE	120	64	1	77.0	26.3	81.4	356.0A		108.6	T
54234	CASTLE R	138	54	55972	CASTLE-1	25	54	1	-50.0	21.0	54.2	50.0M		108.4	F
50459	KIT287	287	50	51075	KIT B5	13	50	5	80.3	24.1	83.8	79.0M		106.1	F
54232	PANCAN 9	138	54	55386	EMPRESS9	25	54	T1	15.7	1.0	15.7	15.0M		104.7	F
64114	TRACY	120	64	64118	TRACY G2	14	64	1	-82.5	-4.0	82.6	81.0M		104.0	T
43017	BEAVER	14	40	43021	BEAVER	230	40	1	356.8	44.9	359.7	348.0M		103.3	F
48319	PLEASANT	115	40	48355	RATHDRUM	115	40	1	-84.1	-16.1	85.6	430.8A		103.0	F
54052	BLUERIDG	138	54	55281	BLUERDGE	14	54	T1	20.8	15.2	25.7	25.0M		102.9	F
54154	E CALGAR	240	54	54189	ENMX2SD9	138	54	T1	234.1	-169.4	289.0	300.0M		102.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	12	155.0	-10.4	155.3	155.0M		101.9	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	DE	155.0	-10.4	155.3	155.0M		101.9	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	34	155.0	-10.4	155.3	155.0M		101.9	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	BC	155.0	-10.4	155.3	155.0M		101.9	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	9A	155.0	-10.4	155.3	155.0M		101.9	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	78	155.0	-10.4	155.3	155.0M		101.9	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	56	155.0	-10.4	155.3	155.0M		101.9	T
41304	COUGAR T	7	40	46211	COUGAR T	115	40	1	28.0	-8.5	29.3	30.0M		101.6	T
46733	LAGRND5	14	40	46735	LGBK5	115	40	1	40.0	7.0	40.6	40.0M		101.5	F

```
Processing file c:\uwk\mts\base\rvolthsbs.out
Processing file c:\uwk\mts\g1\rvoltslcl3.out

Compvolt found the following for comparisons:
     349 Voltage Violations read from c:\uwk\mts\base\rvolthsbs.out
     343 Voltage Violations read from c:\uwk\mts\g1\rvoltslcl3.out


**** VOLTS:  NEW ****
Component                   w/o Prj         w/ Prj  Rating
90200 MTSDAVEJ  500   0.95 <= pu <= 1.05    1.0750  1.00 pu kV
90300 MTSDAN    500   0.95 <= pu <= 1.05    1.0604  1.00 pu kV
62030 PTRSNFLT  230   0.95 <= pu <= 1.05    0.9355  1.00 pu kV
62084 DILLON S  161   0.95 <= pu <= 1.05    0.9427  1.00 pu kV
65155 BIGGRASS  161   0.95 <= pu <= 1.05    0.9290  1.00 pu kV

**** VOLTS: WORSE ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS: BETTER ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS:  AWAY ****
Component             w/o Prj      w/ Prj          Rating
50343 KSH132-2  132   1.0501  0.95 <= pu <= 1.05   1.00 pu kV
50691 NIC230    230   1.0502  0.95 <= pu <= 1.05   1.00 pu kV
62033 ANA BPA   115   1.0568  0.95 <= pu <= 1.05   1.00 pu kV
40091 BELL BPA  500   1.0665  0.95 <= pu <= 1.05   1.00 pu kV
40459 GARRISON  500   1.0778  0.95 <= pu <= 1.05   1.00 pu kV
66225 PINTO     345   1.0511  0.95 <= pu <= 1.05   1.00 pu kV
66235 PINTO PS  345   1.0501  0.95 <= pu <= 1.05   1.00 pu kV
48165 IRVIN     115   0.9489  0.95 <= pu <= 1.05   1.00 pu kV
48310 OPORTUNE  115   0.9493  0.95 <= pu <= 1.05   1.00 pu kV
48299 OPPORTUN  115   0.9468  0.95 <= pu <= 1.05   1.00 pu kV
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GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

overvoltage summary > 1.100000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54090	BICKERD4	240	1.1047	54153	BRAZEAU4	240	1.1053	54329	KEEPHIL4	240	1.1117
54524	GENESEE4	240	1.1086	54681	NEVIS 7	138	1.1101	54802	STURGEO9	138	1.1003
55969	770S701T	138	1.1052	51017	KMS230	230	1.1079	90100	MTSCLSTP	500	1.1033

overvoltage summary > 1.050000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
90200	MTSDAVEJ	500	1.0750	90300	MTSDAN	500	1.0604	54012	FOX CREE	138	1.0510
54013	KAYBOB 9	138	1.0517	54014	GULF RO9	138	1.0592	54021	WESGEN 7	138	1.0507
54050	RBCUPIL7	138	1.0507	54054	LAMOURE4	240	1.0795	54073	IPPL ST9	138	1.0575
54077	BIGSTON4	240	1.0600	54078	CHEVRON7	138	1.0515	54081	METIS644	240	1.0853
54082	BICKERD7	138	1.0557	54090	BICKERD4	240	1.1047	54097	BIG HOR9	138	1.0817
54098	STRACHA9	138	1.0577	54103	DEERLAN4	240	1.0820	54121	ELLERSLI	240	1.0759
54125	SUNDANL9	138	1.0543	54126	WABAMUN4	240	1.0869	54128	SUNDANM9	240	1.0965
54129	E EDMON4	240	1.0709	54130	N CALDE4	240	1.0645	54131	N BARRH4	240	1.0836
54139	GAETZ 4	240	1.0597	54141	HIGHVAL9	138	1.0538	54142	WILLESD4	240	1.0961
54144	RED DEE4	240	1.0636	54147	BENALTO4	240	1.0767	54148	E CROSS4	240	1.0585
54150	LANGDON2	500	1.0533	54152	JANET 4	240	1.0533	54153	BRAZEAU4	240	1.1053
54157	PEIGAN 4	240	1.0748	54159	N LETHB4	240	1.0648	54184	SARCEE 7	138	1.0530
54195	RUNDLE S	138	1.0504	54223	WARE JCT	240	1.0511	54249	RP05103S	138	1.0669
54261	SPRAY S	138	1.0508	54269	COALSPU7	138	1.0609	54281	MILO 2	240	1.0605
54285	LEISMER9	240	1.0749	54287	GREGG R9	138	1.0701	54302	MARIONA9	138	1.0540
54325	CHEV KG9	138	1.0515	54326	COAL VA9	138	1.0582	54329	KEEPHIL4	240	1.1117
54335	W BROOK4	240	1.0550	54384	ENMX28S9	138	1.0523	54412	BENBOW 9	138	1.0517
54441	946/947X	240	1.0759	54444	SPRINGB9	138	1.0505	54505	JASPER 4	240	1.0658
54506	BELLAMY4	240	1.0757	54509	ARGYLL W	240	1.0758	54512	DOME T29	240	1.0764
54513	LAMBTON4	240	1.0705	54514	CLOVERB4	240	1.0694	54518	ARGYLL E	240	1.0760
54519	CASTLTX2	240	1.0705	54521	PETROLIA	240	1.0746	54524	GENESEE4	240	1.1086
54542	RBW LAK7	138	1.0505	54546	CHINCHA7	138	1.0575	54547	KEG RVR7	138	1.0561
54548	KEMP RV9	138	1.0578	54549	HOTCHKS7	138	1.0596	54552	CADOTTE9	138	1.0585
54553	NORCEN 9	138	1.0552	54554	LUBICON7	138	1.0582	54555	CRANBER9	138	1.0591
54558	WESLY C7	138	1.0791	54559	CARMON 9	138	1.0767	54560	PEACE/29	138	1.0753
54561	DIASHOW7	138	1.0736	54589	DOME CU7	138	1.0672	54593	DONNELL9	138	1.0669
54594	TAP7L487	138	1.0686	54595	TRIANGL7	138	1.0619	54596	VALLEYV9	138	1.0782
54600	L.SMOKY7	138	1.0848	54601	STURGEO7	138	1.0844	54606	SIMONET9	138	1.0846
54607	FOXCRK/2	138	1.0515	54608	GOOSE R9	138	1.0666	54612	RUTH LA7	138	1.0600
54613	RUTH LK7	138	1.0603	54618	PARS CR7	138	1.0508	54621	MITS E.4	240	1.0565
54622	MITS E.7	138	1.0892	54623	AEC MILL	138	1.0881	54624	OTAUWAU7	138	1.0890
54633	LOU CR.7	138	1.0570	54634	SARHLK/2	138	1.0511	54636	ESSO JU7	138	1.0519
54637	MORSE RV	138	1.0524	54639	VIRGINI9	138	1.0529	54643	WOLF LK9	138	1.0709
54646	MARG LK4	240	1.0740	54647	MARG LK7	138	1.0861	54648	LACOREY9	138	1.0683
54652	BONNY 9	138	1.0544	54654	BONN SVC	138	1.0544	54655	WHITFISH	240	1.0857
54675	PAINTRT7	240	1.0896	54680	NEVIS 4	240	1.0748	54681	NEVIS 7	138	1.1101
54685	3HILLS/3	138	1.0581	54691	MICH. C9	138	1.0735	54693	WINT HI9	138	1.0749
54694	BULLPON9	138	1.0750	54707	SHEER 14	240	1.0625	54709	ANDERSO4	240	1.0630
54710	ANDERSON	138	1.0850	54711	SHEER 24	240	1.0625	54715	BAT. RV7	138	1.0821
54721	BAT RV79	240	1.0926	54723	CORDEL 4	240	1.0926	54729	PRIM TAP	138	1.0652
54730	PRIMROSE	138	1.0712	54796	791S701T	138	1.0628	54802	STURGEO9	138	1.1003
54806	946/947N	240	1.0709	54809	732S901T	240	1.0667	54818	VERMILA9	138	1.0798

54822	766S901T	240	1.0628	54823	NEVIS 9	138	1.0878	54835	791S702T	138	1.0631
54836	MILNERB9	138	1.0779	54844	709S702T	138	1.0732	54847	BAT RV80	240	1.0926
54848	791S703T	138	1.0530	54962	KAYBOBTP	138	1.0517	54963	CANMORE9	138	1.0506
54978	EAST IN4	240	1.0705	54983	MARION T	138	1.0541	54984	HIGHVL T	138	1.0538
54988	CROSSF T	240	1.0585	54995	W.GRN TP	240	1.0961	55012	BASSET 7	138	1.0562
55013	HAIGRIVE	138	1.0572	55067	FTNELSON	138	1.0665	55072	SYNC_D04	240	1.0563
55073	AURORA 4	240	1.0619	55075	SEAL LK9	138	1.0643	55147	MILNERC9	138	1.0880
55226	WABASCA9	240	1.0532	55272	FIELDGA9	138	1.0513	55280	BRINTNEL	240	1.0504
55515	PRIMROSE	138	1.0565	55763	BC BORDE	138	1.0627	55891	904AL TP	240	1.0705
55894	SARCEE M	138	1.0512	55912	740L JNC	138	1.0609	55913	G.ROBB T	138	1.0600
55924	CH KGT T	138	1.0515	55943	MILO 1	240	1.0605	55969	770S701T	138	1.1052
50010	COM132	132	1.0723	50020	CMS230	230	1.0500	50036	RBW230	230	1.0548
50037	PEM230	230	1.0585	50038	RBW230-1	230	1.0534	50182	ARN132	132	1.0817
50185	ALZ230	230	1.0517	50186	ROS230	230	1.0617	50187	BRT230	230	1.0697
50188	BUT230	230	1.0500	50193	BRT360	360	1.0500	50313	VIT132	132	1.0517
50314	PVO133	132	1.0505	50315	PVO132	132	1.0511	50323	DMR132	132	1.0555
50330	LDR132	132	1.0504	50331	GLD132	132	1.0517	50334	KGH132	132	1.0527
50335	UTA132	132	1.0530	50342	SCA132	132	1.0500	50346	SHA2	132	1.0503
50347	GOW132	132	1.0517	50348	GTP132	132	1.0551	50349	CLD132	132	1.0569
50350	SOO132	132	1.0575	50351	JOR132	132	1.0612	50352	PML132	132	1.0516
50353	WOS132	132	1.0534	50354	GLSTP17	132	1.0561	50355	GLSTP18	132	1.0547
50356	DND132	132	1.0520	50391	KSHTP14	132	1.0503	50394	SHATP14	132	1.0503
50395	SALTP17	132	1.0546	50396	SALTP18	132	1.0548	50447	TKW138	138	1.0533
50463	SKA500	500	1.0631	50464	TKW500	500	1.0687	50540	GMS230	230	1.0548
50541	KDS230	230	1.0543	50545	BLW230	230	1.0655	50546	SCK230	230	1.0596
50547	HMH230	230	1.0579	50548	BLM230	230	1.0587	50549	QNT230	230	1.0579
50550	QRP230	230	1.0651	50551	TLR230	230	1.0585	50553	BCR230	230	1.0585
50554	RBF230	230	1.0663	50556	LAP230	230	1.0569	50557	SNK230	230	1.0589
50558	GMS500	500	1.0500	50560	KDS500	500	1.0618	50561	WSN500	500	1.0501
50562	GLN500	500	1.0680	50653	NIC138	138	1.0526	50655	VVW138	138	1.0507
50656	SVA138	138	1.0518	50659	BDM138	138	1.0510	50660	WGS138	138	1.0609
50661	MON138	138	1.0581	50672	BKL138	138	1.0516	50679	BLU138	138	1.0535
50680	VLM138	138	1.0587	50686	SCO138	138	1.0675	50687	ABA138	138	1.0582
50700	MCA500	500	1.0500	50701	REV500	500	1.0500	50729	PRI138TP	138	1.0675
50776	NTL138	138	1.0539	50783	SEL230	230	1.0590	50785	SEV230	230	1.0581
50792	SEL500	500	1.0500	50899	ABA138TP	138	1.0582	50902	BDM138TP	138	1.0510
50922	DNDTAP	132	1.0527	50923	HSY-PH	132	1.0554	50924	ESQ-PH	132	1.0520
50928	SCG IPP	132	1.0682	50934	JULTP130	132	1.0527	51017	KMS230	230	1.1079
51045	ALH230	230	1.0579	60085	BRIDGER	345	1.0500	60240	MIDPOINT	500	1.0698
90100	MTSCLSTP	500	1.1033	62012	TOWN2	500	1.0717	62013	TOWN1	500	1.0717
62046	BROADVU	500	1.0641	62053	BROADV&2	500	1.0556	62054	BROADV&1	500	1.0563
62057	COLSTRP	500	1.0800	40045	ALLSTON	500	1.0721	40051	ALVEY	500	1.0788
40061	ASHE	500	1.0800	40111	BIG EDDY	500	1.0767	43049	BOARD F	500	1.0840
40139	BONNVILE	115	1.0500	47013	BRIDGPRT	115	1.0538	40155	BUCKLEY	500	1.0768
45029	BURNS	500	1.0521	45035	CAPTJACK	500	1.0768	46209	CARMEN	115	1.0616
41311	CELILO1	500	1.0766	41312	CELILO2	500	1.0766	40233	CHIEF JO	500	1.0800
40287	COULEE	500	1.0810	40302	COVINGT4	500	1.0748	40306	COVINGT5	500	1.0754
43115	COYO M1	500	1.0554	43123	COYOTE	500	1.0843	45095	DIXONVLE	500	1.0793
40369	DWORSHAK	500	1.0631	40381	ECHOLAKE	500	1.0780	40451	GAR1EAST	500	1.0632
40453	GAR2EAST	500	1.0632	40485	GREEN PT	115	1.0520	40489	GRIZZLY	500	1.0738
40499	HANFORD	500	1.0810	40521	HATWAI	500	1.0653	45137	HERMIST	230	1.0509
41212	HILLS CR	115	1.0500	40553	HOT SPR	500	1.0643	40585	JOHN DAY	500	1.0850
40601	KEELER	500	1.0814	45262	KFALLS	500	1.0793	40629	LANE	500	1.0730
40665	LIT GOOS	500	1.0800	40679	LOW GRAN	500	1.0800	40683	LOW MON	500	1.0800
40687	MALIN	500	1.0755	40693	MAPLE VL	500	1.0770	40699	MARION	500	1.0799

40711	MCLOUGLN	500	1.0692	40721	MCNARY	345	1.0510	40723	MCNARY	500	1.0796
45197	MERIDINP	500	1.0773	40749	MONROE	500	1.0791	40797	OLYMPIA	500	1.0791
40809	OSTRNDER	500	1.0715	40821	PAUL	500	1.0800	40827	PEARL	500	1.0780
40837	PONDROSA	500	1.0794	40869	RAVER	500	1.0791	43485	ROUND BU	500	1.0704
40913	SACJAWEA	500	1.0752	40917	SACJWA T	500	1.0765	40941	SANTIAM	500	1.0792
40949	SATSOP	500	1.0798	40957	SCHULTZ	500	1.0837	40973	SICKLER	500	1.0792
40989	SLATT	500	1.0807	41043	SUMMER L	500	1.0784	45289	SWIFT	230	1.0500
41051	TACOMA	500	1.0789	41057	TAFT	500	1.0604	41095	TROUTDAL	500	1.0639
41113	VANTAGE	500	1.0741	45337	WEED JPS	115	1.0500	47099	WELLS	115	1.0629
52226	PRI138	138	1.0675	52229	KER138	138	1.0711	52230	HED138	138	1.0701
52426	MAS138	138	1.0700	52815	PRI-T2	138	1.0683				

undervoltage summary < 0.900000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)

undervoltage summary < 0.950000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
50781	NTL VR	138	0.9499	62030	PTRSNFLT	230	0.9355	62084	DILLON S	161	0.9427
48069	CHESTER	115	0.9481	48306	OTIS	230	0.9417	65155	BIGGRASS	161	0.9290
70249	LAJUNTAW	115	0.9344	64072	MEYERS	120	0.9485	64092	RND HILL	120	0.9466
64102	STATELIN	120	0.9458	64203	TWN CRTP	120	0.9454				

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

	generation capacity	generation on-line	load categories power	load categories current	load categories imped.	shunt	-- svd --	net inter	losses	slack bus
area name ALBERTA										
mw	10743.6	7862.7	7899.2	0.0	0.0	0.0	0.0	-399.4	363.0	59.3
54 mvar	4916.5	857.2	2641.0	0.0	0.0	-22.5	-1851.9	-37.1	127.7	11.7
area name B.C.HYDRO										
mw	14693.0	10252.0	6889.1	0.0	0.0	0.0	0.0	2849.7	513.2	198.4
50 mvar	6719.0	944.0	2565.8	0.0	0.0	2956.9	2142.6	-270.8	-6450.3	9.3
area name IDAHO										
mw	4676.4	3592.8	2984.0	0.0	0.0	0.0	0.0	420.2	188.7	170.5
60 mvar	2192.5	410.6	711.6	0.0	0.0	-594.4	0.0	-123.4	416.8	5.4
area name MONTANA										
mw	4502.2	3969.7	1422.9	0.0	0.0	0.3	0.0	2368.1	178.5	757.7
62 mvar	1929.0	670.3	610.2	0.0	0.0	-119.9	232.3	-429.1	376.8	162.0
area name NORTHWEST										
mw	43502.3	27361.4	22671.3	0.0	0.0	0.0	0.0	3514.0	1176.1	694.3
40 mvar	15475.0	4041.3	6850.3	0.0	0.0	-1878.8	-4240.1	1077.4	2232.5	40.6
area name PACE										
mw	6212.0	5134.7	6293.7	0.0	0.0	0.0	0.0	-1481.1	322.1	213.7
65 mvar	3201.9	1027.4	1960.1	0.0	0.0	-1756.7	341.5	-540.1	1022.5	41.6
area name PSCOLORADO										
mw	5806.0	5162.2	6332.7	0.0	0.0	0.0	0.0	-1333.2	162.7	83.2
70 mvar	3667.3	1201.7	2372.6	0.0	0.0	0.0	-1689.7	548.6	-29.8	25.1
area name SIERRA										
mw	1901.7	1375.4	1719.1	0.0	0.0	0.0	0.0	-399.1	55.4	109.4
64 mvar	925.4	124.2	458.7	0.0	0.0	-188.1	69.7	58.2	-274.3	24.2
area name W KOOTENAY										
mw	763.5	596.5	722.4	0.0	0.0	0.0	0.0	-150.5	24.6	104.6
52 mvar	450.0	99.1	210.2	0.0	0.0	-77.8	-130.7	-9.0	106.4	25.1
area name WAPA R.M.										
mw	6091.6	5389.8	3608.3	0.0	0.0	0.0	0.0	1612.2	169.3	507.4
73 mvar	2883.8	187.7	1237.0	0.0	0.0	-298.0	-378.2	-465.7	92.6	23.6

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

		generation capacity	generation on-line	--- load categories ---- power	current	imped.	shunt	-- svd	-- inter	net losses	slack bus
area name	WAPA U.M.										
	mw	61.8	55.3	-102.1	0.0	0.0	0.0	0.0	146.7	10.6	55.3
63	mvar	34.0	4.9	123.6	0.0	0.0	-79.0	-18.0	-25.7	3.9	4.9
TOTL	mw	98954.1	70752.5	60440.6	0.0	0.0	0.3	0.0	7147.4	3164.2	
	mvar	42394.4	9568.5	19741.2	0.0	0.0	-2058.3	-5522.5	-216.6	-2375.3	

Area Interchange Summary

		mw	mvar
FROM AREA	54 ALBERTA		
TO AREA	50 B.C.HYDRO	-399.4	-37.1
TOTAL		-399.4	-37.1
FROM AREA	50 B.C.HYDRO		
TO AREA	54 ALBERTA	399.4	37.1
TO AREA	40 NORTHWEST	2299.8	-316.9
TO AREA	52 W KOOTENAY	150.5	9.0
TOTAL		2849.7	-270.8
FROM AREA	60 IDAHO		
TO AREA	40 NORTHWEST	-278.1	-256.3
TO AREA	65 PACE	563.7	183.3
TO AREA	64 SIERRA	134.5	-50.4
TOTAL		420.2	-123.4
FROM AREA	62 MONTANA		
TO AREA	40 NORTHWEST	1325.7	-456.3
TO AREA	65 PACE	1034.4	26.2
TO AREA	63 WAPA U.M.	7.9	0.9
TOTAL		2368.1	-429.1
FROM AREA	40 NORTHWEST		
TO AREA	50 B.C.HYDRO	-2299.8	316.9
TO AREA	60 IDAHO	278.1	256.3
TO AREA	26 LADWP	2806.6	606.4
TO AREA	62 MONTANA	-1325.7	456.3
TO AREA	30 PG AND E	3866.9	-509.3
TO AREA	64 SIERRA	187.9	-49.2
TOTAL		3514.0	1077.4
FROM AREA	65 PACE		
TO AREA	14 ARIZONA	-147.3	91.4
TO AREA	60 IDAHO	-563.7	-183.3
TO AREA	26 LADWP	-30.4	-225.5
TO AREA	62 MONTANA	-1034.4	-26.2
TO AREA	18 NEVADA	251.9	-59.3
TO AREA	70 PSCOLORADO	706.5	-250.2
TO AREA	64 SIERRA	29.7	13.0
TO AREA	19 WAPA L.C.	-1.2	38.8
TO AREA	73 WAPA R.M.	-692.1	61.3
TOTAL		-1481.1	-540.1
FROM AREA	70 PSCOLORADO		
TO AREA	65 PACE	-706.5	250.2
TO AREA	73 WAPA R.M.	-626.7	298.4
TOTAL		-1333.2	548.6
FROM AREA	64 SIERRA		
TO AREA	60 IDAHO	-134.5	50.4
TO AREA	26 LADWP	-48.6	2.2
TO AREA	40 NORTHWEST	-187.9	49.2
TO AREA	65 PACE	-29.7	-13.0

TO AREA	30 PG AND E	-9.9	-28.7
TO AREA	24 SOCALIF	11.4	-1.9
TOTAL		-399.1	58.2

FROM AREA	52 W KOOTENAY	mw	mvar
TO AREA	50 B.C.HYDRO	-150.5	-9.0
TOTAL		-150.5	-9.0

FROM AREA	73 WAPA R.M.	mw	mvar
TO AREA	10 NEW MEXICO	294.6	-74.1
TO AREA	65 PACE	692.1	-61.3
TO AREA	70 PSCOLORADO	626.7	-298.4
TO AREA	19 WAPA L.C.	153.3	-56.6
TO AREA	63 WAPA U.M.	-154.6	24.7
TOTAL		1612.2	-465.7

FROM AREA	63 WAPA U.M.	mw	mvar
TO AREA	62 MONTANA	-7.9	-0.9
TO AREA	73 WAPA R.M.	154.6	-24.7
TOTAL		146.7	-25.7

AREA TIE LINE SUMMARY

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

---------from--------				--------- to --------						
--no.--	--name--	-kv-		--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
54150	LANGDON2	500		50791	CBK500	500	1	-359.34	-36.34	f
54205	COLEMAN7	138		50776	NTL138	138	1	-14.12	-8.92	t
54273	POCATER7	138		50830	FRO T274	138	1	-25.97	8.19	t
from area 54 to area 50 B.C.HYDRO								-399.43	-37.07	
Total from area 54 ALBERTA								-399.43	-37.07	

---------from--------				--------- to --------						
--no.--	--name--	-kv-		--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
62004	ANACOND	230		40457	GARRISON	230	1	-214.77	-25.16	f
62004	ANACOND	230		40457	GARRISON	230	2	-231.18	-37.48	f
62009	RATTLE S	161		40867	RATTLE S	230	1	-126.93	-42.28	t
62012	TOWN2	500		40453	GAR2EAST	500	2	913.88	-167.92	t
62013	TOWN1	500		40451	GAR1EAST	500	1	913.88	-167.92	t
62066	KERR	115		40391	ELMO	115	1	6.72	-15.73	f
62072	OVANDO	230		40457	GARRISON	230	1	-46.96	23.34	t
62072	OVANDO	230		40551	HOT SPR	230	1	48.43	5.17	t
62085	CROWCR B	115		48055	BURKAVAB	115	1	28.54	-13.79	t
62086	THOMSON	115		48053	BURKAVAA	115	1	34.12	-14.51	t
from area 62 to area 40 NORTHWEST								1325.74	-456.30	
62030	PTRSNFLT	230		65025	AMPS	230	1	242.18	-68.47	t
62045	BLGS PHA	230		66750	YELOWTLP	230	1	-32.50	3.78	t
62057	COLSTRP	500		90200	MTSDAVEJ	500	1	734.58	149.85	t
62061	RMRK PHA	161		66755	YELOWTLP	161	1	-19.99	-2.79	f
62084	DILLON S	161		65155	BIGGRASS	161	1	110.18	-56.14	t
from area 62 to area 65 PACE								1034.44	26.23	
62023	GT FALLS	161		63008	HAVRE	161	1	14.06	-12.26	f
62024	RAINBOW	161		63015	VERONA	161	1	12.97	-12.05	f
62027	SHELBY	115		63014	TIBERTAP	115	1	0.27	-2.56	f
62051	HARDIN	230		63002	CRSOVRUM	230	1	155.74	8.38	t
62056	HUNTLEY	230		63002	CRSOVRUM	230	1	-175.15	19.44	t
from area 62 to area 63 WAPA U.M.								7.89	0.95	
Total from area 62 MONTANA								2368.08	-429.13	

---------from--------				--------- to --------						
--no.--	--name--	-kv-		--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
40145	BOUNDARY	230		50822	NLYPHS	230	1	-288.94	-3.73	f
40323	CUSTER W	500		50194	ING500	500	1	-1013.81	161.10	t
40323	CUSTER W	500		50194	ING500	500	2	-997.00	159.50	t
from area 40 to area 50 B.C.HYDRO								-2299.75	316.88	
45029	BURNS	500		60240	MIDPOINT	500	1	-75.59	346.83	t
45103	ENTERPRS	230		60150	HELLSCYN	230	1	46.36	-40.57	f
40507	HARNEY	115		61826	HINES	115	1	-12.28	15.06	f
40621	LAGRANDE	230		60192	LADD	230	1	80.95	-31.07	f
48197	LOLO	230		60278	IMNAHA	230	1	238.63	-33.91	t
from area 40 to area 60 IDAHO								278.07	256.34	
41311	CELILO1	500		26097	SYLMAR1	230	1	529.56	58.85	f
41313	CELILO3	230		26098	SYLMAR3	230	1	873.76	244.18	f
41312	CELILO2	500		26099	SYLMAR2	230	1	529.56	58.77	f
41314	CELILO4	230		26100	SYLMAR4	230	1	873.76	244.63	f
from area 40 to area 26 LADWP								2806.65	606.44	
48053	BURKAVAA	115		62086	THOMSON	115	1	-34.12	14.51	f
48055	BURKAVAB	115		62085	CROWCR B	115	1	-28.54	13.79	f
40391	ELMO	115		62066	KERR	115	1	-6.72	15.73	t
40451	GAR1EAST	500		62013	TOWN1	500	1	-913.88	167.92	f
40453	GAR2EAST	500		62012	TOWN2	500	2	-913.88	167.92	f
40457	GARRISON	230		62072	OVANDO	230	1	46.96	-23.34	f
40457	GARRISON	230		62004	ANACOND	230	1	214.77	25.16	t
40457	GARRISON	230		62004	ANACOND	230	2	231.18	37.48	t
40551	HOT SPR	230		62072	OVANDO	230	1	-48.43	-5.17	f
40867	RATTLE S	230		62009	RATTLE S	161	1	126.93	42.28	f
from area 40 to area 62 MONTANA								-1325.74	456.30	
45035	CAPTJACK	500		30020	OLINDA	500	1	1368.04	-226.58	f
45087	DELTA	115		31468	CASCADE	115	1	71.59	-15.58	f

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   40687 MALIN     500        30005 ROUND MT  500  1            1208.29   -124.60   f
   40687 MALIN     500        30005 ROUND MT  500  2            1218.98   -142.53   f
from area  40 to area  30 PG AND E                              3866.90   -509.28

   40537 HIL TOP   230        64058 HIL TOP   345  1             187.88    -49.23   f
from area  40 to area  64 SIERRA                                 187.88    -49.23

Total from area  40 NORTHWEST                                   3514.00   1077.44

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   66235 PINTO PS  345        14101 FOURCORN  345  1            -147.30     91.44   t
from area  65 to area  14 ARIZONA                               -147.30     91.44

   65075 ANTLOPE   230        60073 BRADY     230  1             119.47    -57.41   f
   65135 BENLOMND  345        60060 BORAH     345  1            -377.48      6.88   t
   65220 BRIDGER   230        60085 BRIDGER   345  1              49.01    -37.93   t
   65220 BRIDGER   230        60085 BRIDGER   345  2              49.80    -38.58   t
   65220 BRIDGER   230        60085 BRIDGER   345  3              49.01    -37.93   t
   65665 GOSHEN    345        60085 BRIDGER   345  1            -515.83    -89.38   f
   65665 GOSHEN    345        60190 KINPORT   345  1             180.99     32.72   t
   65670 GOSHEN    161        60030 BLACKFT   161  1              96.32     12.08   f
   65920 MALAD     138        60020 AMFLS     138  1             -69.31      2.55   t
   66565 TREASTON  230        60073 BRADY     230  1            -145.71     23.69   t
from area  65 to area  60 IDAHO                                 -563.73   -183.33

   65995 MONA      345        26043 INTERMT   345  1             -15.20   -112.77   f
   65995 MONA      345        26043 INTERMT   345  2             -15.20   -112.77   f
from area  65 to area  26 LADWP                                  -30.40   -225.54

   90200 MTSDAVEJ  500        62057 COLSTRP   500  1            -734.58   -149.85   f
   65025 AMPS      230        62030 PTRSNFLT  230  1            -242.18     68.47   f
   65155 BIGGRASS  161        62084 DILLON S  161  1            -110.18     56.14   f
   66750 YELOWTLP  230        62045 BLGS PHA  230  1              32.50     -3.78   f
   66755 YELOWTLP  161        62061 RMRK PHA  161  1              19.99      2.79   t
from area  65 to area  62 MONTANA                               -1034.44    -26.23

   66280 REDBUTTE  345        18002 HA PS     345  1             251.92    -59.30   f
from area  65 to area  18 NEVADA                                 251.92    -59.30

   90200 MTSDAVEJ  500        90300 MTSDAN    500  1             706.48   -250.22   f
from area  65 to area  70 PSCOLORADO                             706.48   -250.22

   66210 PAVANT    230        64124 UTAH-NEV  230  1              29.72     12.99   t
from area  65 to area  64 SIERRA                                  29.72     12.99

   66355 SIGURDPS  230        79031 GLENCANY  230  1              -1.23     38.77   t
from area  65 to area  19 WAPA L.C.                               -1.23     38.77

   65060 ANT MINE  230        73276 TEKLA     230  1              22.92     19.64   f
   65085 ASHLEY    138        79067 VERNAL    138  1             -91.00      5.69   t
   65192 BONANZA   138        79067 VERNAL    138  1              63.14     10.77   t
   65193 BONANZA   345        79005 BEARS     345  1            -587.70     25.84   f
   65305 CASPERPP  115        73167 REFNRYTP  115  1             -41.67     -5.20   f
   65305 CASPERPP  115        73042 CASPERLM  115  1             -18.71     -9.62   t
   65420 DAVEJOHN  230        73107 LAR.RIVR  230  1             -14.27    -14.64   f
   65420 DAVEJOHN  230        73190 STEGALL   230  1              46.42    -19.52   f
   65425 DAVEJOHN  115        73070 GLENRCKN  115  1              66.48      3.61   f
   65425 DAVEJOHN  115        73071 GLENRCKS  115  1              79.46      7.88   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  1             -67.11      5.82   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  2             -67.11      5.82   f
   66278 RANGELY   138        79001 ARTESIA   138  1              -1.39     -5.19   f
   66278 RANGELY   138        79046 MEEKER    138  1             -47.23     10.97   f
   66305 RIVERTON  230        73170 RIVERTON  115  1               0.08     -0.25   f
   66535 THERMOPL  230        73197 THERMOPL  115  1              -6.35     -3.98   t
   66540 THERPACE  115        73197 THERMOPL  115  1               7.48      1.00   t
   66720 WORLAND   115        73222 WORLANTP  115  1             -15.34      4.89   t
   66725 WYODAK    230        73148 OSAGE     230  1             104.97    -16.39   t
   66725 WYODAK    230        73168 RENO      230  1              98.30      6.10   f
   66725 WYODAK    230        73294 HUGHES    230  1             105.29     -3.69   f
   66725 WYODAK    230        73282 WYODAK     69  1             -11.13     15.18   f
   66725 WYODAK    230        73282 WYODAK     69  2              -7.53     10.27   f
   66725 WYODAK    230        74016 WYGEN      14  1               0.00      0.00   f
   66750 YELOWTLP  230        73229 YELLOWBR  230  1            -310.15      6.35   t
from area  65 to area  73 WAPA R.M.                              -692.14     61.35

Total from area  65 PACE                                        -1481.12   -540.07

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter
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   90300 MTSDAN    500        90200 MTSDAVEJ  500  1            -706.48    250.22   t
from area  70 to area  65 PACE                                  -706.48    250.22

   70005 BRUSHCPP  115        73013 B.CK PS   115  1             118.32     23.71   f
   70005 BRUSHCPP  115        73013 B.CK PS   115  2             124.79     30.76   f
   70116 COBBLAKE  115        73044 COBBLKTP  115  1             -15.33     -1.44   f
   70122 COMANCHE  230        73477 FULLER    230  1              86.47     26.28   t
   70139 DANIELPK  230        73477 FULLER    230  1             -63.98     15.09   t
   70193 FTN VALL  115        73412 MIDWAYBR  115  1               0.97     -1.02   t
   70205 GRANDJCT  230        79036 GRANDJCT  345  1             -31.46    -21.01   f
   70256 LAPORTPS  115        73105 LAPORTE   115  1             -14.73     -6.26   t
   70274 MALTA     230        73138 MT.ELBRT  230  1            -145.53     17.12   f
   70285 MIDWAYPS  115        73412 MIDWAYBR  115  1              13.04    -24.29   f
   70286 MIDWAYPS  230        73413 MIDWAYBR  230  1             179.25     87.86   t
   70287 MILL      115        73296 FRASER    115  1             -27.24      7.00   f
   70308 PALMER    115        73414 MONUMENT  115  1             -34.99     12.91   t
   70311 PAWNEE    230        73192 STORY     230  1            -131.15    -40.38   t
   70327 PONCHA    115        79037 GUNNISON  115  1              -5.58      3.69   f
   70350 RAWHIDE    24        73165 RAWHIDE   230  1             262.18     67.24   t
   70358 RIFLE PS  230        79059 RIFLE WA  230  1             -14.57      9.24   f
   70358 RIFLE PS  230        79250 AMATLAS   230  1             -75.89     -7.56   f
   70375 SAN LUIS  230        79054 PONCHABR  230  1             -79.66      7.04   t
   70410 ST.VRAIN  230        73116 LONGPEAK  230  1              12.97     58.16   f
   70470 WELD  PS  115        73211 WELD  LM  115  1             -22.22     75.43   f
   70471 WELD  PS  230        73212 WELD  LM  230  1            -263.42    -29.66   f
   70474 WINDSOR   230        73011 AULT      230  1            -212.81     -5.81   t
   70476 WOODLAND  115        73400 EMIL AND  115  1               8.54      4.06   f
   70525 MTHARRIS  138        79038 HAYDEN    138  1              -7.21     -1.37   t
   79033 GOREPASS  230        79039 HAYDEN    230  1            -163.49      4.87   t
   79033 GOREPASS  230        73072 GOREPASS  138  1               4.82      4.16   f
   79034 GRANDJCT  115        79048 MONTROSE  115  1              27.76     -5.90   t
   79056 RIFLE CU  138        79046 MEEKER    138  1              -0.62     -5.21   f
   79057 RIFLE CU  230        79059 RIFLE WA  230  1             -64.57    -27.65   t
   79058 RIFLE CU  345        79014 CRAIG     345  1            -348.75    -18.90   f
   79058 RIFLE CU  345        79036 GRANDJCT  345  1             374.42     21.17   f
   79091 WOLCOTTP  230        79039 HAYDEN    230  1            -145.62      4.83   f
   79173 COLBRAN   115        79174 MOLINA-L  115  1              -0.00     -0.53   f
   70351 RAWHIDEA   14        73165 RAWHIDE   230  1              50.83     34.25   t
   70550 W CANON   115        73551 W CANON   230  1             -22.29    -19.50   t
from area  70 to area  73 WAPA R.M.                             -626.74    298.36

Total from area  70 PSCOLORADO                                 -1333.22    548.59

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   79060 SANJN PS  345        10292 SAN_JUAN  345  1             294.59    -74.14   t
from area  73 to area  10 NEW MEXICO                             294.59    -74.14

   73042 CASPERLM  115        65305 CASPERPP  115  1              18.71      9.62   f
   73070 GLENRCKN  115        65425 DAVEJOHN  115  1             -66.48     -3.61   t
   73071 GLENRCKS  115        65425 DAVEJOHN  115  1             -79.46     -7.88   t
   73107 LAR.RIVR  230        65420 DAVEJOHN  230  1              14.27     14.64   t
   73148 OSAGE     230        66725 WYODAK    230  1            -104.97     16.39   f
   73167 REFNRYTP  115        65305 CASPERPP  115  1              41.67      5.20   t
   73168 RENO      230        66725 WYODAK    230  1             -98.30     -6.10   t
   73170 RIVERTON  115        66305 RIVERTON  230  1              -0.08      0.25   t
   73190 STEGALL   230        65420 DAVEJOHN  230  1             -46.42     19.52   t
   73197 THERMOPL  115        66540 THERPACE  115  1              -7.48     -1.00   f
   73197 THERMOPL  115        66535 THERMOPL  230  1               6.35      3.98   f
   73222 WORLANTP  115        66720 WORLAND   115  1              15.34     -4.89   f
   73229 YELLOWBR  230        66750 YELOWTLP  230  1             310.15     -6.35   f
   73276 TEKLA     230        65060 ANT MINE  230  1             -22.92    -19.64   t
   73282 WYODAK     69        66725 WYODAK    230  1              11.13    -15.18   t
   73282 WYODAK     69        66725 WYODAK    230  2               7.53    -10.27   t
   73294 HUGHES    230        66725 WYODAK    230  1            -105.29      3.69   t
   79001 ARTESIA   138        66278 RANGELY   138  1               1.39      5.19   t
   79005 BEARS     345        65193 BONANZA   345  1             587.70    -25.84   t
   79026 FLAMGORG  138        65565 FLAMGORG  230  1              67.11     -5.82   t
   79026 FLAMGORG  138        65565 FLAMGORG  230  2              67.11     -5.82   t
   79046 MEEKER    138        66278 RANGELY   138  1              47.23    -10.97   t
   79067 VERNAL    138        65085 ASHLEY    138  1              91.00     -5.69   f
   79067 VERNAL    138        65192 BONANZA   138  1             -63.14    -10.77   f
   74016 WYGEN      14        66725 WYODAK    230  1               0.00      0.00   t
from area  73 to area  65 PACE                                   692.14    -61.35

   73011 AULT      230        70474 WINDSOR   230  1             212.81      5.81   f
   73013 B.CK PS   115        70005 BRUSHCPP  115  1            -118.32    -23.71   t
   73013 B.CK PS   115        70005 BRUSHCPP  115  2            -124.79    -30.76   t
   73044 COBBLKTP  115        70116 COBBLAKE  115  1              15.33      1.44   t
   73072 GOREPASS  138        79033 GOREPASS  230  1              -4.82     -4.16   t
   73105 LAPORTE   115        70256 LAPORTPS  115  1              14.73      6.26   f
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   73116 LONGPEAK  230        70410 ST.VRAIN  230  1            -12.97    -58.16   t
   73138 MT.ELBRT  230        70274 MALTA     230  1            145.53    -17.12   t
   73165 RAWHIDE   230        70350 RAWHIDE    24  1           -262.18    -67.24   f
   73165 RAWHIDE   230        70351 RAWHIDEA   14  1            -50.83    -34.25   f
   73192 STORY     230        70311 PAWNEE    230  1            131.15     40.38   f
   73211 WELD  LM  115        70470 WELD  PS  115  1             22.22    -75.43   t
   73212 WELD  LM  230        70471 WELD  PS  230  1            263.42     29.66   t
   73296 FRASER    115        70287 MILL      115  1             27.24     -7.00   t
   73400 EMIL AND  115        70476 WOODLAND  115  1             -8.54     -4.06   t
   73412 MIDWAYBR  115        70193 FTN VALL  115  1             -0.97      1.02   f
   73412 MIDWAYBR  115        70285 MIDWAYPS  115  1            -13.04     24.29   t
   73413 MIDWAYBR  230        70286 MIDWAYPS  230  1           -179.25    -87.86   f
   73414 MONUMENT  115        70308 PALMER    115  1             34.99    -12.91   f
   73477 FULLER    230        70122 COMANCHE  230  1            -86.47    -26.28   f
   73477 FULLER    230        70139 DANIELPK  230  1             63.98    -15.09   f
   79014 CRAIG     345        79058 RIFLE CU  345  1            348.75     18.90   t
   79036 GRANDJCT  345        79058 RIFLE CU  345  1           -374.42    -21.17   t
   79036 GRANDJCT  345        70205 GRANDJCT  230  1             31.46     21.01   t
   79037 GUNNISON  115        70327 PONCHA    115  1              5.58     -3.69   t
   79038 HAYDEN    138        70525 MTHARRIS  138  1              7.21      1.37   f
   79039 HAYDEN    230        79033 GOREPASS  230  1            163.49     -4.87   f
   79039 HAYDEN    230        79091 WOLCOTTP  230  1            145.62     -4.83   t
   79046 MEEKER    138        79056 RIFLE CU  138  1              0.62      5.21   t
   79048 MONTROSE  115        79034 GRANDJCT  115  1            -27.76      5.90   f
   79054 PONCHABR  230        70375 SAN LUIS  230  1             79.66     -7.04   f
   79059 RIFLE WA  230        70358 RIFLE PS  230  1             14.57     -9.24   t
   79059 RIFLE WA  230        79057 RIFLE CU  230  1             64.57     27.65   f
   79174 MOLINA-L  115        79173 COLBRAN   115  1              0.00      0.53   t
   79250 AMATLAS   230        70358 RIFLE PS  230  1             75.89      7.56   t
   73551 W CANON   230        70550 W CANON   115  1             22.29     19.50   f
from area  73 to area  70 PSCOLORADO                            626.74   -298.36

   79061 SHIP PS   230        79063 SHIPROCK  230  1            140.60    -40.36   t
   79260 ELPASOTP  115        79105 GLADETAP  115  1             12.73    -16.23   t
from area  73 to area  19 WAPA L.C.                             153.33    -56.59

   73229 YELLOWBR  230        63001 CROS PHA  230  1           -154.61     24.75   f
from area  73 to area  63 WAPA U.M.                            -154.61     24.75

Total from area  73 WAPA R.M.                                  1612.19   -465.69

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   63002 CRSOVRUM  230        62051 HARDIN    230  1           -155.74     -8.38   f
   63002 CRSOVRUM  230        62056 HUNTLEY   230  1            175.15    -19.44   f
   63008 HAVRE     161        62023 GT FALLS  161  1            -14.06     12.26   t
   63014 TIBERTAP  115        62027 SHELBY    115  1             -0.27      2.56   t
   63015 VERONA    161        62024 RAINBOW   161  1            -12.97     12.05   t
from area  63 to area  62 MONTANA                                -7.89     -0.95

   63001 CROS PHA  230        73229 YELLOWBR  230  1            154.61    -24.75   t
from area  63 to area  73 WAPA R.M.                             154.61    -24.75

Total from area  63 WAPA U.M.                                   146.72    -25.69
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MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Summation of selected system

	-----MW----	----MVAR---		
Generation	70752.531	9568.504	Generators	2564
Actual Load	60440.602	19741.215	Loads	6822
Net actual shunt	0.279	-2058.251	Shunts	1297
Net actual svd	0.000	-5522.512	Svd	587
Loss	3164.187	-2375.254	Buses	13198
			Lines	10963
			Transformers	5151
MVA-miles	6365323.0	988281.1	DC buses	6
Miles	46985.316		DC converters	10
			DC lines	3

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area 54 [ALBERTA]

	-----MW----	----MVAR---		
Generation	7862.734	857.156	Generators	142
Actual Load	7899.199	2641.000	Loads	512
Net actual shunt	0.000	-22.487	Shunts	9
Net actual svd	0.000	-1851.935	Svd	76
Net Interchange	-399.429	-37.075	Buses	992
Sched Interchange	-400.000		Lines	781
Loss	362.962	127.657	Transformers	406
MVA-miles	1111697.5	226120.0	DC buses	0
Miles	18637.697		DC converters	0
			DC lines	0
Loss at 13.20 Kv	1.733	25.322		
Loss at 13.80 Kv	3.367	88.111		
Loss at 14.40 Kv	0.019	2.275		
Loss at 25.00 Kv	1.931	27.273		
Loss at 34.00 Kv	0.053	0.877		
Loss at 69.00 Kv	18.964	-3.364		
Loss at 138.00 Kv	151.491	-263.412		
Loss at 240.00 Kv	167.689	-572.763		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	17.714	823.337		
Largest mismatch MVA	0.0148	0.0989		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area 50 [B.C.HYDRO]

	-----MW----	----MVAR---		
Generation	10252.023	944.035	Generators	112
Actual Load	6889.125	2565.790	Loads	395
Net actual shunt	0.000	2956.868	Shunts	104
Net actual svd	0.000	2142.560	Svd	125
Net Interchange	2849.668	-270.839	Buses	1054
Sched Interchange	2849.900		Lines	718
Loss	513.227	-6450.337	Transformers	645
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.307	7.917		
Loss at 13.80 Kv	10.053	491.574		
Loss at 34.00 Kv	0.000	0.002		
Loss at 46.00 Kv	0.302	0.084		
Loss at 132.00 Kv	36.986	105.930		
Loss at 138.00 Kv	15.103	-120.797		
Loss at 230.00 Kv	52.996	-615.890		
Loss at 500.00 Kv	340.236	-6984.775		
Loss at other Kv	57.244	665.618		
Largest mismatch MVA	0.0522	0.0499		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area 60 [IDAHO]

	-----MW----	----MVAR---

Generation	3592.842	410.647	Generators	62
Actual Load	2984.000	711.600	Loads	64
Net actual shunt	0.000	-594.358	Shunts	15
Net actual svd	0.000	0.000	Svd	0
Net Interchange	420.166	-123.394	Buses	157
Sched Interchange	420.000		Lines	120
Loss	188.677	416.801	Transformers	96
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.272	5.839		
Loss at 13.80 Kv	3.431	119.422		
Loss at 14.40 Kv	0.880	34.230		
Loss at 34.50 Kv	0.000	0.000		
Loss at 100.00 Kv	0.541	22.781		
Loss at 115.00 Kv	0.434	0.353		
Loss at 138.00 Kv	19.455	-6.642		
Loss at 161.00 Kv	1.653	2.282		
Loss at 230.00 Kv	82.553	16.552		
Loss at 345.00 Kv	75.257	88.845		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	4.201	133.141		
Largest mismatch MVA	0.0039	0.0145		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area 62 [MONTANA]

	-----MW----	----MVAR---		
Generation	3969.748	670.300	Generators	22
Actual Load	1422.895	610.184	Loads	200
Net actual shunt	0.279	-119.930	Shunts	56
Net actual svd	0.000	232.349	Svd	12
Net Interchange	2368.076	-429.126	Buses	314
Sched Interchange	2368.000		Lines	317
Loss	178.496	376.823	Transformers	89
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.000	36.457		
Loss at 69.00 Kv	0.537	2.550		
Loss at 100.00 Kv	17.891	-41.394		
Loss at 115.00 Kv	2.533	-17.440		
Loss at 161.00 Kv	41.124	26.896		
Loss at 230.00 Kv	32.512	-2.669		
Loss at 500.00 Kv	82.067	118.180		
Loss at other Kv	1.833	254.244		
Largest mismatch MVA	0.0058	0.0330		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area 40 [NORTHWEST]

	-----MW----	----MVAR---		
Generation	27361.391	4041.300	Generators	383
Actual Load	22671.295	6850.328	Loads	1652
Net actual shunt	0.000	-1878.790	Shunts	43
Net actual svd	0.000	-4240.109	Svd	159
Net Interchange	3513.996	1077.441	Buses	2740
Sched Interchange	3514.000		Lines	2710
Loss	1176.082	2232.461	Transformers	654
MVA-miles	4697860.5	618819.8	DC buses	4
Miles	18469.418		DC converters	4
			DC lines	2
Loss at 11.00 Kv	0.000	0.607		
Loss at 13.20 Kv	-0.000	4.913		
Loss at 13.80 Kv	4.789	206.596		
Loss at 14.40 Kv	0.286	13.120		
Loss at 25.00 Kv	3.151	164.612		
Loss at 34.50 Kv	0.346	6.213		
Loss at 69.00 Kv	15.169	42.943		
Loss at 100.00 Kv	0.119	-0.087		
Loss at 115.00 Kv	219.923	508.997		
Loss at 230.00 Kv	346.941	1693.026		
Loss at 345.00 Kv	16.121	-174.373		

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Loss at 500.00 Kv         444.055    -1548.166
Loss at other Kv          125.181     1314.056

Largest mismatch MVA       0.0257       0.1069

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area  65 [PACE                           ]

                      -----MW----  ----MVAR---
Generation               5134.663     1027.436        Generators           52
Actual Load              6293.716     1960.150        Loads               274
Net actual shunt            0.000    -1756.653        Shunts               74
Net actual svd              0.000      341.504        Svd                   3
Net Interchange         -1481.120     -540.066        Buses               566
Sched Interchange       -1481.000                     Lines               409
Loss                      322.065     1022.497        Transformers        338

MVA-miles                     5.0          1.6        DC buses              0
Miles                       1.900                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           0.880       30.332
Loss at  34.50 Kv           1.014        7.645
Loss at  46.00 Kv           6.349      137.728
Loss at  69.00 Kv           1.667       22.760
Loss at 100.00 Kv           0.056        1.045
Loss at 115.00 Kv           3.241       -8.404
Loss at 138.00 Kv          81.086      233.031
Loss at 161.00 Kv          16.707       11.686
Loss at 230.00 Kv         112.674      379.560
Loss at 345.00 Kv          94.293      104.840
Loss at 500.00 Kv           0.003        3.390
Loss at other Kv            4.094       98.882

Largest mismatch MVA       0.0123       0.0335

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area  70 [PSCOLORADO                     ]

                      -----MW----  ----MVAR---
Generation               5162.184     1201.745        Generators           66
Actual Load              6332.696     2372.604        Loads               362
Net actual shunt            0.000        0.000        Shunts                0
Net actual svd              0.000    -1689.697        Svd                  43
Net Interchange         -1333.223      548.585        Buses               501
Sched Interchange       -1332.800                     Lines               461
Loss                      162.701      -29.770        Transformers        148

MVA-miles                 22312.4       6436.3        DC buses              0
Miles                     564.500                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           3.852      127.295
Loss at  14.40 Kv           0.080        0.801
Loss at  25.00 Kv           0.012        0.161
Loss at  46.00 Kv           0.193        0.005
Loss at  69.00 Kv           7.127        1.957
Loss at 100.00 Kv           0.030       -0.481
Loss at 115.00 Kv          31.673      -48.682
Loss at 138.00 Kv           0.303       -5.355
Loss at 230.00 Kv          94.733       62.271
Loss at 345.00 Kv           0.001        0.086
Loss at 500.00 Kv          17.512     -398.901
Loss at other Kv            7.184      231.073

Largest mismatch MVA       0.0168       0.0130

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area  64 [SIERRA                         ]

                      -----MW----  ----MVAR---
Generation               1375.351      124.215        Generators           22
Actual Load              1719.091      458.744        Loads               121
Net actual shunt            0.000     -188.130        Shunts               30
Net actual svd              0.000       69.701        Svd                   5
Net Interchange          -399.129       58.180        Buses               275
Sched Interchange        -399.000                     Lines               197
Loss                       55.389     -274.273        Transformers        117
```

MVA-miles	64368.3	38854.5	DC buses	0
Miles	1042.600		DC converters	0
			DC lines	0
Loss at 13.80 Kv	2.542	51.443		
Loss at 69.00 Kv	0.000	0.000		
Loss at 115.00 Kv	0.479	-6.148		
Loss at 230.00 Kv	1.476	-103.281		
Loss at 345.00 Kv	9.264	-439.441		
Loss at other Kv	41.627	223.154		
Largest mismatch MVA	0.0095	0.0361		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area 52 [W KOOTENAY]

	-----MW----	----MVAR---		
Generation	596.550	99.148	Generators	20
Actual Load	722.400	210.200	Loads	64
Net actual shunt	0.000	-77.802	Shunts	27
Net actual svd	0.000	-130.683	Svd	4
Net Interchange	-150.488	-8.964	Buses	260
Sched Interchange	-149.900		Lines	165
Loss	24.638	106.395	Transformers	117
MVA-miles	30813.5	4868.4	DC buses	0
Miles	986.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	-0.000	8.258		
Loss at 13.80 Kv	0.000	0.000		
Loss at 14.40 Kv	-0.000	29.963		
Loss at 25.00 Kv	0.000	0.000		
Loss at 138.00 Kv	0.397	-0.481		
Loss at 161.00 Kv	9.043	11.278		
Loss at 230.00 Kv	1.522	-8.745		
Loss at other Kv	13.676	66.120		
Largest mismatch MVA	0.0014	0.0062		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area 73 [WAPA R.M.]

	-----MW----	----MVAR---		
Generation	5389.783	187.660	Generators	80
Actual Load	3608.290	1237.018	Loads	355
Net actual shunt	0.000	-298.020	Shunts	4
Net actual svd	0.000	-378.238	Svd	53
Net Interchange	1612.186	-465.694	Buses	620
Sched Interchange	1612.000		Lines	567
Loss	169.318	92.624	Transformers	174
MVA-miles	438265.6	93180.6	DC buses	0
Miles	7283.200		DC converters	0
			DC lines	0
Loss at 13.80 Kv	6.186	91.195		
Loss at 34.50 Kv	0.312	4.061		
Loss at 69.00 Kv	5.215	-11.838		
Loss at 115.00 Kv	63.928	-121.745		
Loss at 138.00 Kv	9.726	-3.454		
Loss at 230.00 Kv	32.405	-295.743		
Loss at 345.00 Kv	44.283	104.139		
Loss at other Kv	7.263	326.009		
Largest mismatch MVA	0.0092	0.0211		

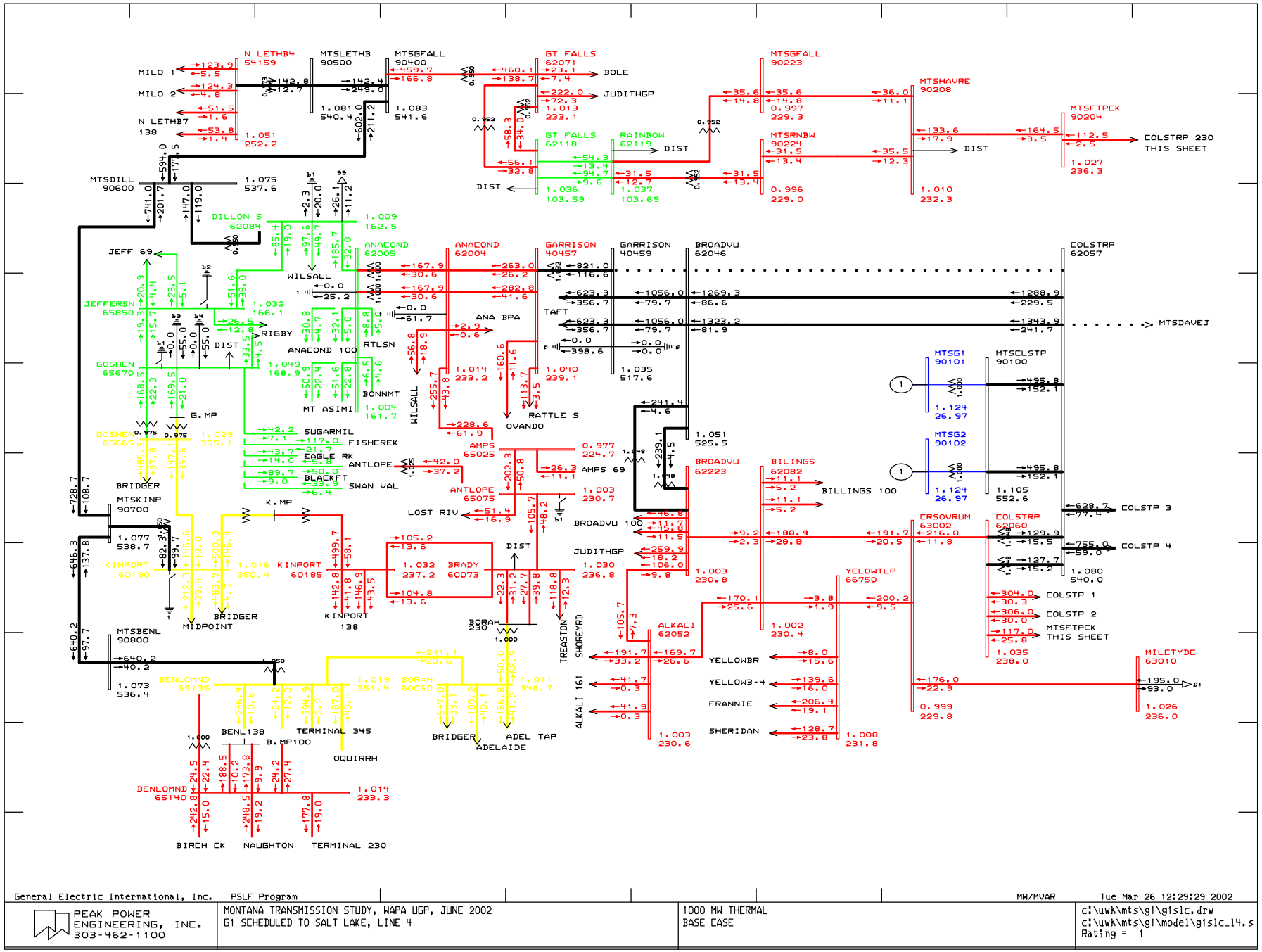
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, WITH LINE 3

Area 63 [WAPA U.M.]

	-----MW----	----MVAR---		
Generation	55.256	4.864	Generators	1
Actual Load	-102.100	123.600	Loads	17
Net actual shunt	0.000	-78.951	Shunts	1
Net actual svd	0.000	-17.963	Svd	4
Net Interchange	146.723	-25.690	Buses	21
Sched Interchange	147.000		Lines	12
Loss	10.633	3.868	Transformers	3

MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.217	6.163		
Loss at 115.00 Kv	0.024	-7.063		
Loss at 161.00 Kv	0.922	-47.912		
Loss at 230.00 Kv	9.469	52.680		
Largest mismatch MVA	0.0001	0.0007		

B.8 slcl4



General Electric International, Inc. PSLF Program MW/MVAR Tue Mar 26 12:29:29 2002

PEAK POWER ENGINEERING, INC. 303-462-1100

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

1000 MW THERMAL
BASE CASE

c:\uwk\mts\g1\g1slc.drw
c:\uwk\mts\g1\model\g1slc_l4.s
Rating = 1

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Percent Loading Summary -- using rating 1 - 100.0 percent of rating

----------from----------				---------- to ----------									rate	per cent	
--no.--	--name--	-kv-	-ar-	--no.--	--name--	-kv-	-ar-	ck	---mw---	-mvar-	-mva--	------		loading	
54611	RUTH LK8	69	54	54839	RUTH LK1	138	54	1	57.9	13.8	59.5	45.0M		132.3	T
64026	CARSON	120	64	64027	CARSON T	120	64	1	-55.8	-6.5	56.1	216.5A		130.8	F
55015	DOME EA9	14	54	55525	163ST2	240	54	T2	-57.3	-4.6	57.5	45.0M		128.6	T
64194	DAYTON	120	64	64254	DAYTON	25	64	1	16.6	6.5	17.8	14.0M		127.4	F
79026	FLAMGORG	138	73	79029	FLAMGORG	69	73	1	22.1	6.0	22.9	19.0M		120.4	F
64099	SPAN SPG	120	64	64114	TRACY	120	64	1	-127.3	-2.1	127.3	514.8A		117.8	F
64091	RENO	120	64	64263	RENO	25	64	1	50.3	20.4	54.3	46.7M		116.3	F
70249	LAJUNTAW	115	70	70250	LAJUNTAW	69	70	1	26.2	12.4	29.0	25.0M		116.0	F
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	1	50.2	20.2	54.2	46.7M		116.0	F
64091	RENO	120	64	64263	RENO	25	64	2	50.2	20.3	54.1	46.7M		115.9	F
62005	ANACOND	161	62	62084	DILLON S	161	62	1	185.7	-32.0	188.5	591.7A		113.8	F
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	2	47.8	19.3	51.6	46.7M		110.4	F
64202	HAN CRTP	120	64	64203	TWN CRTP	120	64	1	74.2	19.8	76.8	356.0A		109.0	F
64201	PINSN TP	120	64	64202	HAN CRTP	120	64	1	74.6	20.6	77.4	356.0A		108.9	F
64200	REDHOUSE	120	64	64201	PINSN TP	120	64	1	75.9	23.6	79.4	356.0A		108.8	T
64129	VALMY	120	64	64200	REDHOUSE	120	64	1	77.0	26.3	81.4	356.0A		108.5	T
54234	CASTLE R	138	54	55972	CASTLE-1	25	54	1	-50.0	21.0	54.2	50.0M		108.4	F
50459	KIT287	287	50	51075	KIT B5	13	50	5	80.3	24.1	83.8	79.0M		106.1	F
54232	PANCAN 9	138	54	55386	EMPRESS9	25	54	T1	15.7	1.0	15.7	15.0M		104.7	F
64114	TRACY	120	64	64118	TRACY G2	14	64	1	-82.5	-3.6	82.6	81.0M		103.9	T
48319	PLEASANT	115	40	48355	RATHDRUM	115	40	1	-84.1	-16.3	85.6	430.8A		103.5	F
43017	BEAVER	14	40	43021	BEAVER	230	40	1	356.8	43.6	359.5	348.0M		103.3	F
54154	E CALGAR	240	54	54189	ENMX2SD9	138	54	T1	236.0	-168.7	290.1	300.0M		103.2	T
54052	BLUERIDG	138	54	55281	BLUERDGE	14	54	T1	20.8	15.2	25.7	25.0M		102.9	F
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	56	155.0	-9.7	155.3	155.0M		101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	78	155.0	-9.7	155.3	155.0M		101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	9A	155.0	-9.7	155.3	155.0M		101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	BC	155.0	-9.7	155.3	155.0M		101.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	34	155.0	-9.7	155.3	155.0M		101.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	12	155.0	-9.7	155.3	155.0M		101.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	DE	155.0	-9.7	155.3	155.0M		101.8	T
41304	COUGAR T	7	40	46211	COUGAR T	115	40	1	28.0	-8.6	29.3	30.0M		101.8	T
46733	LAGRND5	14	40	46735	LGBK5	115	40	1	40.0	6.5	40.5	40.0M		101.3	F

```
Processing file c:\uwk\mts\base\rvolthsbs.out
Processing file c:\uwk\mts\g1\rvoltslcl4.out

Compvolt found the following for comparisons:
     349 Voltage Violations read from c:\uwk\mts\base\rvolthsbs.out
     353 Voltage Violations read from c:\uwk\mts\g1\rvoltslcl4.out


**** VOLTS:  NEW ****
Component                   w/o Prj         w/ Prj  Rating
90400 MTSGFALL  500   0.95 <= pu <= 1.05    1.0832  1.00 pu kV
90500 MTSLETHB  500   0.95 <= pu <= 1.05    1.0808  1.00 pu kV
90600 MTSDILL   500   0.95 <= pu <= 1.05    1.0752  1.00 pu kV
90700 MTSKINP   500   0.95 <= pu <= 1.05    1.0775  1.00 pu kV
90800 MTSBENL   500   0.95 <= pu <= 1.05    1.0728  1.00 pu kV
50390 KSHTP11   132   0.95 <= pu <= 1.05    1.0501  1.00 pu kV
50658 WBK138    138   0.95 <= pu <= 1.05    1.0504  1.00 pu kV
50671 AON138    138   0.95 <= pu <= 1.05    1.0504  1.00 pu kV
50702 ACK500    500   0.95 <= pu <= 1.05    1.0502  1.00 pu kV
50703 NIC500    500   0.95 <= pu <= 1.05    1.0507  1.00 pu kV
50788 KCL230    230   0.95 <= pu <= 1.05    1.0513  1.00 pu kV
50900 AON138TP  138   0.95 <= pu <= 1.05    1.0504  1.00 pu kV
40323 CUSTER W  500   0.95 <= pu <= 1.05    1.0509  1.00 pu kV
66465 SWAN VAL  161   0.95 <= pu <= 1.05    1.0554  1.00 pu kV
52409 KIM161    161   0.95 <= pu <= 1.05    1.0512  1.00 pu kV
52814 KIM-T3    161   0.95 <= pu <= 1.05    1.0512  1.00 pu kV

**** VOLTS: WORSE ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS: BETTER ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS:  AWAY ****
Component             w/o Prj      w/ Prj          Rating
54150 LANGDON2  500   1.0533  0.95 <= pu <= 1.05   1.00 pu kV
54195 RUNDLE S  138   1.0504  0.95 <= pu <= 1.05   1.00 pu kV
54223 WARE JCT  240   1.0511  0.95 <= pu <= 1.05   1.00 pu kV
54444 SPRINGB9  138   1.0505  0.95 <= pu <= 1.05   1.00 pu kV
50776 NTL138    138   1.0539  0.95 <= pu <= 1.05   1.00 pu kV
62033 ANA BPA   115   1.0568  0.95 <= pu <= 1.05   1.00 pu kV
62053 BROADV&2  500   1.0736  0.95 <= pu <= 1.05   1.00 pu kV
62054 BROADV&1  500   1.0744  0.95 <= pu <= 1.05   1.00 pu kV
40091 BELL BPA  500   1.0665  0.95 <= pu <= 1.05   1.00 pu kV
40459 GARRISON  500   1.0778  0.95 <= pu <= 1.05   1.00 pu kV
66235 PINTO PS  345   1.0501  0.95 <= pu <= 1.05   1.00 pu kV
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GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

overvoltage summary > 1.100000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54090	BICKERD4	240	1.1046	54153	BRAZEAU4	240	1.1053	54329	KEEPHIL4	240	1.1115
54524	GENESEE4	240	1.1085	54681	NEVIS 7	138	1.1095	54802	STURGEO9	138	1.1002
55969	770S701T	138	1.1041	51017	KMS230	230	1.1087	90100	MTSCLSTP	500	1.1052

overvoltage summary > 1.050000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
90400	MTSGFALL	500	1.0832	90500	MTSLETHB	500	1.0808	90600	MTSDILL	500	1.0752
90700	MTSKINP	500	1.0775	90800	MTSBENL	500	1.0728	54012	FOX CREE	138	1.0508
54013	KAYBOB 9	138	1.0516	54014	GULF RO9	138	1.0591	54021	WESGEN 7	138	1.0506
54050	RBCUPIL7	138	1.0506	54054	LAMOURE4	240	1.0793	54073	IPPL ST9	138	1.0568
54077	BIGSTON4	240	1.0598	54078	CHEVRON7	138	1.0514	54081	METIS644	240	1.0836
54082	BICKERD7	138	1.0556	54090	BICKERD4	240	1.1046	54097	BIG HOR9	138	1.0816
54098	STRACHA9	138	1.0575	54103	DEERLAN4	240	1.0818	54121	ELLERSLI	240	1.0758
54125	SUNDANL9	138	1.0542	54126	WABAMUN4	240	1.0868	54128	SUNDANM9	240	1.0964
54129	E EDMON4	240	1.0707	54130	N CALDE4	240	1.0644	54131	N BARRH4	240	1.0835
54139	GAETZ 4	240	1.0595	54141	HIGHVAL9	138	1.0537	54142	WILLESD4	240	1.0960
54144	RED DEE4	240	1.0633	54147	BENALTO4	240	1.0764	54148	E CROSS4	240	1.0581
54152	JANET 4	240	1.0527	54153	BRAZEAU4	240	1.1053	54157	PEIGAN 4	240	1.0670
54159	N LETHB4	240	1.0509	54184	SARCEE 7	138	1.0522	54249	RP05103S	138	1.0668
54261	SPRAY S	138	1.0504	54269	COALSPU7	138	1.0608	54281	MILO 2	240	1.0550
54285	LEISMER9	240	1.0747	54287	GREGG R9	138	1.0699	54302	MARIONA9	138	1.0540
54325	CHEV KG9	138	1.0514	54326	COAL VA9	138	1.0581	54329	KEEPHIL4	240	1.1115
54335	W BROOK4	240	1.0533	54384	ENMX28S9	138	1.0515	54412	BENBOW 9	138	1.0516
54441	946/947X	240	1.0758	54505	JASPER 4	240	1.0656	54506	BELLAMY4	240	1.0756
54509	ARGYLL W	240	1.0757	54512	DOME T29	240	1.0763	54513	LAMBTON4	240	1.0703
54514	CLOVERB4	240	1.0692	54518	ARGYLL E	240	1.0758	54519	CASTLTX2	240	1.0704
54521	PETROLIA	240	1.0744	54524	GENESEE4	240	1.1085	54542	RBW LAK7	138	1.0504
54546	CHINCHA7	138	1.0574	54547	KEG RVR7	138	1.0560	54548	KEMP RV9	138	1.0576
54549	HOTCHKS7	138	1.0595	54552	CADOTTE9	138	1.0583	54553	NORCEN 9	138	1.0551
54554	LUBICON7	138	1.0581	54555	CRANBER9	138	1.0589	54558	WESLY C7	138	1.0790
54559	CARMON 9	138	1.0766	54560	PEACE/29	138	1.0752	54561	DIASHOW7	138	1.0735
54589	DOME CU7	138	1.0671	54593	DONNELL9	138	1.0668	54594	TAP7L487	138	1.0684
54595	TRIANGL7	138	1.0617	54596	VALLEYV9	138	1.0781	54600	L.SMOKY7	138	1.0846
54601	STURGEO7	138	1.0843	54606	SIMONET9	138	1.0845	54607	FOXCRK/2	138	1.0514
54608	GOOSE R9	138	1.0665	54612	RUTH LA7	138	1.0599	54613	RUTH LK7	138	1.0603
54618	PARS CR7	138	1.0508	54621	MITS E.4	240	1.0564	54622	MITS E.7	138	1.0890
54623	AEC MILL	138	1.0880	54624	OTAUWAU7	138	1.0889	54633	LOU CR.7	138	1.0569
54634	SARHLK/2	138	1.0510	54636	ESSO JU7	138	1.0518	54637	MORSE RV	138	1.0522
54639	VIRGINI9	138	1.0527	54643	WOLF LK9	138	1.0706	54646	MARG LK4	240	1.0738
54647	MARG LK7	138	1.0859	54648	LACOREY9	138	1.0678	54652	BONNY 9	138	1.0538
54654	BONN SVC	138	1.0538	54655	WHITFISH	240	1.0854	54675	PAINTRT7	240	1.0884
54680	NEVIS 4	240	1.0743	54681	NEVIS 7	138	1.1095	54685	3HILLS/3	138	1.0569
54691	MICH. C9	138	1.0720	54693	WINT HI9	138	1.0733	54694	BULLPON9	138	1.0734
54707	SHEER 14	240	1.0612	54709	ANDERSO4	240	1.0616	54710	ANDERSON	138	1.0835
54711	SHEER 24	240	1.0612	54715	BAT. RV7	138	1.0812	54721	BAT RV79	240	1.0916
54723	CORDEL 4	240	1.0916	54729	PRIM TAP	138	1.0650	54730	PRIMROSE	138	1.0710
54796	791S701T	138	1.0628	54802	STURGEO9	138	1.1002	54806	946/947N	240	1.0707
54809	732S901T	240	1.0666	54818	VERMILA9	138	1.0786	54822	766S901T	240	1.0623

54823	NEVIS 9	138	1.0874	54835	791S702T	138	1.0631	54836	MILNERB9	138	1.0778
54844	709S702T	138	1.0724	54847	BAT RV80	240	1.0916	54848	791S703T	138	1.0530
54962	KAYBOBTP	138	1.0516	54963	CANMORE9	138	1.0501	54978	EAST IN4	240	1.0704
54983	MARION T	138	1.0540	54984	HIGHVL T	138	1.0537	54988	CROSSF T	240	1.0581
54995	W.GRN TP	240	1.0960	55012	BASSET 7	138	1.0561	55013	HAIGRIVE	138	1.0571
55067	FTNELSON	138	1.0665	55072	SYNC_D04	240	1.0563	55073	AURORA 4	240	1.0619
55075	SEAL LK9	138	1.0641	55147	MILNERC9	138	1.0879	55226	WABASCA9	240	1.0531
55272	FIELDGA9	138	1.0512	55280	BRINTNEL	240	1.0503	55515	PRIMROSE	138	1.0563
55763	BC BORDE	138	1.0627	55891	904AL TP	240	1.0704	55894	SARCEE M	138	1.0505
55912	740L JNC	138	1.0608	55913	G.ROBB T	138	1.0599	55924	CH KGT T	138	1.0514
55943	MILO 1	240	1.0549	55969	770S701T	138	1.1041	50010	COM132	132	1.0732
50020	CMS230	230	1.0500	50036	RBW230	230	1.0551	50037	PEM230	230	1.0588
50038	RBW230-1	230	1.0536	50182	ARN132	132	1.0839	50185	ALZ230	230	1.0535
50186	ROS230	230	1.0632	50187	BRT230	230	1.0701	50188	BUT230	230	1.0500
50193	BRT360	360	1.0500	50313	VIT132	132	1.0524	50314	PVO133	132	1.0512
50315	PVO132	132	1.0518	50323	DMR132	132	1.0564	50330	LDR132	132	1.0505
50331	GLD132	132	1.0523	50334	KGH132	132	1.0534	50335	UTA132	132	1.0536
50342	SCA132	132	1.0500	50343	KSH132-2	132	1.0507	50346	SHA2	132	1.0511
50347	GOW132	132	1.0526	50348	GTP132	132	1.0561	50349	CLD132	132	1.0578
50350	SOO132	132	1.0585	50351	JOR132	132	1.0622	50352	PML132	132	1.0523
50353	WOS132	132	1.0540	50354	GLSTP17	132	1.0568	50355	GLSTP18	132	1.0554
50356	DND132	132	1.0529	50390	KSHTP11	132	1.0501	50391	KSHTP14	132	1.0510
50394	SHATP14	132	1.0511	50395	SALTP17	132	1.0553	50396	SALTP18	132	1.0555
50447	TKW138	138	1.0538	50463	SKA500	500	1.0635	50464	TKW500	500	1.0692
50540	GMS230	230	1.0548	50541	KDS230	230	1.0550	50545	BLW230	230	1.0663
50546	SCK230	230	1.0604	50547	HMH230	230	1.0588	50548	BLM230	230	1.0587
50549	QNT230	230	1.0579	50550	QRP230	230	1.0660	50551	TLR230	230	1.0585
50553	BCR230	230	1.0585	50554	RBF230	230	1.0672	50556	LAP230	230	1.0569
50557	SNK230	230	1.0589	50558	GMS500	500	1.0500	50560	KDS500	500	1.0625
50561	WSN500	500	1.0508	50562	GLN500	500	1.0685	50653	NIC138	138	1.0541
50655	VVW138	138	1.0522	50656	SVA138	138	1.0533	50658	WBK138	138	1.0504
50659	BDM138	138	1.0526	50660	WGS138	138	1.0613	50661	MON138	138	1.0586
50671	AON138	138	1.0504	50672	BKL138	138	1.0532	50679	BLU138	138	1.0554
50680	VLM138	138	1.0607	50686	SCO138	138	1.0692	50687	ABA138	138	1.0601
50691	NIC230	230	1.0514	50700	MCA500	500	1.0500	50701	REV500	500	1.0500
50702	ACK500	500	1.0502	50703	NIC500	500	1.0507	50729	PRI138TP	138	1.0691
50783	SEL230	230	1.0610	50785	SEV230	230	1.0605	50788	KCL230	230	1.0513
50792	SEL500	500	1.0500	50899	ABA138TP	138	1.0602	50900	AON138TP	138	1.0504
50902	BDM138TP	138	1.0526	50922	DNDTAP	132	1.0536	50923	HSY-PH	132	1.0563
50924	ESQ-PH	132	1.0529	50928	SCG IPP	132	1.0691	50934	JULTP130	132	1.0534
51017	KMS230	230	1.1087	51045	ALH230	230	1.0590	60085	BRIDGER	345	1.0500
60240	MIDPOINT	500	1.0763	90100	MTSCLSTP	500	1.1052	62012	TOWN2	500	1.0590
62013	TOWN1	500	1.0590	62046	BROADVU	500	1.0509	62057	COLSTRP	500	1.0800
40045	ALLSTON	500	1.0730	40051	ALVEY	500	1.0812	40061	ASHE	500	1.0800
40111	BIG EDDY	500	1.0769	43049	BOARD F	500	1.0840	40139	BONNVILE	115	1.0500
47013	BRIDGPRT	115	1.0536	40155	BUCKLEY	500	1.0788	45029	BURNS	500	1.0565
45035	CAPTJACK	500	1.0797	46209	CARMEN	115	1.0620	41311	CELILO1	500	1.0768
41312	CELILO2	500	1.0768	40233	CHIEF JO	500	1.0800	40287	COULEE	500	1.0810
40302	COVINGT4	500	1.0760	40306	COVINGT5	500	1.0766	43115	COYO M1	500	1.0557
43123	COYOTE	500	1.0847	40323	CUSTER W	500	1.0509	45095	DIXONVLE	500	1.0820
40369	DWORSHAK	500	1.0644	40381	ECHOLAKE	500	1.0794	40451	GAR1EAST	500	1.0622
40453	GAR2EAST	500	1.0622	40485	GREEN PT	115	1.0520	40489	GRIZZLY	500	1.0766
40499	HANFORD	500	1.0820	40521	HATWAI	500	1.0661	45137	HERMIST	230	1.0509
41212	HILLS CR	115	1.0500	40553	HOT SPR	500	1.0724	40585	JOHN DAY	500	1.0850
40601	KEELER	500	1.0833	45262	KFALLS	500	1.0819	40629	LANE	500	1.0751

40665	LIT GOOS	500	1.0800	40679	LOW GRAN	500	1.0800	40683	LOW MON	500	1.0800
40687	MALIN	500	1.0784	40693	MAPLE VL	500	1.0784	40699	MARION	500	1.0820
40711	MCLOUGLN	500	1.0704	40721	MCNARY	345	1.0510	40723	MCNARY	500	1.0799
45197	MERIDINP	500	1.0801	40749	MONROE	500	1.0810	40797	OLYMPIA	500	1.0792
40809	OSTRNDER	500	1.0729	40821	PAUL	500	1.0800	40827	PEARL	500	1.0804
40837	PONDROSA	500	1.0823	40869	RAVER	500	1.0803	43485	ROUND BU	500	1.0731
40913	SACJAWEA	500	1.0754	40917	SACJWA T	500	1.0767	40941	SANTIAM	500	1.0812
40949	SATSOP	500	1.0800	40957	SCHULTZ	500	1.0847	40973	SICKLER	500	1.0796
40989	SLATT	500	1.0813	41043	SUMMER L	500	1.0817	45289	SWIFT	230	1.0500
41051	TACOMA	500	1.0801	41057	TAFT	500	1.0633	41095	TROUTDAL	500	1.0649
41113	VANTAGE	500	1.0755	45337	WEED JPS	115	1.0517	47099	WELLS	115	1.0628
66225	PINTO	345	1.0512	66465	SWAN VAL	161	1.0554	52226	PRI138	138	1.0692
52229	KER138	138	1.0727	52230	HED138	138	1.0717	52409	KIM161	161	1.0512
52426	MAS138	138	1.0717	52814	KIM-T3	161	1.0512	52815	PRI-T2	138	1.0700

undervoltage summary < 0.900000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)

undervoltage summary < 0.950000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
50781	NTL VR	138	0.9441	48069	CHESTER	115	0.9430	48165	IRVIN	115	0.9472
48310	OPORTUNE	115	0.9477	48299	OPPORTUN	115	0.9451	48306	OTIS	230	0.9367
70249	LAJUNTAW	115	0.9285	64072	MEYERS	120	0.9492	64092	RND HILL	120	0.9474
64102	STATELIN	120	0.9465	64203	TWN CRTP	120	0.9464				

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

		generation capacity	generation on-line	load categories power	load categories current	load categories imped.	shunt	svd	net inter	losses	slack bus
area name	ALBERTA										
mw		10743.6	7869.5	7899.2	0.0	0.0	0.0	0.0	-400.2	370.5	66.1
54 mvar		4916.5	954.8	2641.0	0.0	0.0	-22.4	-1842.0	256.4	-341.0	11.9
area name	B.C.HYDRO										
mw		14693.0	10251.3	6889.1	0.0	0.0	0.0	0.0	2850.5	511.7	197.8
50 mvar		6719.0	912.0	2565.8	0.0	0.0	2957.9	2147.0	-300.5	-6458.3	8.4
area name	IDAHO										
mw		4676.4	3576.1	2984.0	0.0	0.0	0.0	0.0	420.5	171.6	153.8
60 mvar		2192.5	113.9	711.6	0.0	0.0	-591.6	0.0	-442.0	290.7	-0.2
area name	MONTANA										
mw		4502.2	3900.7	1422.9	0.0	0.0	0.4	0.0	2220.8	256.6	688.7
62 mvar		1929.0	801.8	610.2	0.0	0.0	-121.8	880.8	-803.1	701.1	152.4
area name	NORTHWEST										
mw		43502.3	27334.8	22671.3	0.0	0.0	0.0	0.0	3513.9	1149.6	572.8
40 mvar		15475.0	3740.8	6850.3	0.0	0.0	-1889.1	-4217.5	1226.6	1770.6	29.0
area name	PACE										
mw		6212.0	5059.2	6293.7	0.0	0.0	0.0	0.0	-1481.0	246.5	138.2
65 mvar		3201.9	320.4	1960.1	0.0	0.0	-1774.5	-47.8	121.9	3.2	17.8
area name	PSCOLORADO										
mw		5806.0	5190.5	6332.7	0.0	0.0	0.0	0.0	-1333.0	190.8	111.5
70 mvar		3667.3	1762.6	2372.6	0.0	0.0	0.0	-1672.3	280.7	781.6	33.1
area name	SIERRA										
mw		1901.7	1374.3	1719.1	0.0	0.0	0.0	0.0	-399.3	54.5	108.3
64 mvar		925.4	110.1	458.7	0.0	0.0	-188.5	69.6	55.8	-285.5	23.1
area name	W KOOTENAY										
mw		763.5	596.5	722.4	0.0	0.0	0.0	0.0	-150.4	24.6	104.6
52 mvar		450.0	91.9	210.2	0.0	0.0	-77.9	-130.7	-15.6	105.9	23.7
area name	WAPA R.M.										
mw		6091.6	5384.0	3608.3	0.0	0.0	0.0	0.0	1612.9	162.8	501.6
73 mvar		2883.8	180.2	1237.0	0.0	0.0	-298.1	-358.5	-338.8	-61.5	49.1

		generation		--- load categories ----					net		slack
		capacity	on-line	power	current	imped.	shunt	-- svd	-- inter	losses	bus
area name		WAPA U.M.									
	mw	61.8	66.1	-102.1	0.0	0.0	0.0	0.0	147.6	20.6	66.1
63	mvar	34.0	8.2	123.6	0.0	0.0	-78.9	-22.6	-49.7	35.9	8.2
TOTL	mw	98954.1	70603.2	60440.6	0.0	0.0	0.4	0.0	7002.4	3159.7	
	mvar	42394.4	8996.7	19741.2	0.0	0.0	-2085.1	-5194.0	-8.3	-3457.3	

Area Interchange Summary

		mw	mvar
FROM AREA	54 ALBERTA		
TO AREA	50 B.C.HYDRO	-542.6	7.4
TO AREA	62 MONTANA	142.4	249.0
TOTAL		-400.2	256.4
FROM AREA	50 B.C.HYDRO	mw	mvar
TO AREA	54 ALBERTA	542.6	-7.4
TO AREA	40 NORTHWEST	2157.5	-308.6
TO AREA	52 W KOOTENAY	150.4	15.6
TOTAL		2850.5	-300.5
FROM AREA	60 IDAHO	mw	mvar
TO AREA	62 MONTANA	-728.7	-108.7
TO AREA	40 NORTHWEST	-157.0	-266.4
TO AREA	65 PACE	1173.6	-20.7
TO AREA	64 SIERRA	132.7	-46.1
TOTAL		420.5	-442.0
FROM AREA	62 MONTANA	mw	mvar
TO AREA	54 ALBERTA	-142.4	-249.0
TO AREA	60 IDAHO	728.7	108.7
TO AREA	40 NORTHWEST	1284.1	-583.6
TO AREA	65 PACE	301.1	-90.1
TO AREA	63 WAPA U.M.	49.3	10.8
TOTAL		2220.8	-803.1
FROM AREA	40 NORTHWEST	mw	mvar
TO AREA	50 B.C.HYDRO	-2157.5	308.6
TO AREA	60 IDAHO	157.0	266.4
TO AREA	26 LADWP	2806.7	606.9
TO AREA	62 MONTANA	-1284.1	583.6
TO AREA	30 PG AND E	3814.6	-489.6
TO AREA	64 SIERRA	177.2	-49.4
TOTAL		3513.9	1226.6
FROM AREA	65 PACE	mw	mvar
TO AREA	14 ARIZONA	-65.6	93.9
TO AREA	60 IDAHO	-1173.6	20.7
TO AREA	26 LADWP	-26.7	-131.2
TO AREA	62 MONTANA	-301.1	90.1
TO AREA	18 NEVADA	254.0	-56.2
TO AREA	64 SIERRA	31.9	14.5
TO AREA	19 WAPA L.C.	31.7	34.8
TO AREA	73 WAPA R.M.	-231.6	55.2
TOTAL		-1481.0	121.9
FROM AREA	70 PSCOLORADO	mw	mvar
TO AREA	73 WAPA R.M.	-1333.0	280.7
TOTAL		-1333.0	280.7
FROM AREA	64 SIERRA	mw	mvar
TO AREA	60 IDAHO	-132.7	46.1
TO AREA	26 LADWP	-52.4	3.3

TO AREA	40 NORTHWEST	-177.2	49.4
TO AREA	65 PACE	-31.9	-14.5
TO AREA	30 PG AND E	-16.8	-26.1
TO AREA	24 SOCALIF	11.7	-2.3
TOTAL		-399.3	55.8

FROM AREA	52 W KOOTENAY	mw	mvar
TO AREA	50 B.C.HYDRO	-150.4	-15.6
TOTAL		-150.4	-15.6

FROM AREA	73 WAPA R.M.	mw	mvar
TO AREA	10 NEW MEXICO	167.6	-18.2
TO AREA	65 PACE	231.6	-55.2
TO AREA	70 PSCOLORADO	1333.0	-280.7
TO AREA	19 WAPA L.C.	77.6	-23.6
TO AREA	63 WAPA U.M.	-196.9	38.8
TOTAL		1612.9	-338.8

FROM AREA	63 WAPA U.M.	mw	mvar
TO AREA	62 MONTANA	-49.3	-10.8
TO AREA	73 WAPA R.M.	196.9	-38.8
TOTAL		147.6	-49.7

AREA TIE LINE SUMMARY

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

```
  ---------from--------      --------- to --------
  --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

    54150 LANGDON2  500        50791 CBK500    500  1            -483.72      1.25   f
    54205 COLEMAN7  138        50776 NTL138    138  1             -28.45     -4.76   t
    54273 POCATER7  138        50830 FRO T274  138  1             -30.42     10.91   t
 from area  54 to area  50 B.C.HYDRO                             -542.59      7.40

    90500 MTSLETHB  500        90400 MTSGFALL  500  1             142.36    248.97   t
 from area  54 to area  62 MONTANA                                142.36    248.97

 Total from area  54 ALBERTA                                     -400.23    256.37

  ---------from--------      --------- to --------
  --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

    90400 MTSGFALL  500        90500 MTSLETHB  500  1            -142.36   -248.97   f
 from area  62 to area  54 ALBERTA                               -142.36   -248.97

    90600 MTSDILL   500        90700 MTSKINP   500  1             728.71    108.69   t
 from area  62 to area  60 IDAHO                                  728.71    108.69

    62004 ANACOND   230        40457 GARRISON  230  1            -258.29     -5.44   f
    62004 ANACOND   230        40457 GARRISON  230  2            -279.21    -18.29   f
    62009 RATTLE S  161        40867 RATTLE S  230  1            -143.47    -33.22   t
    62012 TOWN2     500        40453 GAR2EAST  500  2            1033.80   -258.12   t
    62013 TOWN1     500        40451 GAR1EAST  500  1            1033.80   -258.12   t
    62066 KERR      115        40391 ELMO      115  1               0.09    -12.11   f
    62072 OVANDO    230        40457 GARRISON  230  1            -160.56     11.59   t
    62072 OVANDO    230        40551 HOT SPR   230  1              -0.51     14.08   t
    62085 CROWCR B  115        48055 BURKAVAB  115  1              26.07    -11.43   t
    62086 THOMSON   115        48053 BURKAVAA  115  1              32.34    -12.49   t
 from area  62 to area  40 NORTHWEST                             1284.06   -583.56

    62030 PTRSNFLT  230        65025 AMPS      230  1             228.64    -61.91   t
    62045 BLGS PHA  230        66750 YELOWTLP  230  1               3.76      1.88   t
    62061 RMRK PHA  161        66755 YELOWTLP  161  1              -9.65     -3.45   f
    62084 DILLON S  161        65155 BIGGRASS  161  1              78.32    -26.59   t
 from area  62 to area  65 PACE                                   301.08    -90.07

    90223 MTSGFALL  230        90208 MTSHAVRE  230  1             -35.60    -14.82   f
    90224 MTSRNBW   230        90215 MTSVER    230  1             -31.52    -13.43   f
    62027 SHELBY    115        63014 TIBERTAP  115  1             -20.29      4.19   f
    62051 HARDIN    230        63002 CRSOVRUM  230  1             216.00     11.85   t
    62056 HUNTLEY   230        63002 CRSOVRUM  230  1            -191.73     20.54   t
    62060 COLSTRP   230        90204 MTSFTPCK  230  1             112.47      2.51   t
 from area  62 to area  63 WAPA U.M.                              49.32     10.84

 Total from area  62 MONTANA                                     2220.82   -803.07

  ---------from--------      --------- to --------
  --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

    40145 BOUNDARY  230        50822 NLYPHS    230  1            -235.82    -14.09   f
    40323 CUSTER W  500        50194 ING500    500  1            -968.87    162.20   t
    40323 CUSTER W  500        50194 ING500    500  2            -952.81    160.54   t
 from area  40 to area  50 B.C.HYDRO                            -2157.50    308.65

    45029 BURNS     500        60240 MIDPOINT  500  1            -163.79    348.87   t
    45103 ENTERPRS  230        60150 HELLSCYN  230  1              33.53    -37.49   f
    40507 HARNEY    115        61826 HINES     115  1             -12.80     15.42   f
    40621 LAGRANDE  230        60192 LADD      230  1              73.19    -29.77   f
    48197 LOLO      230        60278 IMNAHA    230  1             226.85    -30.62   t
 from area  40 to area  60 IDAHO                                  156.99    266.40

    41311 CELILO1   500        26097 SYLMAR1   230  1             529.69     58.87   f
    41313 CELILO3   230        26098 SYLMAR3   230  1             873.66    244.39   f
    41312 CELILO2   500        26099 SYLMAR2   230  1             529.69     58.79   f
    41314 CELILO4   230        26100 SYLMAR4   230  1             873.66    244.83   f
 from area  40 to area  26 LADWP                                 2806.69    606.88

    48053 BURKAVAA  115        62086 THOMSON   115  1             -32.34     12.49   f
    48055 BURKAVAB  115        62085 CROWCR B  115  1             -26.07     11.43   f
    40391 ELMO      115        62066 KERR      115  1              -0.09     12.11   t
    40451 GAR1EAST  500        62013 TOWN1     500  1           -1033.80    258.12   f
    40453 GAR2EAST  500        62012 TOWN2     500  2           -1033.80    258.12   f
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   40457 GARRISON  230        62072 OVANDO    230  1            160.56    -11.59   f
   40457 GARRISON  230        62004 ANACOND   230  1            258.29      5.44   t
   40457 GARRISON  230        62004 ANACOND   230  2            279.21     18.29   t
   40551 HOT SPR   230        62072 OVANDO    230  1              0.51    -14.08   f
   40867 RATTLE S  230        62009 RATTLE S  161  1            143.47     33.22   f
from area  40 to area  62 MONTANA                              -1284.06    583.56

   45035 CAPTJACK  500        30020 OLINDA    500  1           1350.07   -221.43   f
   45087 DELTA     115        31468 CASCADE   115  1             71.24    -15.29   f
   40687 MALIN     500        30005 ROUND MT  500  1           1191.38   -117.51   f
   40687 MALIN     500        30005 ROUND MT  500  2           1201.93   -135.33   f
from area  40 to area  30 PG AND E                              3814.62   -489.56

   40537 HIL TOP   230        64058 HIL TOP   345  1            177.17    -49.36   f
from area  40 to area  64 SIERRA                                177.17    -49.36

Total from area  40 NORTHWEST                                   3513.92   1226.57

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   66235 PINTO PS  345        14101 FOURCORN  345  1            -65.63     93.92   t
from area  65 to area  14 ARIZONA                               -65.63     93.92

   90800 MTSBENL   500        90700 MTSKINP   500  1           -646.25    137.81   t
   65075 ANTLOPE   230        60073 BRADY     230  1            105.71    -48.16   f
   65135 BENLOMND  345        60060 BORAH     345  1           -241.11     20.64   t
   65220 BRIDGER   230        60085 BRIDGER   345  1              9.93    -12.60   t
   65220 BRIDGER   230        60085 BRIDGER   345  2             10.08    -12.81   t
   65220 BRIDGER   230        60085 BRIDGER   345  3              9.93    -12.60   t
   65665 GOSHEN    345        60085 BRIDGER   345  1           -485.30    -87.84   f
   65665 GOSHEN    345        60190 KINPORT   345  1            146.59     12.00   t
   65670 GOSHEN    161        60030 BLACKFT   161  1             91.13     10.63   f
   65920 MALAD     138        60020 AMFLS     138  1            -55.54      1.36   t
   66565 TREASTON  230        60073 BRADY     230  1           -118.75     12.30   t
from area  65 to area  60 IDAHO                                -1173.59     20.73

   65995 MONA      345        26043 INTERMT   345  1            -13.35    -65.58   f
   65995 MONA      345        26043 INTERMT   345  2            -13.35    -65.58   f
from area  65 to area  26 LADWP                                 -26.71   -131.16

   65025 AMPS      230        62030 PTRSNFLT  230  1           -228.64     61.91   f
   65155 BIGGRASS  161        62084 DILLON S  161  1            -78.32     26.59   f
   66750 YELOWTLP  230        62045 BLGS PHA  230  1             -3.76     -1.88   f
   66755 YELOWTLP  161        62061 RMRK PHA  161  1              9.65      3.45   t
from area  65 to area  62 MONTANA                               -301.08     90.07

   66280 REDBUTTE  345        18002 HA PS     345  1            253.99    -56.18   f
from area  65 to area  18 NEVADA                                253.99    -56.18

   66210 PAVANT    230        64124 UTAH-NEV  230  1             31.92     14.48   t
from area  65 to area  64 SIERRA                                 31.92     14.48

   66355 SIGURDPS  230        79031 GLENCANY  230  1             31.74     34.83   t
from area  65 to area  19 WAPA L.C.                              31.74     34.83

   65060 ANT MINE  230        73276 TEKLA     230  1             17.23     20.48   f
   65085 ASHLEY    138        79067 VERNAL    138  1            -76.19      5.92   t
   65192 BONANZA   138        79067 VERNAL    138  1             39.70      6.99   t
   65193 BONANZA   345        79005 BEARS     345  1           -379.90     15.09   f
   65305 CASPERPP  115        73167 REFNRYTP  115  1            -33.05     -5.72   f
   65305 CASPERPP  115        73042 CASPERLM  115  1             -3.64     -7.17   t
   65420 DAVEJOHN  230        73107 LAR.RIVR  230  1             87.81    -21.06   f
   65420 DAVEJOHN  230        73190 STEGALL   230  1             96.95    -22.17   f
   65425 DAVEJOHN  115        73070 GLENRCKN  115  1             71.09      1.79   f
   65425 DAVEJOHN  115        73071 GLENRCKS  115  1             82.18      5.93   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  1            -44.64      7.69   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  2            -44.64      7.69   f
   66278 RANGELY   138        79001 ARTESIA   138  1             -9.29     -5.02   f
   66278 RANGELY   138        79046 MEEKER    138  1            -16.29      1.10   f
   66305 RIVERTON  230        73170 RIVERTON  115  1              3.32     10.13   f
   66535 THERMOPL  230        73197 THERMOPL  115  1             -4.53      3.70   t
   66540 THERPACE  115        73197 THERMOPL  115  1             11.31      5.74   t
   66720 WORLAND   115        73222 WORLANTP  115  1            -17.50      7.21   t
   66725 WYODAK    230        73148 OSAGE     230  1            126.44    -19.19   t
   66725 WYODAK    230        73168 RENO      230  1            104.07      5.97   f
   66725 WYODAK    230        73294 HUGHES    230  1            120.05     -2.54   f
   66725 WYODAK    230        73282 WYODAK     69  1            -10.49     15.18   f
   66725 WYODAK    230        73282 WYODAK     69  2             -7.10     10.27   f
   66725 WYODAK    230        74016 WYGEN      14  1              0.00      0.00   f
   66750 YELOWTLP  230        73229 YELLOWBR  230  1           -344.49      7.18   t
from area  65 to area  73 WAPA R.M.                             -231.59     55.18
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Total from area  65 PACE                                          -1480.95    121.87

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   70005 BRUSHCPP  115        73013 B.CK PS   115  1            118.30     22.96   f
   70005 BRUSHCPP  115        73013 B.CK PS   115  2            124.81     29.95   f
   70116 COBBLAKE  115        73044 COBBLKTP  115  1            -15.32     -1.44   f
   70122 COMANCHE  230        73477 FULLER    230  1             95.71     31.31   t
   70139 DANIELPK  230        73477 FULLER    230  1           -116.01    -18.21   t
   70193 FTN VALL  115        73412 MIDWAYBR  115  1              4.55     -0.17   t
   70205 GRANDJCT  230        79036 GRANDJCT  345  1            -49.31    -23.61   f
   70256 LAPORTPS  115        73105 LAPORTE   115  1            -14.73     -6.26   t
   70274 MALTA     230        73138 MT.ELBRT  230  1           -145.53     -5.91   f
   70285 MIDWAYPS  115        73412 MIDWAYBR  115  1             18.57    -22.65   f
   70286 MIDWAYPS  230        73413 MIDWAYBR  230  1            131.07     79.17   t
   70287 MILL      115        73296 FRASER    115  1            -41.19      9.30   f
   70308 PALMER    115        73414 MONUMENT  115  1            -47.68     17.76   t
   70311 PAWNEE    230        73192 STORY     230  1           -230.57    -30.77   t
   70327 PONCHA    115        79037 GUNNISON  115  1            -24.63     11.32   f
   70350 RAWHIDE    24        73165 RAWHIDE   230  1            262.16     79.95   t
   70358 RIFLE PS  230        79059 RIFLE WA  230  1            -89.47      9.47   f
   70358 RIFLE PS  230        79250 AMATLAS   230  1            -75.90     -2.65   f
   70375 SAN LUIS  230        79054 PONCHABR  230  1            -80.83      6.64   t
   70410 ST.VRAIN  230        73116 LONGPEAK  230  1            -52.40     65.54   f
   70470 WELD  PS  115        73211 WELD  LM  115  1            -20.49     61.45   f
   70471 WELD  PS  230        73212 WELD  LM  230  1           -369.43     -0.75   f
   70474 WINDSOR   230        73011 AULT      230  1           -307.40     -0.22   t
   70476 WOODLAND  115        73400 EMIL AND  115  1             14.48      2.64   f
   70525 MTHARRIS  138        79038 HAYDEN    138  1             -7.21     -1.37   t
   79033 GOREPASS  230        79039 HAYDEN    230  1           -247.76    -21.45   t
   79033 GOREPASS  230        73072 GOREPASS  138  1              2.94      3.35   f
   79034 GRANDJCT  115        79048 MONTROSE  115  1             21.13     -4.20   t
   79056 RIFLE CU  138        79046 MEEKER    138  1            -12.81     -3.05   f
   79057 RIFLE CU  230        79059 RIFLE WA  230  1              6.79    -22.04   t
   79058 RIFLE CU  345        79014 CRAIG     345  1           -322.29      0.77   f
   79058 RIFLE CU  345        79036 GRANDJCT  345  1            291.33     -6.83   f
   79091 WOLCOTTP  230        79039 HAYDEN    230  1           -180.76      0.48   f
   79173 COLBRAN   115        79174 MOLINA-L  115  1             -0.00     -0.54   f
   70351 RAWHIDEA   14        73165 RAWHIDE   230  1             50.81     39.80   t
   70550 W CANON   115        73551 W CANON   230  1            -23.91    -19.10   t
from area  70 to area  73 WAPA R.M.                               -1332.98    280.66

Total from area  70 PSCOLORADO                                    -1332.98    280.66

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   79060 SANJN PS  345        10292 SAN_JUAN  345  1            167.64    -18.19   t
from area  73 to area  10 NEW MEXICO                              167.64    -18.19

   73042 CASPERLM  115        65305 CASPERPP  115  1              3.64      7.17   f
   73070 GLENRCKN  115        65425 DAVEJOHN  115  1            -71.09     -1.79   t
   73071 GLENRCKS  115        65425 DAVEJOHN  115  1            -82.18     -5.93   t
   73107 LAR.RIVR  230        65420 DAVEJOHN  230  1            -87.81     21.06   t
   73148 OSAGE     230        66725 WYODAK    230  1           -126.44     19.19   f
   73167 REFNRYTP  115        65305 CASPERPP  115  1             33.05      5.72   t
   73168 RENO      230        66725 WYODAK    230  1           -104.07     -5.97   t
   73170 RIVERTON  115        66305 RIVERTON  230  1             -3.32    -10.13   t
   73190 STEGALL   230        65420 DAVEJOHN  230  1            -96.95     22.17   t
   73197 THERMOPL  115        66540 THERPACE  115  1            -11.31     -5.74   f
   73197 THERMOPL  115        66535 THERMOPL  230  1              4.53     -3.70   f
   73222 WORLANTP  115        66720 WORLAND   115  1             17.50     -7.21   f
   73229 YELLOWBR  230        66750 YELOWTLP  230  1            344.49     -7.18   f
   73276 TEKLA     230        65060 ANT MINE  230  1            -17.23    -20.48   t
   73282 WYODAK     69        66725 WYODAK    230  1             10.49    -15.18   t
   73282 WYODAK     69        66725 WYODAK    230  2              7.10    -10.27   t
   73294 HUGHES    230        66725 WYODAK    230  1           -120.05      2.54   t
   79001 ARTESIA   138        66278 RANGELY   138  1              9.29      5.02   t
   79005 BEARS     345        65193 BONANZA   345  1            379.90    -15.09   t
   79026 FLAMGORG  138        65565 FLAMGORG  230  1             44.64     -7.69   t
   79026 FLAMGORG  138        65565 FLAMGORG  230  2             44.64     -7.69   t
   79046 MEEKER    138        66278 RANGELY   138  1             16.29     -1.10   t
   79067 VERNAL    138        65085 ASHLEY    138  1             76.19     -5.92   f
   79067 VERNAL    138        65192 BONANZA   138  1            -39.70     -6.99   f
   74016 WYGEN      14        66725 WYODAK    230  1              0.00      0.00   t
from area  73 to area  65 PACE                                    231.59    -55.18

   73011 AULT      230        70474 WINDSOR   230  1            307.40      0.22   f
   73013 B.CK PS   115        70005 BRUSHCPP  115  1           -118.30    -22.96   t
   73013 B.CK PS   115        70005 BRUSHCPP  115  2           -124.81    -29.95   t
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73044	COBBLKTP	115	70116	COBBLAKE	115	1	15.32	1.44	t
73072	GOREPASS	138	79033	GOREPASS	230	1	-2.94	-3.35	t
73105	LAPORTE	115	70256	LAPORTPS	115	1	14.73	6.26	f
73116	LONGPEAK	230	70410	ST.VRAIN	230	1	52.40	-65.54	t
73138	MT.ELBRT	230	70274	MALTA	230	1	145.53	5.91	t
73165	RAWHIDE	230	70350	RAWHIDE	24	1	-262.16	-79.95	f
73165	RAWHIDE	230	70351	RAWHIDEA	14	1	-50.81	-39.80	f
73192	STORY	230	70311	PAWNEE	230	1	230.57	30.77	f
73211	WELD LM	115	70470	WELD PS	115	1	20.49	-61.45	t
73212	WELD LM	230	70471	WELD PS	230	1	369.43	0.75	t
73296	FRASER	115	70287	MILL	115	1	41.19	-9.30	t
73400	EMIL AND	115	70476	WOODLAND	115	1	-14.48	-2.64	t
73412	MIDWAYBR	115	70193	FTN VALL	115	1	-4.55	0.17	f
73412	MIDWAYBR	115	70285	MIDWAYPS	115	1	-18.57	22.65	t
73413	MIDWAYBR	230	70286	MIDWAYPS	230	1	-131.07	-79.17	f
73414	MONUMENT	115	70308	PALMER	115	1	47.68	-17.76	f
73477	FULLER	230	70122	COMANCHE	230	1	-95.71	-31.31	f
73477	FULLER	230	70139	DANIELPK	230	1	116.01	18.21	f
79014	CRAIG	345	79058	RIFLE CU	345	1	322.29	-0.77	t
79036	GRANDJCT	345	79058	RIFLE CU	345	1	-291.33	6.83	t
79036	GRANDJCT	345	70205	GRANDJCT	230	1	49.31	23.61	t
79037	GUNNISON	115	70327	PONCHA	115	1	24.63	-11.32	t
79038	HAYDEN	138	70525	MTHARRIS	138	1	7.21	1.37	f
79039	HAYDEN	230	79033	GOREPASS	230	1	247.76	21.45	f
79039	HAYDEN	230	79091	WOLCOTTP	230	1	180.76	-0.48	t
79046	MEEKER	138	79056	RIFLE CU	138	1	12.81	3.05	t
79048	MONTROSE	115	79034	GRANDJCT	115	1	-21.13	4.20	f
79054	PONCHABR	230	70375	SAN LUIS	230	1	80.83	-6.64	f
79059	RIFLE WA	230	70358	RIFLE PS	230	1	89.47	-9.47	t
79059	RIFLE WA	230	79057	RIFLE CU	230	1	-6.79	22.04	f
79174	MOLINA-L	115	79173	COLBRAN	115	1	0.00	0.54	t
79250	AMATLAS	230	70358	RIFLE PS	230	1	75.90	2.65	t
73551	W CANON	230	70550	W CANON	115	1	23.91	19.10	f
from area 73 to area 70 PSCOLORADO							1332.98	-280.66	
79061	SHIP PS	230	79063	SHIPROCK	230	1	80.14	-11.70	t
79260	ELPASOTP	115	79105	GLADETAP	115	1	-2.51	-11.90	t
from area 73 to area 19 WAPA L.C.							77.63	-23.61	
73229	YELLOWBR	230	63001	CROS PHA	230	1	-196.94	38.84	f
from area 73 to area 63 WAPA U.M.							-196.94	38.84	
Total from area 73 WAPA R.M.							1612.91	-338.79	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
90204	MTSFTPCK	230	62060	COLSTRP	230	1	-112.47	-2.51	f
90208	MTSHAVRE	230	90223	MTSGFALL	230	1	35.60	14.82	t
90215	MTSVER	230	90224	MTSRNBW	230	1	31.52	13.43	t
63002	CRSOVRUM	230	62051	HARDIN	230	1	-216.00	-11.85	f
63002	CRSOVRUM	230	62056	HUNTLEY	230	1	191.73	-20.54	f
63014	TIBERTAP	115	62027	SHELBY	115	1	20.29	-4.19	t
from area 63 to area 62 MONTANA							-49.32	-10.84	
63001	CROS PHA	230	73229	YELLOWBR	230	1	196.94	-38.84	t
from area 63 to area 73 WAPA R.M.							196.94	-38.84	
Total from area 63 WAPA U.M.							147.62	-49.68	

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Summation of selected system

	-----MW----	----MVAR---		
Generation	70603.180	8996.652	Generators	2564
Actual Load	60440.602	19741.215	Loads	6822
Net actual shunt	0.412	-2085.090	Shunts	1297
Net actual svd	0.000	-5193.967	Svd	590
Loss	3159.743	-3457.289	Buses	13198
			Lines	10966
			Transformers	5151
MVA-miles	6360189.0	989508.3	DC buses	6
Miles	46985.316		DC converters	10
			DC lines	3

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area 54 [ALBERTA]

	-----MW----	----MVAR---		
Generation	7869.490	954.813	Generators	142
Actual Load	7899.199	2641.000	Loads	512
Net actual shunt	0.000	-22.450	Shunts	9
Net actual svd	0.000	-1841.958	Svd	76
Net Interchange	-400.229	256.371	Buses	992
Sched Interchange	-400.000		Lines	781
Loss	370.518	-340.967	Transformers	407
MVA-miles	1132962.3	226521.7	DC buses	0
Miles	18637.697		DC converters	0
			DC lines	0
Loss at 13.20 Kv	1.733	25.319		
Loss at 13.80 Kv	3.376	88.611		
Loss at 14.40 Kv	0.019	2.276		
Loss at 25.00 Kv	1.929	27.222		
Loss at 34.00 Kv	0.052	0.858		
Loss at 69.00 Kv	19.295	-2.877		
Loss at 138.00 Kv	154.702	-253.614		
Loss at 240.00 Kv	171.197	-533.982		
Loss at 500.00 Kv	0.484	-519.044		
Loss at other Kv	17.732	824.264		
Largest mismatch MVA	0.0141	0.0387		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area 50 [B.C.HYDRO]

	-----MW----	----MVAR---		
Generation	10251.335	911.964	Generators	112
Actual Load	6889.125	2565.790	Loads	395
Net actual shunt	0.000	2957.905	Shunts	104
Net actual svd	0.000	2147.031	Svd	125
Net Interchange	2850.511	-300.451	Buses	1054
Sched Interchange	2849.900		Lines	718
Loss	511.695	-6458.316	Transformers	645
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.308	7.939		
Loss at 13.80 Kv	9.980	489.083		
Loss at 34.00 Kv	0.000	0.002		
Loss at 46.00 Kv	0.302	0.084		
Loss at 132.00 Kv	36.962	105.592		
Loss at 138.00 Kv	15.303	-120.342		
Loss at 230.00 Kv	53.482	-619.043		
Loss at 500.00 Kv	337.919	-6987.700		
Loss at other Kv	57.440	666.071		
Largest mismatch MVA	0.0201	0.0321		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area 60 [IDAHO]

-----MW---- ----MVAR---

Generation	3576.130	113.862	Generators	62
Actual Load	2984.000	711.600	Loads	64
Net actual shunt	0.000	-591.615	Shunts	15
Net actual svd	0.000	0.000	Svd	0
Net Interchange	420.539	-441.958	Buses	157
Sched Interchange	420.000		Lines	122
Loss	171.592	290.718	Transformers	97
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.264	5.683		
Loss at 13.80 Kv	3.396	117.275		
Loss at 14.40 Kv	0.879	34.194		
Loss at 34.50 Kv	0.000	0.000		
Loss at 100.00 Kv	0.537	24.883		
Loss at 115.00 Kv	0.436	0.366		
Loss at 138.00 Kv	19.137	-8.095		
Loss at 161.00 Kv	1.452	1.610		
Loss at 230.00 Kv	75.888	-20.159		
Loss at 345.00 Kv	65.413	2.158		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	4.190	132.803		
Largest mismatch MVA	0.0023	0.0195		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area 62 [MONTANA]

	-----MW----	----MVAR---		
Generation	3900.685	801.779	Generators	22
Actual Load	1422.895	610.184	Loads	200
Net actual shunt	0.412	-121.780	Shunts	56
Net actual svd	0.000	880.830	Svd	16
Net Interchange	2220.819	-803.073	Buses	314
Sched Interchange	2220.000		Lines	319
Loss	256.559	701.095	Transformers	91
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.000	36.682		
Loss at 69.00 Kv	0.801	2.887		
Loss at 100.00 Kv	26.508	-14.678		
Loss at 115.00 Kv	3.224	-15.139		
Loss at 161.00 Kv	57.096	99.128		
Loss at 230.00 Kv	54.269	134.273		
Loss at 500.00 Kv	112.817	212.015		
Loss at other Kv	1.843	245.928		
Largest mismatch MVA	0.0078	0.0374		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area 40 [NORTHWEST]

	-----MW----	----MVAR---		
Generation	27334.801	3740.844	Generators	384
Actual Load	22671.295	6850.328	Loads	1652
Net actual shunt	0.000	-1889.147	Shunts	43
Net actual svd	0.000	-4217.522	Svd	159
Net Interchange	3513.916	1226.575	Buses	2740
Sched Interchange	3514.000		Lines	2710
Loss	1149.622	1770.616	Transformers	654
MVA-miles	4637068.0	626178.1	DC buses	4
Miles	18469.418		DC converters	4
			DC lines	2
Loss at 11.00 Kv	-0.000	0.607		
Loss at 13.20 Kv	0.000	4.917		
Loss at 13.80 Kv	4.793	207.447		
Loss at 14.40 Kv	0.284	13.040		
Loss at 25.00 Kv	3.174	166.197		
Loss at 34.50 Kv	0.351	6.353		
Loss at 69.00 Kv	15.057	42.912		
Loss at 100.00 Kv	0.119	-0.094		
Loss at 115.00 Kv	217.197	495.955		
Loss at 230.00 Kv	339.923	1631.452		
Loss at 345.00 Kv	16.338	-171.225		

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Loss at 500.00 Kv         427.510    -1938.160
Loss at other Kv          124.876     1311.217

Largest mismatch MVA       0.0273       0.1026

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area  65 [PACE                            ]

                      -----MW----  ----MVAR---
Generation               5059.243      320.372        Generators           52
Actual Load              6293.716     1960.150        Loads               274
Net actual shunt            0.000    -1774.547        Shunts               74
Net actual svd              0.000      -47.824        Svd                   2
Net Interchange         -1480.951      121.871        Buses               566
Sched Interchange       -1481.000                     Lines               407
Loss                      246.479        3.198        Transformers        338

MVA-miles                     5.0          1.6        DC buses              0
Miles                       1.900                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           0.907       30.963
Loss at  34.50 Kv           1.003        7.543
Loss at  46.00 Kv           6.322      136.808
Loss at  69.00 Kv           1.661       22.627
Loss at 100.00 Kv           0.056        1.037
Loss at 115.00 Kv           3.118       -8.912
Loss at 138.00 Kv          63.123      150.844
Loss at 161.00 Kv          11.114      -13.268
Loss at 230.00 Kv          79.192       44.413
Loss at 345.00 Kv          69.882     -231.917
Loss at 500.00 Kv           6.021     -235.518
Loss at other Kv            4.081       98.578

Largest mismatch MVA       0.0059       0.0216

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area  70 [PSCOLORADO                      ]

                      -----MW----  ----MVAR---
Generation               5190.470     1762.616        Generators           66
Actual Load              6332.696     2372.604        Loads               362
Net actual shunt            0.000        0.000        Shunts                0
Net actual svd              0.000    -1672.272        Svd                  43
Net Interchange         -1332.983      280.656        Buses               501
Sched Interchange       -1332.800                     Lines               461
Loss                      190.754      781.619        Transformers        147

MVA-miles                 30252.9       6133.7        DC buses              0
Miles                     564.500                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           4.002      136.023
Loss at  14.40 Kv           0.080        0.798
Loss at  25.00 Kv           0.010        0.140
Loss at  46.00 Kv           0.196        0.009
Loss at  69.00 Kv           7.171        1.588
Loss at 100.00 Kv           0.031       -0.496
Loss at 115.00 Kv          32.924      -38.344
Loss at 138.00 Kv           0.185       -5.926
Loss at 230.00 Kv         138.738      447.046
Loss at 345.00 Kv           0.002        0.126
Loss at 500.00 Kv           0.000        0.000
Loss at other Kv            7.416      240.656

Largest mismatch MVA       0.0111       0.0138

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area  64 [SIERRA                          ]

                      -----MW----  ----MVAR---
Generation               1374.338      110.136        Generators           22
Actual Load              1719.091      458.744        Loads               121
Net actual shunt            0.000     -188.550        Shunts               30
Net actual svd              0.000       69.592        Svd                   5
Net Interchange          -399.285       55.824        Buses               275
Sched Interchange        -399.000                     Lines               197
Loss                       54.531     -285.477        Transformers        117
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MVA-miles                 65569.9      39635.8        DC buses              0
Miles                    1042.600                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           2.532       51.208
Loss at  69.00 Kv           0.000        0.000
Loss at 115.00 Kv           0.478       -6.172
Loss at 230.00 Kv           1.715     -101.695
Loss at 345.00 Kv           8.478     -449.099
Loss at other Kv           41.328      220.281

Largest mismatch MVA       0.0051       0.0231

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area  52 [W KOOTENAY                      ]

                       -----MW----  ----MVAR---
Generation                596.550       91.851        Generators           20
Actual Load               722.400      210.200        Loads                64
Net actual shunt            0.000      -77.893        Shunts               27
Net actual svd              0.000     -130.722        Svd                   4
Net Interchange          -150.423      -15.596        Buses               260
Sched Interchange        -149.900                     Lines               165
Loss                       24.573      105.864        Transformers        117

MVA-miles                 30768.5       4909.9        DC buses              0
Miles                     986.000                     DC converters         0
                                                      DC lines              0
Loss at  13.20 Kv           0.000        8.255
Loss at  13.80 Kv           0.000        0.000
Loss at  14.40 Kv          -0.000       29.850
Loss at  25.00 Kv           0.000        0.000
Loss at 138.00 Kv           0.396       -0.526
Loss at 161.00 Kv           9.043       11.245
Loss at 230.00 Kv           1.516       -8.924
Loss at other Kv           13.618       65.965

Largest mismatch MVA       0.0020       0.0074

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area  73 [WAPA R.M.                       ]

                       -----MW----  ----MVAR---
Generation               5383.993      180.222        Generators           80
Actual Load              3608.290     1237.018        Loads               355
Net actual shunt            0.000     -298.066        Shunts                4
Net actual svd              0.000     -358.479        Svd                  53
Net Interchange          1612.905     -338.789        Buses               620
Sched Interchange        1612.000                     Lines               567
Loss                      162.799      -61.501        Transformers        174

MVA-miles                463562.3      86127.5        DC buses              0
Miles                    7283.200                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           6.220       91.857
Loss at  34.50 Kv           0.315        4.024
Loss at  69.00 Kv           5.456      -10.785
Loss at 115.00 Kv          67.748     -105.268
Loss at 138.00 Kv           5.089      -28.417
Loss at 230.00 Kv          36.181     -283.210
Loss at 345.00 Kv          34.534      -53.893
Loss at other Kv            7.255      324.192

Largest mismatch MVA       0.0303       0.0351

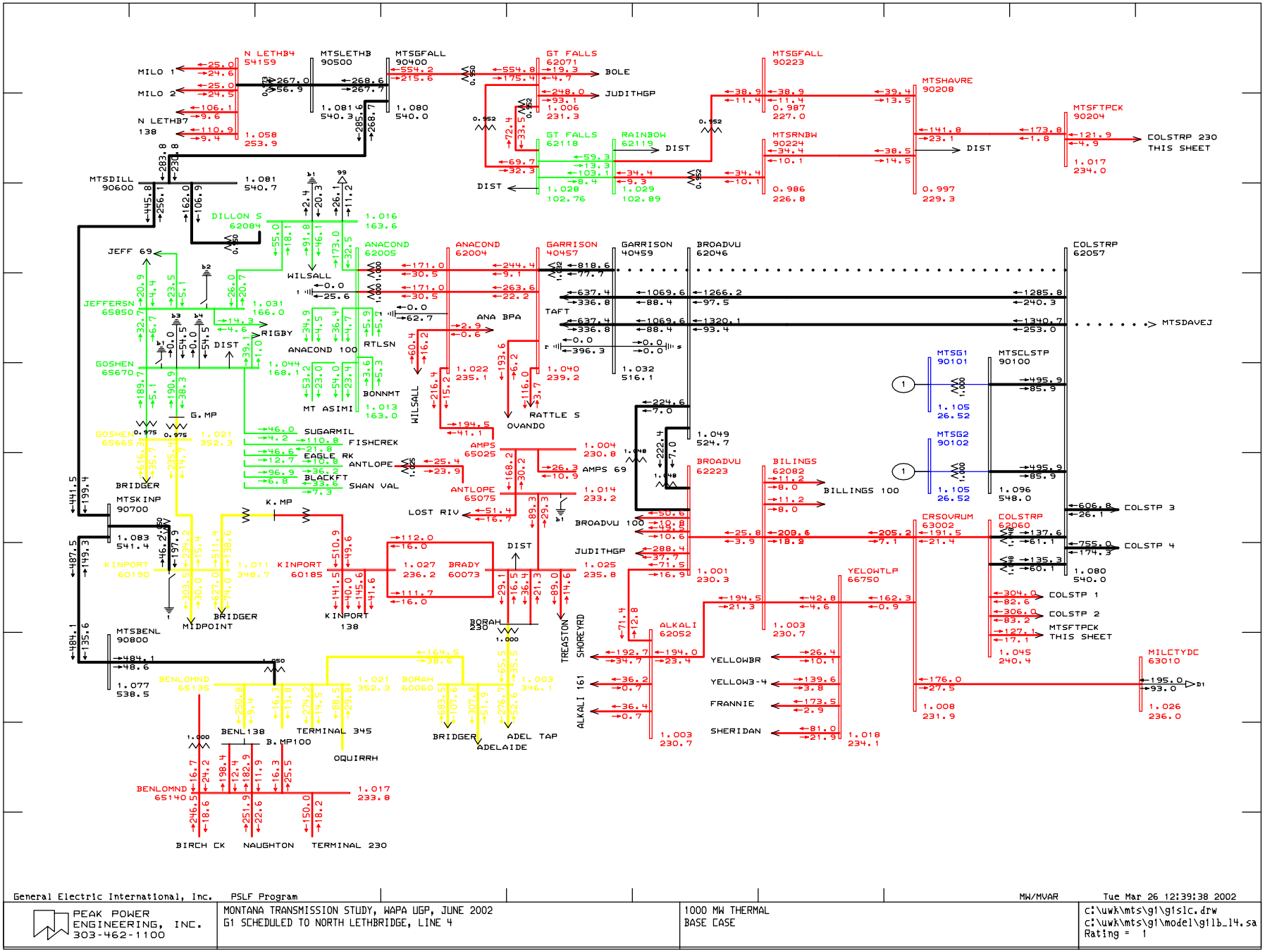
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO SALT LAKE, LINE 4

Area  63 [WAPA U.M.                       ]

                       -----MW----  ----MVAR---
Generation                 66.141        8.192        Generators            1
Actual Load              -102.100      123.600        Loads                17
Net actual shunt            0.000      -78.949        Shunts                1
Net actual svd              0.000      -22.641        Svd                   4
Net Interchange           147.619      -49.681        Buses                21
Sched Interchange         147.000                     Lines                13
Loss                       20.622       35.862        Transformers          3
```

MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.348	9.596		
Loss at 115.00 Kv	1.132	-3.725		
Loss at 161.00 Kv	0.000	0.000		
Loss at 230.00 Kv	19.142	29.991		
Largest mismatch MVA	0.0003	0.0012		

B.9 lbl4



General Electric International, Inc. PSLF Program MW/MVAR Tue Mar 26 12:39:38 2002

PEAK POWER ENGINEERING, INC. 303-462-1100

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

1000 MW THERMAL
BASE CASE

c:\uwk\mts\g1\g1slc.drw
c:\uwk\mts\g1\model\g1lb_14.sa
Rating = 1

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Percent Loading Summary -- using rating 1 - 100.0 percent of rating

----------from----------				---------- to ----------									rate	per cent
--no.--	--name--	-kv-	-ar-	--no.--	--name--	-kv-	-ar-	ck	---mw---	-mvar-	-mva--	------	loading	
54611	RUTH LK8	69	54	54839	RUTH LK1	138	54	1	57.9	13.8	59.5	45.0M	132.4	T
64026	CARSON	120	64	64027	CARSON T	120	64	1	-55.9	-6.4	56.3	216.5A	131.2	F
64194	DAYTON	120	64	64254	DAYTON	25	64	1	16.6	6.5	17.8	14.0M	127.4	F
79026	FLAMGORG	138	73	79029	FLAMGORG	69	73	1	22.1	6.0	22.9	19.0M	120.4	F
64099	SPAN SPG	120	64	64114	TRACY	120	64	1	-127.8	-2.6	127.8	514.8A	118.4	F
55015	DOME EA9	14	54	55525	163ST2	240	54	T2	-52.0	-4.6	52.2	45.0M	116.8	T
64091	RENO	120	64	64263	RENO	25	64	1	50.3	20.4	54.3	46.7M	116.3	F
70249	LAJUNTAW	115	70	70250	LAJUNTAW	69	70	1	26.2	12.4	29.0	25.0M	116.0	F
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	1	50.2	20.3	54.2	46.7M	116.0	F
64091	RENO	120	64	64263	RENO	25	64	2	50.2	20.3	54.2	46.7M	116.0	F
54110	RED DEE9	138	54	54144	RED DEE4	240	54	T1	-54.4	-193.7	201.2	200.0M	114.3	T
64127	VAL ROAD	120	64	64274	VAL ROAD	25	64	2	47.8	19.3	51.6	46.7M	110.4	F
64202	HAN CRTP	120	64	64203	TWN CRTP	120	64	1	74.2	19.8	76.8	356.0A	109.1	F
64201	PINSN TP	120	64	64202	HAN CRTP	120	64	1	74.6	20.6	77.4	356.0A	109.0	F
64200	REDHOUSE	120	64	64201	PINSN TP	120	64	1	75.9	23.6	79.5	356.0A	108.9	T
64129	VALMY	120	64	64200	REDHOUSE	120	64	1	77.0	26.3	81.4	356.0A	108.6	T
50459	KIT287	287	50	51075	KIT B5	13	50	5	80.3	24.1	83.8	79.0M	106.1	F
62005	ANACOND	161	62	62084	DILLON S	161	62	1	173.0	-32.5	176.1	591.7A	105.4	F
50781	NTL VR	138	50	50802	NTL 66	66	50	1	-72.2	-0.0	72.2	69.5M	104.8	T
54154	E CALGAR	240	54	54189	ENMX2SD9	138	54	T1	240.9	-169.8	294.7	300.0M	104.8	T
54232	PANCAN 9	138	54	55386	EMPRESS9	25	54	T1	15.7	1.0	15.7	15.0M	104.7	F
50781	NTL VR	138	50	50802	NTL 66	66	50	2	-70.9	-0.0	70.9	68.5M	104.5	T
64114	TRACY	120	64	64118	TRACY G2	14	64	1	-82.5	-3.9	82.6	81.0M	104.0	T
50776	NTL138	138	50	50781	NTL VR	138	50	1	-143.1	2.7	143.1	138.0M	103.7	F
43017	BEAVER	14	40	43021	BEAVER	230	40	1	356.8	41.5	359.2	348.0M	103.2	F
48319	PLEASANT	115	40	48355	RATHDRUM	115	40	1	-84.1	-16.1	85.6	430.8A	103.0	F
62047	COLSTP 4	26	62	62057	COLSTRP	500	62	1	755.0	241.6	792.7	770.0M	103.0	F
41304	COUGAR T	7	40	46211	COUGAR T	115	40	1	28.0	-8.8	29.3	30.0M	102.0	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	9A	155.0	-10.0	155.3	155.0M	101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	BC	155.0	-10.0	155.3	155.0M	101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	78	155.0	-10.0	155.3	155.0M	101.8	T
40221	CHIEF J2	14	40	40231	CHIEF JO	230	40	56	155.0	-10.0	155.3	155.0M	101.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	12	155.0	-10.0	155.3	155.0M	101.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	34	155.0	-10.0	155.3	155.0M	101.8	T
40229	CHIEF JO	14	40	40231	CHIEF JO	230	40	DE	155.0	-10.0	155.3	155.0M	101.8	T
46733	LAGRND5	14	40	46735	LGBK5	115	40	1	40.0	7.3	40.7	40.0M	101.6	F

```
Processing file c:\uwk\mts\base\rvolthsbs.out
Processing file c:\uwk\mts\g1\rvoltlbl4.out

Compvolt found the following for comparisons:
     349 Voltage Violations read from c:\uwk\mts\base\rvolthsbs.out
     378 Voltage Violations read from c:\uwk\mts\g1\rvoltlbl4.out


**** VOLTS:  NEW ****
Component                    w/o Prj          w/ Prj  Rating
90400 MTSGFALL  500   0.95 <= pu <= 1.05    1.0801  1.00 pu kV
90500 MTSLETHB  500   0.95 <= pu <= 1.05    1.0806  1.00 pu kV
90600 MTSDILL   500   0.95 <= pu <= 1.05    1.0814  1.00 pu kV
90700 MTSKINP   500   0.95 <= pu <= 1.05    1.0828  1.00 pu kV
90800 MTSBENL   500   0.95 <= pu <= 1.05    1.0769  1.00 pu kV
54154 E CALGAR  240   0.95 <= pu <= 1.05    1.0553  1.00 pu kV
54162 COCHRAN9  138   0.95 <= pu <= 1.05    1.0513  1.00 pu kV
54170 GHOST  9  138   0.95 <= pu <= 1.05    1.0504  1.00 pu kV
54173 BEARSPAW  138   0.95 <= pu <= 1.05    1.0542  1.00 pu kV
54182 SHELL J7  138   0.95 <= pu <= 1.05    1.0526  1.00 pu kV
54183 JUMPPND9  138   0.95 <= pu <= 1.05    1.0531  1.00 pu kV
54190 MOUNT A7  138   0.95 <= pu <= 1.05    1.0504  1.00 pu kV
54385 ENMX21S7  138   0.95 <= pu <= 1.05    1.0513  1.00 pu kV
54388 ENMX14S9  138   0.95 <= pu <= 1.05    1.0530  1.00 pu kV
54395 ENMX36S7  138   0.95 <= pu <= 1.05    1.0558  1.00 pu kV
54586 ENMX30S9  138   0.95 <= pu <= 1.05    1.0529  1.00 pu kV
54828 767S701T  138   0.95 <= pu <= 1.05    1.0567  1.00 pu kV
54948 802S701T  138   0.95 <= pu <= 1.05    1.0614  1.00 pu kV
54965 54L JNC   138   0.95 <= pu <= 1.05    1.0507  1.00 pu kV
55010 ANG COCH  138   0.95 <= pu <= 1.05    1.0506  1.00 pu kV
55521 LANGDOB9  240   0.95 <= pu <= 1.05    1.0521  1.00 pu kV
55900 JUMP TP1  138   0.95 <= pu <= 1.05    1.0528  1.00 pu kV
55925 JUMP TP2  138   0.95 <= pu <= 1.05    1.0531  1.00 pu kV
50345 KSH132    132   0.95 <= pu <= 1.05    1.0503  1.00 pu kV
50390 KSHTP11   132   0.95 <= pu <= 1.05    1.0505  1.00 pu kV
50657 TMT138    138   0.95 <= pu <= 1.05    1.0518  1.00 pu kV
50658 WBK138    138   0.95 <= pu <= 1.05    1.0520  1.00 pu kV
50669 DUG138    138   0.95 <= pu <= 1.05    1.0511  1.00 pu kV
50670 KWD138    138   0.95 <= pu <= 1.05    1.0522  1.00 pu kV
50671 AON138    138   0.95 <= pu <= 1.05    1.0526  1.00 pu kV
50673 HFY138    138   0.95 <= pu <= 1.05    1.0504  1.00 pu kV
50677 MCK138    138   0.95 <= pu <= 1.05    1.0505  1.00 pu kV
50678 AVO138    138   0.95 <= pu <= 1.05    1.0522  1.00 pu kV
50702 ACK500    500   0.95 <= pu <= 1.05    1.0511  1.00 pu kV
50703 NIC500    500   0.95 <= pu <= 1.05    1.0526  1.00 pu kV
50726 TMT138TP  138   0.95 <= pu <= 1.05    1.0518  1.00 pu kV
50784 NLY230    230   0.95 <= pu <= 1.05    1.0539  1.00 pu kV
50788 KCL230    230   0.95 <= pu <= 1.05    1.0881  1.00 pu kV
50900 AON138TP  138   0.95 <= pu <= 1.05    1.0526  1.00 pu kV
50929 TOK138    138   0.95 <= pu <= 1.05    1.0506  1.00 pu kV
50933 JUL132    132   0.95 <= pu <= 1.05    1.0503  1.00 pu kV
40323 CUSTER W  500   0.95 <= pu <= 1.05    1.0515  1.00 pu kV
52391 30L-LK-W  161   0.95 <= pu <= 1.05    1.0550  1.00 pu kV
52392 30L-LK-E  161   0.95 <= pu <= 1.05    1.0557  1.00 pu kV
52400 CRA161    161   0.95 <= pu <= 1.05    1.0560  1.00 pu kV
52407 COF161    161   0.95 <= pu <= 1.05    1.0549  1.00 pu kV
52409 KIM161    161   0.95 <= pu <= 1.05    1.0607  1.00 pu kV
52814 KIM-T3    161   0.95 <= pu <= 1.05    1.0607  1.00 pu kV
50787 NTL230    230   0.95 <= pu <= 1.05    0.9215  1.00 pu kV

**** VOLTS: WORSE ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS: BETTER ****
Component             w/o Prj  w/ Prj  Rating

**** VOLTS:  AWAY ****
Component             w/o Prj      w/ Prj          Rating
54021 WESGEN 7  138   1.0507  0.95 <= pu <= 1.05   1.00 pu kV
54150 LANGDON2  500   1.0533  0.95 <= pu <= 1.05   1.00 pu kV
54546 CHINCHA7  138   1.0575  0.95 <= pu <= 1.05   1.00 pu kV
54547 KEG RVR7  138   1.0561  0.95 <= pu <= 1.05   1.00 pu kV
54548 KEMP RV9  138   1.0578  0.95 <= pu <= 1.05   1.00 pu kV
54549 HOTCHKS7  138   1.0596  0.95 <= pu <= 1.05   1.00 pu kV
54552 CADOTTE9  138   1.0585  0.95 <= pu <= 1.05   1.00 pu kV
54553 NORCEN 9  138   1.0552  0.95 <= pu <= 1.05   1.00 pu kV
54554 LUBICON7  138   1.0582  0.95 <= pu <= 1.05   1.00 pu kV
54555 CRANBER9  138   1.0591  0.95 <= pu <= 1.05   1.00 pu kV
54618 PARS CR7  138   1.0508  0.95 <= pu <= 1.05   1.00 pu kV
54621 MITS E.4  240   1.0565  0.95 <= pu <= 1.05   1.00 pu kV
55226 WABASCA9  240   1.0532  0.95 <= pu <= 1.05   1.00 pu kV
55280 BRINTNEL  240   1.0504  0.95 <= pu <= 1.05   1.00 pu kV
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62033 ANA BPA   115   1.0568  0.95 <= pu <= 1.05   1.00 pu kV
62046 BROADVU   500   1.0782  0.95 <= pu <= 1.05   1.00 pu kV
62053 BROADV&2  500   1.0736  0.95 <= pu <= 1.05   1.00 pu kV
62054 BROADV&1  500   1.0744  0.95 <= pu <= 1.05   1.00 pu kV
40091 BELL BPA  500   1.0665  0.95 <= pu <= 1.05   1.00 pu kV
40459 GARRISON  500   1.0778  0.95 <= pu <= 1.05   1.00 pu kV
66225 PINTO     345   1.0511  0.95 <= pu <= 1.05   1.00 pu kV
66235 PINTO PS  345   1.0501  0.95 <= pu <= 1.05   1.00 pu kV
48165 IRVIN     115   0.9489  0.95 <= pu <= 1.05   1.00 pu kV
48310 OPORTUNE  115   0.9493  0.95 <= pu <= 1.05   1.00 pu kV
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GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

overvoltage summary > 1.100000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
54090	BICKERD4	240	1.1054	54142	WILLESD4	240	1.1056	54153	BRAZEAU4	240	1.1112
54329	KEEPHIL4	240	1.1179	54524	GENESEE4	240	1.1139	54675	PAINTRT7	240	1.1008
54681	NEVIS 7	138	1.1232	54721	BAT RV79	240	1.1029	54723	CORDEL 4	240	1.1029
54802	STURGEO9	138	1.1007	54847	BAT RV80	240	1.1029	54995	W.GRN TP	240	1.1056
55969	770S701T	138	1.1192	51017	KMS230	230	1.1095				

overvoltage summary > 1.050000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
90400	MTSGFALL	500	1.0801	90500	MTSLETHB	500	1.0806	90600	MTSDILL	500	1.0814
90700	MTSKINP	500	1.0828	90800	MTSBENL	500	1.0769	54012	FOX CREE	138	1.0503
54013	KAYBOB 9	138	1.0515	54014	GULF RO9	138	1.0594	54050	RBCUPIL7	138	1.0539
54054	LAMOURE4	240	1.0815	54073	IPPL ST9	138	1.0614	54077	BIGSTON4	240	1.0701
54078	CHEVRON7	138	1.0514	54081	METIS644	240	1.0989	54082	BICKERD7	138	1.0559
54090	BICKERD4	240	1.1054	54097	BIG HOR9	138	1.0840	54098	STRACHA9	138	1.0630
54103	DEERLAN4	240	1.0830	54121	ELLERSLI	240	1.0818	54125	SUNDANL9	138	1.0560
54126	WABAMUN4	240	1.0908	54128	SUNDANM9	240	1.0983	54129	E EDMON4	240	1.0758
54130	N CALDE4	240	1.0736	54131	N BARRH4	240	1.0780	54139	GAETZ 4	240	1.0813
54141	HIGHVAL9	138	1.0555	54142	WILLESD4	240	1.1056	54144	RED DEE4	240	1.0791
54147	BENALTO4	240	1.0915	54148	E CROSS4	240	1.0691	54152	JANET 4	240	1.0585
54153	BRAZEAU4	240	1.1112	54154	E CALGAR	240	1.0553	54157	PEIGAN 4	240	1.0734
54159	N LETHB4	240	1.0580	54162	COCHRAN9	138	1.0513	54170	GHOST 9	138	1.0504
54173	BEARSPAW	138	1.0542	54182	SHELL J7	138	1.0526	54183	JUMPPND9	138	1.0531
54184	SARCEE 7	138	1.0602	54190	MOUNT A7	138	1.0504	54195	RUNDLE S	138	1.0511
54223	WARE JCT	240	1.0611	54249	RP05103S	138	1.0542	54261	SPRAY S	138	1.0515
54269	COALSPU7	138	1.0611	54281	MILO 2	240	1.0645	54285	LEISMER9	240	1.0708
54287	GREGG R9	138	1.0703	54302	MARIONA9	138	1.0558	54325	CHEV KG9	138	1.0514
54326	COAL VA9	138	1.0584	54329	KEEPHIL4	240	1.1179	54335	W BROOK4	240	1.0646
54384	ENMX28S9	138	1.0596	54385	ENMX21S7	138	1.0513	54388	ENMX14S9	138	1.0530
54395	ENMX36S7	138	1.0558	54412	BENBOW 9	138	1.0516	54441	946/947X	240	1.0818
54444	SPRINGB9	138	1.0557	54505	JASPER 4	240	1.0734	54506	BELLAMY4	240	1.0817
54509	ARGYLL W	240	1.0818	54512	DOME T29	240	1.0821	54513	LAMBTON4	240	1.0757
54514	CLOVERB4	240	1.0735	54518	ARGYLL E	240	1.0820	54519	CASTLTX2	240	1.0761
54521	PETROLIA	240	1.0806	54524	GENESEE4	240	1.1139	54542	RBW LAK7	138	1.0537
54558	WESLY C7	138	1.0653	54559	CARMON 9	138	1.0629	54560	PEACE/29	138	1.0635
54561	DIASHOW7	138	1.0627	54586	ENMX30S9	138	1.0529	54589	DOME CU7	138	1.0655
54593	DONNELL9	138	1.0602	54594	TAP7L487	138	1.0640	54595	TRIANGL7	138	1.0572
54596	VALLEYV9	138	1.0774	54600	L.SMOKY7	138	1.0857	54601	STURGEO7	138	1.0854
54606	SIMONET9	138	1.0842	54607	FOXCRK/2	138	1.0509	54608	GOOSE R9	138	1.0666
54612	RUTH LA7	138	1.0569	54613	RUTH LK7	138	1.0573	54622	MITS E.7	138	1.0889
54623	AEC MILL	138	1.0878	54624	OTAUWAU7	138	1.0887	54633	LOU CR.7	138	1.0563
54634	SARHLK/2	138	1.0501	54636	ESSO JU7	138	1.0511	54637	MORSE RV	138	1.0515
54639	VIRGINI9	138	1.0522	54643	WOLF LK9	138	1.0688	54646	MARG LK4	240	1.0725
54647	MARG LK7	138	1.0839	54648	LACOREY9	138	1.0663	54652	BONNY 9	138	1.0519
54654	BONN SVC	138	1.0519	54655	WHITFISH	240	1.0842	54675	PAINTRT7	240	1.1008
54680	NEVIS 4	240	1.0877	54681	NEVIS 7	138	1.1232	54685	3HILLS/3	138	1.0733
54691	MICH. C9	138	1.0826	54693	WINT HI9	138	1.0840	54694	BULLPON9	138	1.0837
54707	SHEER 14	240	1.0695	54709	ANDERSO4	240	1.0701	54710	ANDERSON	138	1.0936
54711	SHEER 24	240	1.0695	54715	BAT. RV7	138	1.0894	54721	BAT RV79	240	1.1029
54723	CORDEL 4	240	1.1029	54729	PRIM TAP	138	1.0632	54730	PRIMROSE	138	1.0687

54796	791S701T	138	1.0637	54802	STURGEO9	138	1.1007	54806	946/947N	240	1.0758
54809	732S901T	240	1.0666	54818	VERMILA9	138	1.0785	54822	766S901T	240	1.0754
54823	NEVIS 9	138	1.0995	54828	767S701T	138	1.0567	54835	791S702T	138	1.0641
54836	MILNERB9	138	1.0764	54844	709S702T	138	1.0731	54847	BAT RV80	240	1.1029
54848	791S703T	138	1.0543	54948	802S701T	138	1.0614	54962	KAYBOBTP	138	1.0516
54963	CANMORE9	138	1.0514	54965	54L JNC	138	1.0507	54978	EAST IN4	240	1.0756
54983	MARION T	138	1.0558	54984	HIGHVL T	138	1.0555	54988	CROSSF T	240	1.0691
54995	W.GRN TP	240	1.1056	55010	ANG COCH	138	1.0506	55012	BASSET 7	138	1.0531
55013	HAIGRIVE	138	1.0519	55067	FTNELSON	138	1.0679	55072	SYNC_D04	240	1.0581
55073	AURORA 4	240	1.0636	55075	SEAL LK9	138	1.0513	55147	MILNERC9	138	1.0866
55272	FIELDGA9	138	1.0504	55515	PRIMROSE	138	1.0559	55521	LANGDOB9	240	1.0521
55763	BC BORDE	138	1.0647	55891	904AL TP	240	1.0756	55894	SARCEE M	138	1.0615
55900	JUMP TP1	138	1.0528	55912	740L JNC	138	1.0611	55913	G.ROBB T	138	1.0602
55924	CH KGT T	138	1.0514	55925	JUMP TP2	138	1.0531	55943	MILO 1	240	1.0646
55969	770S701T	138	1.1192	50010	COM132	132	1.0675	50020	CMS230	230	1.0500
50036	RBW230	230	1.0552	50037	PEM230	230	1.0590	50038	RBW230-1	230	1.0537
50182	ARN132	132	1.0662	50185	ALZ230	230	1.0531	50186	ROS230	230	1.0630
50187	BRT230	230	1.0704	50188	BUT230	230	1.0500	50193	BRT360	360	1.0500
50313	VIT132	132	1.0529	50314	PVO133	132	1.0518	50315	PVO132	132	1.0523
50323	DMR132	132	1.0573	50330	LDR132	132	1.0507	50331	GLD132	132	1.0529
50334	KGH132	132	1.0541	50335	UTA132	132	1.0544	50342	SCA132	132	1.0500
50343	KSH132-2	132	1.0512	50345	KSH132	132	1.0503	50346	SHA2	132	1.0515
50347	GOW132	132	1.0528	50348	GTP132	132	1.0563	50349	CLD132	132	1.0578
50350	SOO132	132	1.0583	50351	JOR132	132	1.0614	50352	PML132	132	1.0530
50353	WOS132	132	1.0547	50354	GLSTP17	132	1.0573	50355	GLSTP18	132	1.0559
50356	DND132	132	1.0532	50390	KSHTP11	132	1.0505	50391	KSHTP14	132	1.0515
50394	SHATP14	132	1.0515	50395	SALTP17	132	1.0558	50396	SALTP18	132	1.0560
50447	TKW138	138	1.0542	50463	SKA500	500	1.0637	50464	TKW500	500	1.0696
50540	GMS230	230	1.0548	50541	KDS230	230	1.0556	50545	BLW230	230	1.0670
50546	SCK230	230	1.0612	50547	HMH230	230	1.0597	50548	BLM230	230	1.0587
50549	QNT230	230	1.0579	50550	QRP230	230	1.0667	50551	TLR230	230	1.0585
50553	BCR230	230	1.0585	50554	RBF230	230	1.0679	50556	LAP230	230	1.0569
50557	SNK230	230	1.0589	50558	GMS500	500	1.0500	50560	KDS500	500	1.0631
50561	WSN500	500	1.0513	50562	GLN500	500	1.0690	50653	NIC138	138	1.0561
50655	VVW138	138	1.0546	50656	SVA138	138	1.0554	50657	TMT138	138	1.0518
50658	WBK138	138	1.0520	50659	BDM138	138	1.0543	50660	WGS138	138	1.0618
50661	MON138	138	1.0591	50669	DUG138	138	1.0511	50670	KWD138	138	1.0522
50671	AON138	138	1.0526	50672	BKL138	138	1.0555	50673	HFY138	138	1.0504
50677	MCK138	138	1.0505	50678	AVO138	138	1.0522	50679	BLU138	138	1.0583
50680	VLM138	138	1.0636	50686	SCO138	138	1.0713	50687	ABA138	138	1.0631
50691	NIC230	230	1.0533	50700	MCA500	500	1.0500	50701	REV500	500	1.0500
50702	ACK500	500	1.0511	50703	NIC500	500	1.0526	50726	TMT138TP	138	1.0518
50729	PRI138TP	138	1.0712	50776	NTL138	138	1.0520	50783	SEL230	230	1.0750
50784	NLY230	230	1.0539	50785	SEV230	230	1.0765	50788	KCL230	230	1.0881
50792	SEL500	500	1.0500	50899	ABA138TP	138	1.0631	50900	AON138TP	138	1.0526
50902	BDM138TP	138	1.0543	50922	DNDTAP	132	1.0539	50923	HSY-PH	132	1.0566
50924	ESQ-PH	132	1.0532	50928	SCG IPP	132	1.0632	50929	TOK138	138	1.0506
50933	JUL132	132	1.0503	50934	JULTP130	132	1.0541	51017	KMS230	230	1.1095
51045	ALH230	230	1.0669	60085	BRIDGER	345	1.0500	60240	MIDPOINT	500	1.0724
90100	MTSCLSTP	500	1.0960	62012	TOWN2	500	1.0560	62013	TOWN1	500	1.0560
62057	COLSTRP	500	1.0800	40045	ALLSTON	500	1.0746	40051	ALVEY	500	1.0840
40061	ASHE	500	1.0800	40111	BIG EDDY	500	1.0771	43049	BOARD F	500	1.0840
40139	BONNVILE	115	1.0500	47013	BRIDGPRT	115	1.0541	40155	BUCKLEY	500	1.0811
45029	BURNS	500	1.0621	45035	CAPTJACK	500	1.0815	46209	CARMEN	115	1.0624
41311	CELILO1	500	1.0770	41312	CELILO2	500	1.0770	40233	CHIEF JO	500	1.0800

40287	COULEE	500	1.0810	40302	COVINGT4	500	1.0736	40306	COVINGT5	500	1.0742
43115	COYO M1	500	1.0561	43123	COYOTE	500	1.0855	40323	CUSTER W	500	1.0515
45095	DIXONVLE	500	1.0849	40369	DWORSHAK	500	1.0636	40381	ECHOLAKE	500	1.0751
40451	GAR1EAST	500	1.0597	40453	GAR2EAST	500	1.0597	40485	GREEN PT	115	1.0520
40489	GRIZZLY	500	1.0787	40499	HANFORD	500	1.0834	40521	HATWAI	500	1.0664
45137	HERMIST	230	1.0509	41212	HILLS CR	115	1.0500	40553	HOT SPR	500	1.0612
40585	JOHN DAY	500	1.0850	40601	KEELER	500	1.0857	45262	KFALLS	500	1.0839
40629	LANE	500	1.0775	40665	LIT GOOS	500	1.0800	40679	LOW GRAN	500	1.0800
40683	LOW MON	500	1.0800	40687	MALIN	500	1.0800	40693	MAPLE VL	500	1.0745
40699	MARION	500	1.0843	40711	MCLOUGLN	500	1.0722	40721	MCNARY	345	1.0510
40723	MCNARY	500	1.0805	45197	MERIDINP	500	1.0829	40749	MONROE	500	1.0697
40797	OLYMPIA	500	1.0792	40809	OSTRNDER	500	1.0748	40821	PAUL	500	1.0800
40827	PEARL	500	1.0827	40837	PONDROSA	500	1.0835	40869	RAVER	500	1.0779
43485	ROUND BU	500	1.0752	40913	SACJAWEA	500	1.0758	40917	SACJWA T	500	1.0771
40941	SANTIAM	500	1.0835	40949	SATSOP	500	1.0800	40957	SCHULTZ	500	1.0841
40973	SICKLER	500	1.0795	40989	SLATT	500	1.0822	41043	SUMMER L	500	1.0822
45289	SWIFT	230	1.0500	41051	TACOMA	500	1.0777	41057	TAFT	500	1.0565
41095	TROUTDAL	500	1.0666	41113	VANTAGE	500	1.0771	45337	WEED JPS	115	1.0534
47099	WELLS	115	1.0630	52226	PRI138	138	1.0713	52229	KER138	138	1.0748
52230	HED138	138	1.0738	52391	30L-LK-W	161	1.0550	52392	30L-LK-E	161	1.0557
52400	CRA161	161	1.0560	52407	COF161	161	1.0549	52409	KIM161	161	1.0607
52426	MAS138	138	1.0738	52814	KIM-T3	161	1.0607	52815	PRI-T2	138	1.0721

undervoltage summary < 0.900000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)

undervoltage summary < 0.950000

--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)	--no.--	--name--	-kv-	(v pu)
50781	NTL VR	138	0.9473	50787	NTL230	230	0.9215	48069	CHESTER	115	0.9478
48299	OPPORTUN	115	0.9499	48306	OTIS	230	0.9414	70249	LAJUNTAW	115	0.9285
64072	MEYERS	120	0.9487	64092	RND HILL	120	0.9469	64102	STATELIN	120	0.9460
64203	TWN CRTP	120	0.9456								

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

	generation capacity	generation on-line	load categories power	load categories current	load categories imped.	shunt	-- svd --	net inter	losses	slack bus
area name ALBERTA										
mw	10743.6	6996.2	7899.2	0.0	0.0	0.0	0.0	-1244.0	341.0	29.2
54 mvar	4916.5	912.0	2641.0	0.0	0.0	-22.8	-1854.8	479.7	-623.0	4.6
area name B.C.HYDRO										
mw	14693.0	10268.1	6889.1	0.0	0.0	0.0	0.0	2850.5	528.4	214.5
50 mvar	6719.0	1184.3	2565.8	0.0	0.0	2946.1	2266.0	-424.3	-6169.3	8.0
area name IDAHO										
mw	4676.4	4111.7	2984.0	0.0	0.0	0.0	0.0	920.7	207.1	144.4
60 mvar	2192.5	261.1	711.6	0.0	0.0	-594.2	0.0	-688.6	685.7	-6.1
area name MONTANA										
mw	4502.2	3878.8	1422.9	0.0	0.0	0.4	0.0	2212.8	242.7	666.8
62 mvar	1929.0	832.7	610.2	0.0	0.0	-122.5	1077.1	-697.6	491.0	97.3
area name NORTHWEST										
mw	43502.3	27275.4	22671.3	0.0	0.0	0.0	0.0	3513.8	1090.4	513.4
40 mvar	15475.0	3279.0	6850.3	0.0	0.0	-1891.6	-3923.2	1251.5	991.9	19.2
area name PACE										
mw	6212.0	5555.1	6293.7	0.0	0.0	0.0	0.0	-981.2	242.6	134.1
65 mvar	3201.9	408.0	1960.1	0.0	0.0	-1773.5	-49.7	157.5	26.6	18.8
area name PSCOLORADO										
mw	5806.0	5191.5	6332.7	0.0	0.0	0.0	0.0	-1333.0	191.8	112.5
70 mvar	3667.3	1775.6	2372.6	0.0	0.0	0.0	-1672.0	283.7	791.3	33.3
area name SIERRA										
mw	1901.7	1375.4	1719.1	0.0	0.0	0.0	0.0	-399.3	55.6	109.4
64 mvar	925.4	120.5	458.7	0.0	0.0	-188.3	69.4	56.1	-275.5	23.8
area name W KOOTENAY										
mw	763.5	596.5	722.4	0.0	0.0	0.0	0.0	-150.3	24.4	104.6
52 mvar	450.0	49.8	210.2	0.0	0.0	-78.0	-130.8	-57.4	105.8	16.1
area name WAPA R.M.										
mw	6091.6	5382.2	3608.3	0.0	0.0	0.0	0.0	1612.9	161.0	499.8
73 mvar	2883.8	208.2	1237.0	0.0	0.0	-296.6	-308.9	-384.4	-39.0	55.3

		generation capacity	generation on-line	--- load categories ---- power	current	imped.	shunt	-- svd	-- inter	net losses	slack bus
area name	WAPA U.M.										
	mw	61.8	66.1	-102.1	0.0	0.0	0.0	0.0	147.2	20.9	66.1
63	mvar	34.0	11.1	123.6	0.0	0.0	-79.0	-17.4	-44.4	28.2	11.1
TOTL	mw	98954.1	70697.0	60440.6	0.0	0.0	0.4	0.0	7150.1	3105.9	
	mvar	42394.4	9042.0	19741.2	0.0	0.0	-2100.2	-4544.4	-68.2	-3986.3	

Area Interchange Summary

		mw	mvar
FROM AREA	54 ALBERTA		
TO AREA	50 B.C.HYDRO	-975.4	212.0
TO AREA	62 MONTANA	-268.6	267.7
TOTAL		-1244.0	479.7
FROM AREA	50 B.C.HYDRO	mw	mvar
TO AREA	54 ALBERTA	975.4	-212.0
TO AREA	40 NORTHWEST	1724.9	-269.7
TO AREA	52 W KOOTENAY	150.3	57.4
TOTAL		2850.5	-424.3
FROM AREA	60 IDAHO	mw	mvar
TO AREA	62 MONTANA	-441.5	-199.4
TO AREA	40 NORTHWEST	185.7	-321.0
TO AREA	65 PACE	1042.9	-118.2
TO AREA	64 SIERRA	133.5	-49.9
TOTAL		920.7	-688.6
FROM AREA	62 MONTANA	mw	mvar
TO AREA	54 ALBERTA	268.6	-267.7
TO AREA	60 IDAHO	441.5	199.4
TO AREA	40 NORTHWEST	1311.1	-583.4
TO AREA	65 PACE	178.6	-63.2
TO AREA	63 WAPA U.M.	13.0	17.3
TOTAL		2212.8	-697.6
FROM AREA	40 NORTHWEST	mw	mvar
TO AREA	50 B.C.HYDRO	-1724.9	269.7
TO AREA	60 IDAHO	-185.7	321.0
TO AREA	26 LADWP	2806.6	610.1
TO AREA	62 MONTANA	-1311.1	583.4
TO AREA	30 PG AND E	3743.7	-484.4
TO AREA	64 SIERRA	185.1	-48.3
TOTAL		3513.8	1251.5
FROM AREA	65 PACE	mw	mvar
TO AREA	14 ARIZONA	35.1	85.0
TO AREA	60 IDAHO	-1042.9	118.2
TO AREA	26 LADWP	-28.9	-140.5
TO AREA	62 MONTANA	-178.6	63.2
TO AREA	18 NEVADA	253.0	-57.5
TO AREA	64 SIERRA	32.4	13.7
TO AREA	19 WAPA L.C.	78.5	22.2
TO AREA	73 WAPA R.M.	-129.7	53.2
TOTAL		-981.2	157.5
FROM AREA	70 PSCOLORADO	mw	mvar
TO AREA	73 WAPA R.M.	-1333.0	283.7
TOTAL		-1333.0	283.7
FROM AREA	64 SIERRA	mw	mvar
TO AREA	60 IDAHO	-133.5	49.9
TO AREA	26 LADWP	-50.2	2.2

TO AREA	40 NORTHWEST	-185.1	48.3
TO AREA	65 PACE	-32.4	-13.7
TO AREA	30 PG AND E	-10.5	-28.1
TO AREA	24 SOCALIF	12.5	-2.5
TOTAL		-399.3	56.1

FROM AREA	52 W KOOTENAY	mw	mvar
TO AREA	50 B.C.HYDRO	-150.3	-57.4
TOTAL		-150.3	-57.4

FROM AREA	73 WAPA R.M.	mw	mvar
TO AREA	10 NEW MEXICO	211.5	-40.2
TO AREA	65 PACE	129.7	-53.2
TO AREA	70 PSCOLORADO	1333.0	-283.7
TO AREA	19 WAPA L.C.	99.0	-34.3
TO AREA	63 WAPA U.M.	-160.2	27.1
TOTAL		1612.9	-384.4

FROM AREA	63 WAPA U.M.	mw	mvar
TO AREA	62 MONTANA	-13.0	-17.3
TO AREA	73 WAPA R.M.	160.2	-27.1
TOTAL		147.2	-44.4

AREA TIE LINE SUMMARY

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V11.1
MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

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  ---------from--------      --------- to --------
  --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

    54150 LANGDON2  500        50791 CBK500    500  1            -867.32    194.08   f
    54205 COLEMAN7  138        50776 NTL138    138  1             -44.56     -1.80   t
    54273 POCATER7  138        50830 FRO T274  138  1             -63.52     19.70   t
 from area  54 to area  50 B.C.HYDRO                             -975.40    211.97

    90500 MTSLETHB  500        90400 MTSGFALL  500  1            -268.62    267.74   t
 from area  54 to area  62 MONTANA                               -268.62    267.74

 Total from area  54 ALBERTA                                    -1244.02    479.71

  ---------from--------      --------- to --------
  --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

    90400 MTSGFALL  500        90500 MTSLETHB  500  1             268.62   -267.74   f
 from area  62 to area  54 ALBERTA                                268.62   -267.74

    90600 MTSDILL   500        90700 MTSKINP   500  1             441.48    199.43   t
 from area  62 to area  60 IDAHO                                  441.48    199.43

    62004 ANACOND   230        40457 GARRISON  230  1            -240.42      7.20   f
    62004 ANACOND   230        40457 GARRISON  230  2            -260.52     -3.75   f
    62009 RATTLE S  161        40867 RATTLE S  230  1            -141.32    -30.08   t
    62012 TOWN2     500        40453 GAR2EAST  500  2            1046.73   -263.71   t
    62013 TOWN1     500        40451 GAR1EAST  500  1            1046.73   -263.71   t
    62066 KERR      115        40391 ELMO      115  1               1.13    -12.79   f
    62072 OVANDO    230        40457 GARRISON  230  1            -193.57      6.21   t
    62072 OVANDO    230        40551 HOT SPR   230  1              -7.56      5.26   t
    62085 CROWCR B  115        48055 BURKAVAB  115  1              26.99    -13.32   t
    62086 THOMSON   115        48053 BURKAVAA  115  1              32.95    -14.74   t
 from area  62 to area  40 NORTHWEST                             1311.14   -583.43

    62030 PTRSNFLT  230        65025 AMPS      230  1             194.50    -41.10   t
    62045 BLGS PHA  230        66750 YELOWTLP  230  1             -42.75     -4.62   t
    62061 RMRK PHA  161        66755 YELOWTLP  161  1             -25.26     -4.43   f
    62084 DILLON S  161        65155 BIGGRASS  161  1              52.08    -13.03   t
 from area  62 to area  65 PACE                                   178.57    -63.18

    90223 MTSGFALL  230        90208 MTSHAVRE  230  1             -38.93    -11.38   f
    90224 MTSRNBW   230        90215 MTSVER    230  1             -34.40    -10.13   f
    62027 SHELBY    115        63014 TIBERTAP  115  1             -21.88      5.48   f
    62051 HARDIN    230        63002 CRSOVRUM  230  1             191.49     21.37   t
    62056 HUNTLEY   230        63002 CRSOVRUM  230  1            -205.15      7.08   t
    62060 COLSTRP   230        90204 MTSFTPCK  230  1             121.88      4.93   t
 from area  62 to area  63 WAPA U.M.                              13.00     17.35

 Total from area  62 MONTANA                                     2212.81   -697.56

  ---------from--------      --------- to --------
  --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

    40145 BOUNDARY  230        50822 NLYPHS    230  1             -99.20    -44.24   f
    40323 CUSTER W  500        50194 ING500    500  1            -819.64    157.85   t
    40323 CUSTER W  500        50194 ING500    500  2            -806.03    156.13   t
 from area  40 to area  50 B.C.HYDRO                            -1724.87    269.74

    45029 BURNS     500        60240 MIDPOINT  500  1            -408.62    381.43   t
    45103 ENTERPRS  230        60150 HELLSCYN  230  1              -3.03    -28.80   f
    40507 HARNEY    115        61826 HINES     115  1             -14.95     16.50   f
    40621 LAGRANDE  230        60192 LADD      230  1              50.86    -25.75   f
    48197 LOLO      230        60278 IMNAHA    230  1             190.07    -22.36   t
 from area  40 to area  60 IDAHO                                  -185.66    321.02

    41311 CELILO1   500        26097 SYLMAR1   230  1             529.47     59.11   f
    41313 CELILO3   230        26098 SYLMAR3   230  1             873.84    245.76   f
    41312 CELILO2   500        26099 SYLMAR2   230  1             529.47     59.04   f
    41314 CELILO4   230        26100 SYLMAR4   230  1             873.84    246.17   f
 from area  40 to area  26 LADWP                                 2806.62    610.08

    48053 BURKAVAA  115        62086 THOMSON   115  1             -32.95     14.74   f
    48055 BURKAVAB  115        62085 CROWCR B  115  1             -26.99     13.32   f
    40391 ELMO      115        62066 KERR      115  1              -1.13     12.79   t
    40451 GAR1EAST  500        62013 TOWN1     500  1           -1046.73    263.71   f
    40453 GAR2EAST  500        62012 TOWN2     500  2           -1046.73    263.71   f
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   40457 GARRISON  230        62072 OVANDO    230  1            193.57     -6.21   f
   40457 GARRISON  230        62004 ANACOND   230  1            240.42     -7.20   t
   40457 GARRISON  230        62004 ANACOND   230  2            260.52      3.75   t
   40551 HOT SPR   230        62072 OVANDO    230  1              7.56     -5.26   f
   40867 RATTLE S  230        62009 RATTLE S  161  1            141.32     30.08   f
from area  40 to area  62 MONTANA                              -1311.14    583.43

   45035 CAPTJACK  500        30020 OLINDA    500  1           1323.27   -221.37   f
   45087 DELTA     115        31468 CASCADE   115  1             70.52    -14.82   f
   40687 MALIN     500        30005 ROUND MT  500  1           1169.78   -115.28   f
   40687 MALIN     500        30005 ROUND MT  500  2           1180.12   -132.97   f
from area  40 to area  30 PG AND E                              3743.68   -484.45

   40537 HIL TOP   230        64058 HIL TOP   345  1            185.15    -48.30   f
from area  40 to area  64 SIERRA                                185.15    -48.30

Total from area  40 NORTHWEST                                   3513.78   1251.51

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   66235 PINTO PS  345        14101 FOURCORN  345  1             35.11     85.04   t
from area  65 to area  14 ARIZONA                                35.11     85.04

   90800 MTSBENL   500        90700 MTSKINP   500  1           -487.54    149.34   t
   65075 ANTLOPE   230        60073 BRADY     230  1             89.28    -29.29   f
   65135 BENLOMND  345        60060 BORAH     345  1           -164.55     38.61   t
   65220 BRIDGER   230        60085 BRIDGER   345  1            -20.71     -4.57   t
   65220 BRIDGER   230        60085 BRIDGER   345  2            -21.05     -4.63   t
   65220 BRIDGER   230        60085 BRIDGER   345  3            -20.71     -4.57   t
   65665 GOSHEN    345        60085 BRIDGER   345  1           -616.32    -35.66   f
   65665 GOSHEN    345        60190 KINPORT   345  1            234.22    -15.37   t
   65670 GOSHEN    161        60030 BLACKFT   161  1             98.65      9.27   f
   65920 MALAD     138        60020 AMFLS     138  1            -45.20      0.47   t
   66565 TREASTON  230        60073 BRADY     230  1            -89.00     14.64   t
from area  65 to area  60 IDAHO                                -1042.94    118.25

   65995 MONA      345        26043 INTERMT   345  1            -14.47    -70.27   f
   65995 MONA      345        26043 INTERMT   345  2            -14.47    -70.27   f
from area  65 to area  26 LADWP                                  -28.95   -140.53

   65025 AMPS      230        62030 PTRSNFLT  230  1           -194.50     41.10   f
   65155 BIGGRASS  161        62084 DILLON S  161  1            -52.08     13.03   f
   66750 YELOWTLP  230        62045 BLGS PHA  230  1             42.75      4.62   f
   66755 YELOWTLP  161        62061 RMRK PHA  161  1             25.26      4.43   t
from area  65 to area  62 MONTANA                               -178.57     63.18

   66280 REDBUTTE  345        18002 HA PS     345  1            252.98    -57.55   f
from area  65 to area  18 NEVADA                                252.98    -57.55

   66210 PAVANT    230        64124 UTAH-NEV  230  1             32.38     13.73   t
from area  65 to area  64 SIERRA                                 32.38     13.73

   66355 SIGURDPS  230        79031 GLENCANY  230  1             78.47     22.16   t
from area  65 to area  19 WAPA L.C.                              78.47     22.16

   65060 ANT MINE  230        73276 TEKLA     230  1             29.64     18.66   f
   65085 ASHLEY    138        79067 VERNAL    138  1            -74.70      5.30   t
   65192 BONANZA   138        79067 VERNAL    138  1             53.33      4.18   t
   65193 BONANZA   345        79005 BEARS     345  1           -314.88      1.27   f
   65305 CASPERPP  115        73167 REFNRYTP  115  1            -35.62     -3.27   f
   65305 CASPERPP  115        73042 CASPERLM  115  1             -5.54     -4.88   t
   65420 DAVEJOHN  230        73107 LAR.RIVR  230  1             83.79    -19.52   f
   65420 DAVEJOHN  230        73190 STEGALL   230  1             94.77    -16.20   f
   65425 DAVEJOHN  115        73070 GLENRCKN  115  1             72.95      2.16   f
   65425 DAVEJOHN  115        73071 GLENRCKS  115  1             84.49      5.91   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  1            -49.49      8.67   f
   65565 FLAMGORG  230        79026 FLAMGORG  138  2            -49.49      8.67   f
   66278 RANGELY   138        79001 ARTESIA   138  1             -6.64     -5.78   f
   66278 RANGELY   138        79046 MEEKER    138  1             -2.63     -1.49   f
   66305 RIVERTON  230        73170 RIVERTON  115  1              6.44      1.68   f
   66535 THERMOPL  230        73197 THERMOPL  115  1              0.47      6.11   t
   66540 THERPACE  115        73197 THERMOPL  115  1             11.22      6.39   t
   66720 WORLAND   115        73222 WORLANTP  115  1            -12.62      9.39   t
   66725 WYODAK    230        73148 OSAGE     230  1            120.99    -17.01   t
   66725 WYODAK    230        73168 RENO      230  1             91.50      6.34   f
   66725 WYODAK    230        73294 HUGHES    230  1            116.36     -1.98   f
   66725 WYODAK    230        73282 WYODAK     69  1            -10.65     15.20   f
   66725 WYODAK    230        73282 WYODAK     69  2             -7.20     10.28   f
   66725 WYODAK    230        74016 WYGEN      14  1              0.00      0.00   f
   66750 YELOWTLP  230        73229 YELLOWBR  230  1           -326.18     13.13   t
from area  65 to area  73 WAPA R.M.                             -129.68     53.19
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Total from area  65 PACE                                          -981.18    157.46

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   70005 BRUSHCPP  115        73013 B.CK PS   115  1            118.30     22.99   f
   70005 BRUSHCPP  115        73013 B.CK PS   115  2            124.81     29.99   f
   70116 COBBLAKE  115        73044 COBBLKTP  115  1            -15.33     -1.45   f
   70122 COMANCHE  230        73477 FULLER    230  1             95.13     31.44   t
   70139 DANIELPK  230        73477 FULLER    230  1           -113.48    -18.43   t
   70193 FTN VALL  115        73412 MIDWAYBR  115  1              4.34     -0.12   t
   70205 GRANDJCT  230        79036 GRANDJCT  345  1            -43.79    -22.19   f
   70256 LAPORTPS  115        73105 LAPORTE   115  1            -14.74     -6.24   t
   70274 MALTA     230        73138 MT.ELBRT  230  1           -145.52     -7.79   f
   70285 MIDWAYPS  115        73412 MIDWAYBR  115  1             18.23    -22.60   f
   70286 MIDWAYPS  230        73413 MIDWAYBR  230  1            133.63     79.62   t
   70287 MILL      115        73296 FRASER    115  1            -42.11      9.67   f
   70308 PALMER    115        73414 MONUMENT  115  1            -46.92     17.61   t
   70311 PAWNEE    230        73192 STORY     230  1           -228.20    -30.90   t
   70327 PONCHA    115        79037 GUNNISON  115  1            -22.56     10.18   f
   70350 RAWHIDE    24        73165 RAWHIDE   230  1            262.16     80.77   t
   70358 RIFLE PS  230        79059 RIFLE WA  230  1            -91.75     13.46   f
   70358 RIFLE PS  230        79250 AMATLAS   230  1            -75.90     -5.06   f
   70375 SAN LUIS  230        79054 PONCHABR  230  1            -80.22      6.79   t
   70410 ST.VRAIN  230        73116 LONGPEAK  230  1            -52.62     66.23   f
   70470 WELD  PS  115        73211 WELD  LM  115  1            -20.29     61.40   f
   70471 WELD  PS  230        73212 WELD  LM  230  1           -370.48      0.84   f
   70474 WINDSOR   230        73011 AULT      230  1           -308.28      1.01   t
   70476 WOODLAND  115        73400 EMIL AND  115  1             14.89      2.41   f
   70525 MTHARRIS  138        79038 HAYDEN    138  1             -7.21     -1.37   t
   79033 GOREPASS  230        79039 HAYDEN    230  1           -253.84    -23.18   t
   79033 GOREPASS  230        73072 GOREPASS  138  1              2.45      3.48   f
   79034 GRANDJCT  115        79048 MONTROSE  115  1             25.11     -5.14   t
   79056 RIFLE CU  138        79046 MEEKER    138  1            -23.63     -1.79   f
   79057 RIFLE CU  230        79059 RIFLE WA  230  1             10.79    -26.84   t
   79058 RIFLE CU  345        79014 CRAIG     345  1           -355.34     -4.53   f
   79058 RIFLE CU  345        79036 GRANDJCT  345  1            327.08      3.38   f
   79091 WOLCOTTP  230        79039 HAYDEN    230  1           -185.39     -0.59   f
   79173 COLBRAN   115        79174 MOLINA-L  115  1              0.00     -0.53   f
   70351 RAWHIDEA   14        73165 RAWHIDE   230  1             50.81     40.16   t
   70550 W CANON   115        73551 W CANON   230  1            -23.12    -18.95   t
from area  70 to area  73 WAPA R.M.                              -1332.98    283.72

Total from area  70 PSCOLORADO                                   -1332.98    283.72

 ---------from--------      --------- to --------
 --no.-- --name-- -kv-      --no.-- --name-- -kv- ck          ---mw---- ---mvar-- meter

   79060 SANJN PS  345        10292 SAN_JUAN  345  1            211.48    -40.25   t
from area  73 to area  10 NEW MEXICO                              211.48    -40.25

   73042 CASPERLM  115        65305 CASPERPP  115  1              5.54      4.88   f
   73070 GLENRCKN  115        65425 DAVEJOHN  115  1            -72.95     -2.16   t
   73071 GLENRCKS  115        65425 DAVEJOHN  115  1            -84.49     -5.91   t
   73107 LAR.RIVR  230        65420 DAVEJOHN  230  1            -83.79     19.52   t
   73148 OSAGE     230        66725 WYODAK    230  1           -120.99     17.01   f
   73167 REFNRYTP  115        65305 CASPERPP  115  1             35.62      3.27   t
   73168 RENO      230        66725 WYODAK    230  1            -91.50     -6.34   t
   73170 RIVERTON  115        66305 RIVERTON  230  1             -6.44     -1.68   t
   73190 STEGALL   230        65420 DAVEJOHN  230  1            -94.77     16.20   t
   73197 THERMOPL  115        66540 THERPACE  115  1            -11.22     -6.39   f
   73197 THERMOPL  115        66535 THERMOPL  230  1             -0.47     -6.11   f
   73222 WORLANTP  115        66720 WORLAND   115  1             12.62     -9.39   f
   73229 YELLOWBR  230        66750 YELOWTLP  230  1            326.18    -13.13   f
   73276 TEKLA     230        65060 ANT MINE  230  1            -29.64    -18.66   t
   73282 WYODAK     69        66725 WYODAK    230  1             10.65    -15.20   t
   73282 WYODAK     69        66725 WYODAK    230  2              7.20    -10.28   t
   73294 HUGHES    230        66725 WYODAK    230  1           -116.36      1.98   t
   79001 ARTESIA   138        66278 RANGELY   138  1              6.64      5.78   t
   79005 BEARS     345        65193 BONANZA   345  1            314.88     -1.27   t
   79026 FLAMGORG  138        65565 FLAMGORG  230  1             49.49     -8.67   t
   79026 FLAMGORG  138        65565 FLAMGORG  230  2             49.49     -8.67   t
   79046 MEEKER    138        66278 RANGELY   138  1              2.63      1.49   t
   79067 VERNAL    138        65085 ASHLEY    138  1             74.70     -5.30   f
   79067 VERNAL    138        65192 BONANZA   138  1            -53.33     -4.18   f
   74016 WYGEN      14        66725 WYODAK    230  1              0.00      0.00   t
from area  73 to area  65 PACE                                    129.68    -53.19

   73011 AULT      230        70474 WINDSOR   230  1            308.28     -1.01   f
   73013 B.CK PS   115        70005 BRUSHCPP  115  1           -118.30    -22.99   t
   73013 B.CK PS   115        70005 BRUSHCPP  115  2           -124.81    -29.99   t
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73044	COBBLKTP	115	70116	COBBLAKE	115	1	15.33	1.45	t
73072	GOREPASS	138	79033	GOREPASS	230	1	-2.45	-3.48	t
73105	LAPORTE	115	70256	LAPORTPS	115	1	14.74	6.24	f
73116	LONGPEAK	230	70410	ST.VRAIN	230	1	52.62	-66.23	t
73138	MT.ELBRT	230	70274	MALTA	230	1	145.52	7.79	t
73165	RAWHIDE	230	70350	RAWHIDE	24	1	-262.16	-80.77	f
73165	RAWHIDE	230	70351	RAWHIDEA	14	1	-50.81	-40.16	f
73192	STORY	230	70311	PAWNEE	230	1	228.20	30.90	f
73211	WELD LM	115	70470	WELD PS	115	1	20.29	-61.40	t
73212	WELD LM	230	70471	WELD PS	230	1	370.48	-0.84	t
73296	FRASER	115	70287	MILL	115	1	42.11	-9.67	t
73400	EMIL AND	115	70476	WOODLAND	115	1	-14.89	-2.41	t
73412	MIDWAYBR	115	70193	FTN VALL	115	1	-4.34	0.12	f
73412	MIDWAYBR	115	70285	MIDWAYPS	115	1	-18.23	22.60	t
73413	MIDWAYBR	230	70286	MIDWAYPS	230	1	-133.63	-79.62	f
73414	MONUMENT	115	70308	PALMER	115	1	46.92	-17.61	f
73477	FULLER	230	70122	COMANCHE	230	1	-95.13	-31.44	f
73477	FULLER	230	70139	DANIELPK	230	1	113.48	18.43	f
79014	CRAIG	345	79058	RIFLE CU	345	1	355.34	4.53	t
79036	GRANDJCT	345	79058	RIFLE CU	345	1	-327.08	-3.38	t
79036	GRANDJCT	345	70205	GRANDJCT	230	1	43.79	22.19	t
79037	GUNNISON	115	70327	PONCHA	115	1	22.56	-10.18	t
79038	HAYDEN	138	70525	MTHARRIS	138	1	7.21	1.37	f
79039	HAYDEN	230	79033	GOREPASS	230	1	253.84	23.18	f
79039	HAYDEN	230	79091	WOLCOTTP	230	1	185.39	0.59	t
79046	MEEKER	138	79056	RIFLE CU	138	1	23.63	1.79	t
79048	MONTROSE	115	79034	GRANDJCT	115	1	-25.11	5.14	f
79054	PONCHABR	230	70375	SAN LUIS	230	1	80.22	-6.79	f
79059	RIFLE WA	230	70358	RIFLE PS	230	1	91.75	-13.46	t
79059	RIFLE WA	230	79057	RIFLE CU	230	1	-10.79	26.84	f
79174	MOLINA-L	115	79173	COLBRAN	115	1	-0.00	0.53	t
79250	AMATLAS	230	70358	RIFLE PS	230	1	75.90	5.06	t
73551	W CANON	230	70550	W CANON	115	1	23.12	18.95	f
from area 73 to area 70 PSCOLORADO							1332.98	-283.72	
79061	SHIP PS	230	79063	SHIPROCK	230	1	97.14	-19.47	t
79260	ELPASOTP	115	79105	GLADETAP	115	1	1.83	-14.87	t
from area 73 to area 19 WAPA L.C.							98.97	-34.34	
73229	YELLOWBR	230	63001	CROS PHA	230	1	-160.22	27.09	f
from area 73 to area 63 WAPA U.M.							-160.22	27.09	
Total from area 73 WAPA R.M.							1612.88	-384.40	

---------from--------			--------- to --------						
--no.--	--name--	-kv-	--no.--	--name--	-kv-	ck	---mw----	---mvar--	meter
90204	MTSFTPCK	230	62060	COLSTRP	230	1	-121.88	-4.93	f
90208	MTSHAVRE	230	90223	MTSGFALL	230	1	38.93	11.38	t
90215	MTSVER	230	90224	MTSRNBW	230	1	34.40	10.13	t
63002	CRSOVRUM	230	62051	HARDIN	230	1	-191.49	-21.37	f
63002	CRSOVRUM	230	62056	HUNTLEY	230	1	205.15	-7.08	f
63014	TIBERTAP	115	62027	SHELBY	115	1	21.88	-5.48	t
from area 63 to area 62 MONTANA							-13.00	-17.35	
63001	CROS PHA	230	73229	YELLOWBR	230	1	160.22	-27.09	t
from area 63 to area 73 WAPA R.M.							160.22	-27.09	
Total from area 63 WAPA U.M.							147.23	-44.44	

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Summation of selected system

	-----MW----	----MVAR---		
Generation	70696.977	9042.044	Generators	2564
Actual Load	60440.602	19741.215	Loads	6822
Net actual shunt	0.405	-2100.208	Shunts	1297
Net actual svd	0.000	-4544.405	Svd	590
Loss	3105.857	-3986.330	Buses	13198
			Lines	10966
			Transformers	5151
MVA-miles	6093065.0	1002735.9	DC buses	6
Miles	46985.316		DC converters	10
			DC lines	3

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area 54 [ALBERTA]

	-----MW----	----MVAR---		
Generation	6996.218	911.953	Generators	142
Actual Load	7899.199	2641.000	Loads	512
Net actual shunt	0.000	-22.789	Shunts	9
Net actual svd	0.000	-1854.840	Svd	76
Net Interchange	-1244.017	479.707	Buses	992
Sched Interchange	-1244.000		Lines	781
Loss	341.036	-623.048	Transformers	407
MVA-miles	1000619.5	259188.3	DC buses	0
Miles	18637.697		DC converters	0
			DC lines	0
Loss at 13.20 Kv	1.571	21.679		
Loss at 13.80 Kv	2.941	74.162		
Loss at 14.40 Kv	0.019	2.243		
Loss at 25.00 Kv	1.871	27.253		
Loss at 34.00 Kv	0.043	0.718		
Loss at 69.00 Kv	17.560	-9.145		
Loss at 138.00 Kv	163.840	-231.837		
Loss at 240.00 Kv	136.644	-676.521		
Loss at 500.00 Kv	1.710	-491.647		
Loss at other Kv	14.837	660.047		
Largest mismatch MVA	0.0233	0.0443		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area 50 [B.C.HYDRO]

	-----MW----	----MVAR---		
Generation	10268.090	1184.271	Generators	112
Actual Load	6889.125	2565.790	Loads	395
Net actual shunt	0.000	2946.134	Shunts	104
Net actual svd	0.000	2265.955	Svd	125
Net Interchange	2850.536	-424.293	Buses	1054
Sched Interchange	2849.900		Lines	718
Loss	528.427	-6169.317	Transformers	645
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.308	7.950		
Loss at 13.80 Kv	9.851	484.611		
Loss at 34.00 Kv	0.000	0.002		
Loss at 46.00 Kv	0.302	0.084		
Loss at 132.00 Kv	36.942	105.821		
Loss at 138.00 Kv	18.061	-113.147		
Loss at 230.00 Kv	58.795	-585.656		
Loss at 500.00 Kv	345.913	-6742.144		
Loss at other Kv	58.253	673.163		
Largest mismatch MVA	0.0292	0.0297		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area 60 [IDAHO]

-----MW---- ----MVAR---

Generation	4111.725	261.085	Generators	62
Actual Load	2984.000	711.600	Loads	64
Net actual shunt	0.000	-594.178	Shunts	15
Net actual svd	0.000	0.000	Svd	0
Net Interchange	920.667	-688.614	Buses	157
Sched Interchange	920.000		Lines	122
Loss	207.057	685.710	Transformers	97
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.20 Kv	0.267	5.734		
Loss at 13.80 Kv	3.390	116.620		
Loss at 14.40 Kv	0.878	34.161		
Loss at 34.50 Kv	0.000	0.000		
Loss at 100.00 Kv	0.667	35.278		
Loss at 115.00 Kv	0.445	0.422		
Loss at 138.00 Kv	19.992	-3.666		
Loss at 161.00 Kv	1.707	2.420		
Loss at 230.00 Kv	63.106	-86.904		
Loss at 345.00 Kv	111.362	412.390		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	5.244	169.255		
Largest mismatch MVA	0.0060	0.0168		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area 62 [MONTANA]

	-----MW----	----MVAR---		
Generation	3878.787	832.667	Generators	22
Actual Load	1422.895	610.184	Loads	200
Net actual shunt	0.405	-122.540	Shunts	56
Net actual svd	0.000	1077.056	Svd	16
Net Interchange	2212.808	-697.564	Buses	314
Sched Interchange	2212.000		Lines	319
Loss	242.678	491.015	Transformers	91
MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.000	37.329		
Loss at 69.00 Kv	0.889	2.983		
Loss at 100.00 Kv	30.900	-2.577		
Loss at 115.00 Kv	3.084	-15.532		
Loss at 161.00 Kv	49.060	71.981		
Loss at 230.00 Kv	57.023	156.535		
Loss at 500.00 Kv	99.899	-4.522		
Loss at other Kv	1.824	244.819		
Largest mismatch MVA	0.0071	0.0287		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area 40 [NORTHWEST]

	-----MW----	----MVAR---		
Generation	27275.416	3278.966	Generators	384
Actual Load	22671.295	6850.328	Loads	1652
Net actual shunt	0.000	-1891.556	Shunts	43
Net actual svd	0.000	-3923.210	Svd	159
Net Interchange	3513.777	1251.514	Buses	2740
Sched Interchange	3514.000		Lines	2710
Loss	1090.373	991.912	Transformers	654
MVA-miles	4493028.5	607133.5	DC buses	4
Miles	18469.418		DC converters	4
			DC lines	2
Loss at 11.00 Kv	0.000	0.606		
Loss at 13.20 Kv	0.000	4.807		
Loss at 13.80 Kv	4.794	207.025		
Loss at 14.40 Kv	0.287	13.141		
Loss at 25.00 Kv	3.230	169.896		
Loss at 34.50 Kv	0.342	6.081		
Loss at 69.00 Kv	14.759	42.596		
Loss at 100.00 Kv	0.119	-0.108		
Loss at 115.00 Kv	210.954	468.437		
Loss at 230.00 Kv	314.386	1400.307		
Loss at 345.00 Kv	17.319	-156.189		

Loss at 500.00 Kv	399.668	-2472.891
Loss at other Kv	124.519	1308.204
Largest mismatch MVA	0.0369	0.0587

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area 65 [PACE]

	-----MW----	----MVAR---		
Generation	5555.099	407.978	Generators	52
Actual Load	6293.716	1960.150	Loads	274
Net actual shunt	0.000	-1773.484	Shunts	74
Net actual svd	0.000	-49.673	Svd	2
Net Interchange	-981.182	157.456	Buses	566
Sched Interchange	-981.200		Lines	407
Loss	242.565	26.571	Transformers	338
MVA-miles	5.0	1.6	DC buses	0
Miles	1.900		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.906	30.887		
Loss at 34.50 Kv	1.002	7.505		
Loss at 46.00 Kv	6.309	136.527		
Loss at 69.00 Kv	1.664	22.636		
Loss at 100.00 Kv	0.056	1.043		
Loss at 115.00 Kv	3.028	-9.429		
Loss at 138.00 Kv	63.133	167.246		
Loss at 161.00 Kv	9.713	-19.544		
Loss at 230.00 Kv	71.261	-27.361		
Loss at 345.00 Kv	78.043	-96.365		
Loss at 500.00 Kv	3.392	-284.921		
Loss at other Kv	4.060	98.347		
Largest mismatch MVA	0.0039	0.0209		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area 70 [PSCOLORADO]

	-----MW----	----MVAR---		
Generation	5191.508	1775.615	Generators	66
Actual Load	6332.696	2372.604	Loads	362
Net actual shunt	0.000	0.000	Shunts	0
Net actual svd	0.000	-1672.010	Svd	43
Net Interchange	-1332.978	283.717	Buses	501
Sched Interchange	-1332.800		Lines	461
Loss	191.784	791.345	Transformers	147
MVA-miles	30904.3	6451.6	DC buses	0
Miles	564.500		DC converters	0
			DC lines	0
Loss at 13.80 Kv	4.008	136.243		
Loss at 14.40 Kv	0.080	0.798		
Loss at 25.00 Kv	0.010	0.140		
Loss at 46.00 Kv	0.196	0.009		
Loss at 69.00 Kv	7.181	1.786		
Loss at 100.00 Kv	0.032	-0.503		
Loss at 115.00 Kv	33.317	-36.936		
Loss at 138.00 Kv	0.275	-5.459		
Loss at 230.00 Kv	139.261	454.243		
Loss at 345.00 Kv	0.002	0.103		
Loss at 500.00 Kv	0.000	0.000		
Loss at other Kv	7.423	240.921		
Largest mismatch MVA	0.0151	0.0269		

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area 64 [SIERRA]

	-----MW----	----MVAR---		
Generation	1375.351	120.465	Generators	22
Actual Load	1719.091	458.744	Loads	121
Net actual shunt	0.000	-188.265	Shunts	30
Net actual svd	0.000	69.398	Svd	5
Net Interchange	-399.322	56.132	Buses	275
Sched Interchange	-399.000		Lines	197
Loss	55.582	-275.545	Transformers	117

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MVA-miles                 65394.0      38832.6        DC buses              0
Miles                    1042.600                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           2.541       51.403
Loss at  69.00 Kv           0.000        0.000
Loss at 115.00 Kv           0.479       -6.154
Loss at 230.00 Kv           1.669     -101.685
Loss at 345.00 Kv           9.089     -442.401
Loss at other Kv           41.805      223.291

Largest mismatch MVA       0.0032       0.0180

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area  52 [W KOOTENAY                      ]

                       -----MW----  ----MVAR---
Generation                596.550       49.788        Generators           20
Actual Load               722.400      210.200        Loads                64
Net actual shunt            0.000      -77.969        Shunts               27
Net actual svd              0.000     -130.796        Svd                   4
Net Interchange          -150.272      -57.414        Buses               260
Sched Interchange        -149.900                     Lines               165
Loss                       24.422      105.767        Transformers        117

MVA-miles                 30654.5       5237.4        DC buses              0
Miles                     986.000                     DC converters         0
                                                      DC lines              0
Loss at  13.20 Kv          -0.000        8.237
Loss at  13.80 Kv           0.000        0.000
Loss at  14.40 Kv           0.000       29.482
Loss at  25.00 Kv           0.000        0.000
Loss at 138.00 Kv           0.395       -0.585
Loss at 161.00 Kv           9.043       11.010
Loss at 230.00 Kv           1.517       -8.944
Loss at other Kv           13.467       66.567

Largest mismatch MVA       0.0023       0.0050

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area  73 [WAPA R.M.                       ]

                       -----MW----  ----MVAR---
Generation               5382.160      208.161        Generators           80
Actual Load              3608.290     1237.018        Loads               355
Net actual shunt            0.000     -296.610        Shunts                4
Net actual svd              0.000     -308.922        Svd                  53
Net Interchange          1612.884     -384.400        Buses               620
Sched Interchange        1612.000                     Lines               567
Loss                      160.990      -38.983        Transformers        174

MVA-miles                472459.0      85890.9        DC buses              0
Miles                    7283.200                     DC converters         0
                                                      DC lines              0
Loss at  13.80 Kv           6.220       91.925
Loss at  34.50 Kv           0.315        4.024
Loss at  69.00 Kv           5.349      -11.262
Loss at 115.00 Kv          64.771     -115.957
Loss at 138.00 Kv           4.570      -30.522
Loss at 230.00 Kv          36.895     -269.012
Loss at 345.00 Kv          35.633      -31.931
Loss at other Kv            7.237      323.752

Largest mismatch MVA       0.0185       0.0402

MONTANA TRANSMISSION STUDY, WAPA UGP, JUNE 2002
G1 SCHEDULED TO NORTH LETHBRIDGE, LINE 4

Area  63 [WAPA U.M.                       ]

                       -----MW----  ----MVAR---
Generation                 66.068       11.094        Generators            1
Actual Load              -102.100      123.600        Loads                17
Net actual shunt            0.000      -78.950        Shunts                1
Net actual svd              0.000      -17.363        Svd                   4
Net Interchange           147.226      -44.437        Buses                21
Sched Interchange         147.000                     Lines                13
Loss                       20.942       28.244        Transformers          3
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MVA-miles	0.0	0.0	DC buses	0
Miles	0.000		DC converters	0
			DC lines	0
Loss at 13.80 Kv	0.350	9.659		
Loss at 115.00 Kv	1.349	-2.899		
Loss at 161.00 Kv	0.000	0.000		
Loss at 230.00 Kv	19.243	21.483		
Largest mismatch MVA	0.0002	0.0006		

C. CATEGORY B (CONTINGENCY) DATA

Contingency Analysis Summaries for Viable Projects

Continuous Rating (Rate 1) Reports

Emergency Rating (Rate 2) Reports

Light Summer and Heavy Summer Contingency Lists

Contingency Analysis Summary - Project 1 Line 2 Scheduled to Spokane

Component	Rate 1			Rate 2			Contingency		Recommendation
Area, Bus Name, kV	Without Project [pu]	With Project [pu]	Continuous Rating	Without Project [pu]	With Project [pu]	Emergency Rating	#	Description	
New or Worse by 5%									
40 BELL BPA 500 to 40 BELL SO 230 CKT 1	<0.95	1.50	1220.00	<0.95	1.21	1512.00	412	LINE 40 DWORSHAK 500.0 to 41 TAFT 500.0 ckt 1	Extend Project Line
40 BEACON S 115 to 40 BELL BPA 115 CKT 1	<0.95	1.25	85.80	<0.95	1.25	85.80	274	LINE 40 BELL MI 230.0 to 40 BELL SO 230.0 ckt 1	Reconductor
40 BEACON N 230 to 40 BELL SO 230 CKT 5	<0.95	1.12	366.50	<0.95	1.12	366.50	274	LINE 40 BELL MI 230.0 to 40 BELL SO 230.0 ckt 1	Reconductor
40 POSTSTRT 115 to 40 THIRHACH 115 CKT 1	<0.95	1.08	110.90	<0.95	1.08	110.90	278	LINE 40 BELL NO 230.0 to 41 WESTBPA1 230.0 ckt 1	Reconductor
40 BEACON N 115 to 40 NORTHEAS 115 CKT 1	<0.95	1.07	110.90	<0.95	1.07	110.90	274	LINE 40 BELL MI 230.0 to 40 BELL SO 230.0 ckt 1	Reconductor
40 BURKE 115 to 40 HECLA 115 CKT 1	<0.95	1.05	92.80	<0.95	1.05	92.80	315	LINE 48 BURKE 115.0 to 48 LUCKYFTP 115.0 ckt 1	Reconductor
40 HATWAI 230 to 40 N LEWIST 230 CKT 1	<0.95	1.05	425.10	<0.95	1.05	425.10	463	LINE 40 HATWAI 500.0 to 40 LOW GRAN 500.0 ckt 1	Extend Project Line
40 OSBURN 115 to 40 PINE CRK 115 CKT 1	<0.95	1.02	85.80	<0.95	1.02	85.80	315	LINE 48 BURKE 115.0 to 48 LUCKYFTP 115.0 ckt 1	Reconductor
40 WALLACE 115 to 40 OSBURN 115 CKT 1	<0.95	1.02	92.80	<0.95	1.02	92.80	315	LINE 48 BURKE 115.0 to 48 LUCKYFTP 115.0 ckt 1	Reconductor
40 CLARKSTN 115 to 40 POMEROY 115 CKT 1	<0.95	1.02	63.70	<0.95	1.02	63.70	463	LINE 40 HATWAI 500.0 to 40 LOW GRAN 500.0 ckt 1	Extend Project Line
40 BIGCREEK 115 to 40 BUNKRHIL 115 CKT 1	<0.95	1.00	85.80	<0.95	1.00	85.80	314	LINE 48 BURKE 115.0 to 48 HECLA 115.0 ckt 1	None
40 HATWAI 230 to 40 MOSCOW 230 CKT 1	<0.95	1.00	372.10	<0.95	1.00	372.10	411	LINE 40 DWORSHAK 500.0 to 40 HATWAI 500.0 ckt 1	None
40 PLUMMER 115 to 40 OGARA 115 CKT 1	<0.95	0.99	61.30	<0.95	0.99	61.30	284	LINE 48 BENEWAH 230.0 to 48 PINE CRK 230.0 ckt 1	None
40 POMEROY 115 to 40 WALAWALA 115 CKT 1	<0.95	0.99	63.70	<0.95	0.99	63.70	463	LINE 40 HATWAI 500.0 to 40 LOW GRAN 500.0 ckt 1	None
40 BUNKRHIL 115 to 40 PINE CRK 115 CKT 1	<0.95	0.97	85.80	<0.95	0.97	85.80	314	LINE 48 BURKE 115.0 to 48 HECLA 115.0 ckt 1	None
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1	<0.95	0.95	1732.10	<0.95	0.95	1732.10	138	LINE 62 BROADVU 500.0 to 62 TOWN2 500.0 ckt 2	None
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1	<0.95	0.95	1732.10	<0.95	0.95	1732.10	139	LINE 62 BROADVU 500.0 to 62 TOWN1 500.0 ckt 1	None
73 CURECANT 115 to 73 SOCANAL 115 CKT 1	<0.95	0.95	120.00				1489	LINE 79 GRANDJCT 345.0 to 79 MONTROSE 345.0 ckt 1	None
40 OROFINO 115 to 40 AHSAHKA 115 CKT 1	1.94	2.39	113.70	1.94	2.39	113.70	411	LINE 40 DWORSHAK 500.0 to 40 HATWAI 500.0 ckt 1	Extend Project Line
40 N LEWIST 115 to 40 CLEARWTR 115 CKT 1	1.31	1.40	113.70	1.31	1.40	113.70	459	LINE 40 HATWAI 230.0 to 48 LOLO 230.0 ckt 1	Extend Project Line
40 BURKE 115 to 40 BURKAVAA 115 CKT 1	1.26	1.36	73.90	1.26	1.36	73.90	173	LINE 62 THOMSON 115.0 to 62 CROWCR B 115.0 ckt 1	Reconductor
40 BURKE 115 to 40 BURKAVAB 115 CKT 1	1.21	1.35	73.90	1.21	1.35	73.90	312	LINE 48 BURKE 115.0 to 48 BURKAVAA 115.0 ckt 1	Reconductor
40 BEACON N 115 to 40 ROSSPARK 115 CKT 1	1.18	1.43	138.20	1.18	1.43	138.20	278	LINE 40 BELL NO 230.0 to 41 WESTBPA1 230.0 ckt 1	Reconductor
40 AHSAHKA 115 to 40 DWORSHAK 115 CKT 1	1.04	1.29	213.10	1.04	1.29	213.10	411	LINE 40 DWORSHAK 500.0 to 40 HATWAI 500.0 ckt 1	Extend Project Line
40 BEACON S 115 to 40 NINTHCNT 115 CKT 1	1.02	1.08	91.00	1.02	1.08	91.00	251	LINE 48 BEACON N 115.0 to 48 NINTHCNT 115.0 ckt 1	Reconductor
40 BURKE 115 to 40 LUCKYFTP 115 CKT 1	1.02	1.14	85.80	1.02	1.14	85.80	314	LINE 48 BURKE 115.0 to 48 HECLA 115.0 ckt 1	Reconductor
40 BEACON N 230 to 40 BEACON N 115 CKT 1	0.97	1.27	287.00	0.97	1.27	287.00	274	LINE 40 BELL MI 230.0 to 40 BELL SO 230.0 ckt 1	Extend Project Line
40 BEACON S 230 to 40 BEACON S 115 CKT 1	0.97	1.27	287.00	0.97	1.27	287.00	274	LINE 40 BELL MI 230.0 to 40 BELL SO 230.0 ckt 1	Extend Project Line
40 HECLAT 115 to 40 BIGCREEK 115 CKT 1	0.96	1.07	85.80	0.96	1.07	85.80	314	LINE 48 BURKE 115.0 to 48 HECLA 115.0 ckt 1	Reconductor
40 LUCKYFTP 115 to 40 HECLAT 115 CKT 1	0.96	1.07	85.80	0.96	1.07	85.80	314	LINE 48 BURKE 115.0 to 48 HECLA 115.0 ckt 1	Reconductor
40 BELL MI 230 to 40 BELL BPA 115 CKT 1	0.95	1.12	249.00				412	LINE 40 DWORSHAK 500.0 to 41 TAFT 500.0 ckt 1	Extend Project Line
Better by 5% or Corrected									
62 BROADV&1 500 to 62 BROADVU 500 CKT 1	1.03	<= 0.95	1732.00				144	LINE 62 COLSTRP 500.0 to 62 BROADV&2 500.0 ckt 2	None
62 BROADV&2 500 to 62 BROADVU 500 CKT 2	1.02	<= 0.95	1732.00				145	LINE 62 COLSTRP 500.0 to 62 BROADV&1 500.0 ckt 1	None

Contingency Analysis Summary - Project 1 Line 3 Scheduled to Denver

Component	Rate 1			Rate 2			Contingency		Recommendation
Area, Bus Name, kV	Without Project [pu]	With Project [pu]	Continuous Rating	Without Project [pu]	With Project [pu]	Emergency Rating	#	Description	
New or Worse by 5%									
65 DAVEJOHN 230 to 73 LAR.RIVR 230 CKT 1	<0.95	1.51	265.70				4	LINE 90 MTSDAVEJ 500.0 to 90 MTSDAN 500.0 CKT 1	Reconductor
70 DANIELPK 230 to 70 PRAIRIE 230 CKT 1	<0.95	1.08	494.80	<0.95	1.08	494.80	979	LINE 70 DANIELPK 230.0 to 70 GREENWD 230.0 CKT 1	Reconductor
70 DANIELPK 230 to 70 GREENWD 230 CKT 1	<0.95	1.05	494.80	<0.95	1.05	494.80	983	LINE 70 DANIELPK 230.0 to 70 PRAIRIE 230.0 CKT 1	Reconductor
73 STEGALDC 230 to 73 STEGALL 230 CKT 1	<0.95	1.03	150.00				4	LINE 90 MTSDAVEJ 500.0 to 90 MTSDAN 500.0 CKT 1	Review Rating
62 BROADV&2 500 to 62 BROADVU 500 CKT 2	<0.95	0.96	1732.00				151	LINE 62 COLSTRP 500.0 to 62 BROADV&1 500.0 CKT 1	None
40 NEWPORTB 115 to 40 PINE ST 115 CKT 1	<0.95	0.96	120.10	<0.95	0.96	120.10	283	LINE 40 BELL NO 230.0 to 40 SACHEEN 230.0 CKT 1	None
73 CARTERMT 115 to 73 THERMOPL 115 CKT 1	<0.95	0.96	40.00				1598	LINE 66 YELOWTLP 230.0 to 73 YELLOWBR 230.0 CKT 1	None
73 GLENDO 115 to 73 GLENRCKN 115 CKT 1	<0.95	0.95	80.00				4	LINE 90 MTSDAVEJ 500.0 to 90 MTSDAN 500.0 CKT 1	None
70 CASTLRCK 115 to 70 DANIELPK 115 CKT 1	<0.95	0.95	134.80	<0.95	0.95	134.80	1093	LINE 70 SMOKYHIL 115.0 to 70 PEAKVIEW 115.0 CKT 1	None
62 ANACOND 230 to 40 GARRISON 230 CKT 1	<0.95	0.95	358.50				1571	LINE 62 ANACOND 230.0 to 40 GARRISON 230.0 CKT 2	None
70 RIDGE 115 to 70 RIDGE 230 CKT 2	<0.95	0.95	100.00	<0.95	0.95	100.00	1865	TRANSFORMER 70 RIDGE 115.0 to 70 RIDGE 230.0 CKT 1	None
73 WELD LM 115 to 73 WELD LM 230 CKT 1	1.04	1.11	150.00				1624	LINE 70 WELD PS 230.0 to 73 WELD LM 230.0 CKT 1	Upgrade
70 SMOKYHIL 115 to 70 SMOKYHIL 230 CKT 1	1.04	1.17	150.00	1.04	1.17	150.00	1868	TRANSFORMER 70 SMOKYHIL 115.0 to 70 SMOKYHIL 230.0 CKT 2	Upgrade
70 WATERTON 115 to 70 WATERTON 230 CKT 2	1.00	1.20	100.00	1.00	1.20	100.00	1870	TRANSFORMER 70 WATERTON 115.0 to 70 WATERTON 230.0 CKT 1	Upgrade
70 WATERTON 115 to 70 WATERTON 230 CKT 1	0.99	1.19	100.00	0.99	1.19	100.00	1871	TRANSFORMER 70 WATERTON 115.0 to 70 WATERTON 230.0 CKT 2	Upgrade
Better by 5% or Corrected									
70 BRUSHCPP 115 to 73 B.CK PS 115 CKT 1	1.48	1.22	162.00	1.48	1.22	162.00	1628	LINE 70 BRUSHCPP 115.0 to 73 B.CK PS 115.0 CKT 2	None
73 EFMORGTP 115 to 73 FMWEST 115 CKT 1	1.29	1.22	80.00				1166	LINE 73 AULT 345.0 to 73 LAR.RIVR 345.0 CKT 1	None
70 BRUSHCPP 115 to 73 B.CK PS 115 CKT 2	1.28	1.06	187.00	1.28	1.06	187.00	1627	LINE 70 BRUSHCPP 115.0 to 73 B.CK PS 115.0 CKT 1	None
65 FLAMGORG 230 to 73 FLAMGORG 138 CKT 1	1.16	1.09	100.00				699	LINE 65 BONANZA 345.0 to 65 MONA 345.0 CKT 1	None
65 FLAMGORG 230 to 73 FLAMGORG 138 CKT 2	1.16	1.09	100.00				699	LINE 65 BONANZA 345.0 to 65 MONA 345.0 CKT 1	None
73 MIDWAYBR 230 to 73 MIDWAYBR 115 CKT 1	1.11	1.01	100.00				1457	LINE 73 MIDWAYBR 230.0 to 73 RD NIXON 230.0 CKT 1	None
70 CHEROKEN 115 to 70 DERBY 2 115 CKT 1	1.10	<= 0.95	135.00	1.10	<= 0.95	135.00	962	LINE 70 CHEROKEN 115.0 to 70 DERBY 1 115.0 CKT 1	None
70 CHEROKEN 115 to 70 DERBY 1 115 CKT 1	1.06	<= 0.95	135.00	1.06	<= 0.95	135.00	963	LINE 70 CHEROKEN 115.0 to 70 DERBY 2 115.0 CKT 1	None
73 B.CK PS 115 to 73 B.CK PS 230 CKT 1	1.06	<= 0.95	224.00				1168	LINE 73 B.CK PS 115.0 to 73 BEAVERCK 115.0 CKT 1	None
73 BIJOUTAP 115 to 73 FMWEST 115 CKT 1	0.99	<= 0.95	80.00				1166	LINE 73 AULT 345.0 to 73 LAR.RIVR 345.0 CKT 1	None
73 BRUSHTAP 115 to 73 EFMORGTP 115 CKT 1	0.98	<= 0.95	121.70				1166	LINE 73 AULT 345.0 to 73 LAR.RIVR 345.0 CKT 1	None
70 FTLUPTON 230 to 70 PAWNEE 230 CKT 1	0.97	<= 0.95	413.50	0.97	<= 0.95	413.50	1066	LINE 73 AULT 345.0 to 73 LAR.RIVR 345.0 CKT 1	None
73 VERNAL 138 to 65 BONANZA 138 CKT 1	0.96	<= 0.95	192.00				699	LINE 65 BONANZA 345.0 to 65 MONA 345.0 CKT 1	None
70 LOOKOUT 115 to 70 HOGBACK 115 CKT 1	0.96	<= 0.95	192.00	0.96	<= 0.95	192.00	1034	LINE 70 KENDRICK 115.0 to 70 BANCROFT 115.0 CKT 1	None

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Compost found the following for comparisons:
     55 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\lsbs\plsbs-1.out
     115 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\lsbs\plsbs-1.out
     71 lines of MVA Rating Violations read from c:\uwk\mts\a\spl1b\pspl1b-1.out
     251 lines of kV Voltage Violations read from c:\uwk\mts\a\spl1b\pspl1b-1.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.42   1732.10   138
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.42   1732.10   139
40 BELL BPA 500 to 40 BELL SO  230 CKT 1    <0.95     1.33   1220.00   412
40 BEACON S 115 to 40 BELL BPA 115 CKT 1    <0.95     1.15   85.80   274
40 BURKE    115 to 40 HECLA    115 CKT 1    <0.95     1.14   92.80   315
40 OSBURN   115 to 40 PINE CRK 115 CKT 1    <0.95     1.12   85.80   315
40 WALLACE  115 to 40 OSBURN   115 CKT 1    <0.95     1.10   92.80   315
40 BIGCREEK 115 to 40 BUNKRHIL 115 CKT 1    <0.95     1.10   85.80   314
40 BUNKRHIL 115 to 40 PINE CRK 115 CKT 1    <0.95     1.07   85.80   314
40 PLUMMER  115 to 40 OGARA    115 CKT 1    <0.95     1.03   61.30   284
40 BEACON N 230 to 40 BELL SO  230 CKT 5    <0.95     1.01   366.50   274
40 POSTSTRT 115 to 40 THIRHACH 115 CKT 1    <0.95     1.01   110.90   278
40 BEACON N 115 to 40 NORTHEAS 115 CKT 1    <0.95     0.99   110.90   274
40 HATWAI   230 to 40 MOSCOW   230 CKT 1    <0.95     0.96   372.10   411
73 CURECANT 115 to 73 SOCANAL  115 CKT 1    <0.95     0.96   120.00   1489
40 HECLA    115 to 40 WALLACE  115 CKT 1    <0.95     0.95   110.90   315

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   2.44   113.70   411
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.41   2.13   944.00   445
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.41   2.13   944.00   446
40 BURKE    115 to 40 BURKAVAA 115 CKT 1    1.26   1.44   73.90   173
40 BURKE    115 to 40 BURKAVAB 115 CKT 1    1.21   1.46   73.90   312
40 BEACON N 115 to 40 ROSSPARK 115 CKT 1    1.18   1.36   138.20   278
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.04   1.31   213.10   411
62 BROADV&1 500 to 62 BROADVU  500 CKT 1    1.03   1.45   1732.00   140
62 BROADV&2 500 to 62 BROADVU  500 CKT 2    1.02   1.45   1732.00   145
40 BURKE    115 to 40 LUCKYFTP 115 CKT 1    1.02   1.23   85.80   314
40 BEACON N 230 to 40 BEACON N 115 CKT 1    0.97   1.19   287.00   274
40 BEACON S 230 to 40 BEACON S 115 CKT 1    0.97   1.19   287.00   274
40 HECLAT   115 to 40 BIGCREEK 115 CKT 1    0.96   1.16   85.80   314
40 LUCKYFTP 115 to 40 HECLAT   115 CKT 1    0.96   1.16   85.80   314
40 BELL MI  230 to 40 BELL BPA 115 CKT 1    0.95   1.06   249.00   412

Area Count, Rates new and worse:
Area 40: 28
Area 62: 2
Area 73: 1

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
62 BONNERMT 161.0  >0.95    0.935  1.00 pu kV  138
62 ANACOND  230.0  >0.95    0.909  1.00 pu kV  138
62 ANACOND  161.0  >0.95    0.899  1.00 pu kV  138
62 RATTLE S 161.0  >0.95    0.939  1.00 pu kV  138
62 TOWN2    500.0  >0.95    0.941  1.00 pu kV  139
62 TOWN1    500.0  >0.95    0.941  1.00 pu kV  138
62 BUTTEMHD 161.0  >0.95    0.878  1.00 pu kV  138
62 WILSALL  161.0  >0.95    0.903  1.00 pu kV  138
62 MT ASIMI 161.0  >0.95    0.882  1.00 pu kV  138
62 WILSALL  230.0  >0.95    0.907  1.00 pu kV  138
62 SHELBY   230.0  >0.95    0.958  1.00 pu kV  138
62 SHELBY   115.0  >0.95    0.954  1.00 pu kV  138
62 PTRSNFLT 230.0  >0.95    0.942  1.00 pu kV  138
62 CUTBANK  115.0  >0.95    0.944  1.00 pu kV  138
62 ANA BPA  115.0  >0.95    0.932  1.00 pu kV  138
62 BOLE     230.0  >0.95    0.957  1.00 pu kV  138
62 CNRDWAPA 230.0  >0.95    0.959  1.00 pu kV  138
62 JUDITHGP 230.0  >0.95    0.962  1.00 pu kV  138
62 BROADV&2 500.0  >0.95    1.013  1.00 pu kV  138
62 BROADV&1 500.0  >0.95    1.014  1.00 pu kV  138
62 BRADLEYC 161.0  >0.95    0.884  1.00 pu kV  138
62 ENNIS MT 161.0  >0.95    0.889  1.00 pu kV  138
62 CNRDWAPA 115.0  >0.95    0.960  1.00 pu kV  138
62 GT FALLS 230.0  >0.95    0.950  1.00 pu kV  138
62 OVANDO   230.0  >0.95    0.931  1.00 pu kV  138
62 TRIDENT  161.0  >0.95    0.873  1.00 pu kV  138
62 BUTTE MT 161.0  >0.95    0.877  1.00 pu kV  138
62 RESERVST 161.0  >0.95    0.934  1.00 pu kV  138
62 MILLERCK 161.0  >0.95    0.933  1.00 pu kV  138
62 DILLON S 161.0  >0.95    0.916  1.00 pu kV  138
62 CTBPUMP  115.0  >0.95    0.944  1.00 pu kV  138
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62 CLYDE P  161.0  >0.95    0.888  1.00 pu kV  138
62 LANDRSFK 230.0  >0.95    0.932  1.00 pu kV  138
62 SHERDNMT 161.0  >0.95    0.899  1.00 pu kV  138
62 GLDNSNLT 161.0  >0.95    0.873  1.00 pu kV  138
62 VAL-WILL 115.0  >0.95    0.954  1.00 pu kV  138
62 CNRD-SRA 115.0  >0.95    0.959  1.00 pu kV  138
62 COLRPLJE 161.0  >0.95    0.923  1.00 pu kV  138
62 CLMBUSPM 161.0  >0.95    0.923  1.00 pu kV  138
62 EGALTN A 161.0  >0.95    0.879  1.00 pu kV  138
62 BGTMBERA 161.0  >0.95    0.894  1.00 pu kV  138
62 JACKRABT 161.0  >0.95    0.878  1.00 pu kV  138
62 EMIGT AT 161.0  >0.95    0.891  1.00 pu kV  138
62 EGALTN B 161.0  >0.95    0.879  1.00 pu kV  138
62 MISSLA 7 161.0  >0.95    0.934  1.00 pu kV  138
62 HAMLTNMA 161.0  >0.95    0.927  1.00 pu kV  138
62 HAMLTNMB 161.0  >0.95    0.927  1.00 pu kV  138
40 DIXON    230.0  >0.95    0.961  1.00 pu kV  138
40 GARRISON 230.0  >0.95    0.919  1.00 pu kV  138
40 GARRISON 500.0  >0.95    0.926  1.00 pu kV  138
40 HOT SPR  230.0  >0.95    0.977  1.00 pu kV  138
40 HOT SPR  500.0  >0.95    1.020  1.00 pu kV  138
40 RATTLE S 230.0  >0.95    0.941  1.00 pu kV  138
40 TAFT     500.0  >0.95    1.010  1.00 pu kV  138
63 TIBERTAP 115.0  >0.95    0.947  1.00 pu kV  1689
40 ARMSTRNG 115.0  >0.95    0.939  1.00 pu kV  411
40 BRINKENS 115.0  >0.95    0.932  1.00 pu kV  411
40 CHAMBERS 115.0  >0.95    0.940  1.00 pu kV  411
40 EGRANVIL 115.0  >0.95    0.927  1.00 pu kV  411
40 HOPKINSB 115.0  >0.95    0.940  1.00 pu kV  412
40 MICA     115.0  >0.95    0.940  1.00 pu kV  412
40 MICA TAP 115.0  >0.95    0.940  1.00 pu kV  412
40 PLUMMER  115.0  >0.95    0.939  1.00 pu kV  412
40 RALSTONB 115.0  >0.95    0.924  1.00 pu kV  412
40 SCOTPAPR 115.0  >0.95    0.933  1.00 pu kV  411
40 STMARIES 115.0  >0.95    0.935  1.00 pu kV  412
40 SULLIVNB 115.0  >0.95    0.930  1.00 pu kV  412
40 VALY WAY 115.0  >0.95    0.931  1.00 pu kV  412
40 VERA     115.0  >0.95    0.929  1.00 pu kV  412
40 VERA TAP 115.0  >0.95    0.931  1.00 pu kV  412
40 4LAKE TP 115.0  >0.95    0.936  1.00 pu kV  412
40 4TH&HRLD 115.0  >0.95    0.942  1.00 pu kV  412
40 4TH&HRTP 115.0  >0.95    0.942  1.00 pu kV  412
40 AIRWAYHT 115.0  >0.95    0.937  1.00 pu kV  412
40 AIRWAYTP 115.0  >0.95    0.934  1.00 pu kV  412
40 BEACON N 115.0  >0.95    0.948  1.00 pu kV  412
40 BEACON N 230.0  >0.95    0.971  1.00 pu kV  412
40 BEACON S 115.0  >0.95    0.948  1.00 pu kV  412
40 BEACON S 230.0  >0.95    0.971  1.00 pu kV  412
40 BELL BPA 115.0  >0.95    0.945  1.00 pu kV  412
40 BELL BPA 500.0  >0.95    1.009  1.00 pu kV  412
40 BELL MI  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL NO  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL SO  230.0  >0.95    0.978  1.00 pu kV  412
40 BELL TAP 115.0  >0.95    0.945  1.00 pu kV  412
40 BIGELOW  115.0  >0.95    0.937  1.00 pu kV  412
40 COLBERTT 115.0  >0.95    0.944  1.00 pu kV  412
40 COLLWALN 115.0  >0.95    0.938  1.00 pu kV  412
40 DEER PRK 115.0  >0.95    0.947  1.00 pu kV  412
40 FAIRCHLD 115.0  >0.95    0.936  1.00 pu kV  412
40 FOURLBPA 115.0  >0.95    0.934  1.00 pu kV  412
40 FRANCEDR 115.0  >0.95    0.942  1.00 pu kV  412
40 FTWRIGHT 115.0  >0.95    0.940  1.00 pu kV  412
40 GARDENSP 115.0  >0.95    0.942  1.00 pu kV  412
40 GLENROSE 115.0  >0.95    0.939  1.00 pu kV  412
40 GLENTAP  115.0  >0.95    0.939  1.00 pu kV  412
40 GREEN BL 115.0  >0.95    0.936  1.00 pu kV  412
40 HAL&WHIT 115.0  >0.95    0.934  1.00 pu kV  412
40 HALFMOON 115.0  >0.95    0.944  1.00 pu kV  412
40 HANGMAN  115.0  >0.95    0.936  1.00 pu kV  412
40 HAYFORD  115.0  >0.95    0.935  1.00 pu kV  412
40 I.E.PAPR 115.0  >0.95    0.941  1.00 pu kV  412
40 INLD EMP 115.0  >0.95    0.937  1.00 pu kV  412
40 LYONSTND 115.0  >0.95    0.941  1.00 pu kV  412
40 MEAD     115.0  >0.95    0.944  1.00 pu kV  412
40 METRO    115.0  >0.95    0.938  1.00 pu kV  412
40 MILLWOOD 115.0  >0.95    0.941  1.00 pu kV  412
40 NINEMILE 115.0  >0.95    0.950  1.00 pu kV  412
40 NINTHCNT 115.0  >0.95    0.942  1.00 pu kV  412
40 NORTHEAS 115.0  >0.95    0.944  1.00 pu kV  412
40 NORTHWES 115.0  >0.95    0.944  1.00 pu kV  412
40 OGARA    115.0  >0.95    0.944  1.00 pu kV  412
40 OPORTUNW 115.0  >0.95    0.944  1.00 pu kV  412
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40 PINE CRK 230.0  >0.95    0.960  1.00 pu kV  412
40 POSTSTRT 115.0  >0.95    0.938  1.00 pu kV  412
40 ROSSPARK 115.0  >0.95    0.943  1.00 pu kV  412
40 SEVENTAP 115.0  >0.95    0.943  1.00 pu kV  412
40 SOUTHEAS 115.0  >0.95    0.938  1.00 pu kV  412
40 SPKINDPK 115.0  >0.95    0.934  1.00 pu kV  412
40 SPKWASTE 115.0  >0.95    0.943  1.00 pu kV  412
40 SPRNGHIL 115.0  >0.95    0.949  1.00 pu kV  412
40 SUNSET   115.0  >0.95    0.938  1.00 pu kV  412
40 THIRHACH 115.0  >0.95    0.939  1.00 pu kV  412
40 TRENTWOD 115.0  >0.95    0.932  1.00 pu kV  412
40 TUM TUM  115.0  >0.95    0.945  1.00 pu kV  412
40 WAIKIKI  115.0  >0.95    0.941  1.00 pu kV  412
40 WAIKIKIT 115.0  >0.95    0.944  1.00 pu kV  412
40 WEST     115.0  >0.95    0.948  1.00 pu kV  412
40 WEST     230.0  >0.95    0.973  1.00 pu kV  412
40 WESTBPA1 230.0  >0.95    0.974  1.00 pu kV  412
40 WESTBPA2 230.0  >0.95    0.974  1.00 pu kV  412
73 GRANDJCT 345.0  >0.95    0.946  1.00 pu kV  693
73 MONTROSE 115.0  >0.95    0.949  1.00 pu kV  1489
73 HAPPYCAN 115.0  >0.95    0.946  1.00 pu kV  1489
73 GARNETAP 115.0  >0.95    0.947  1.00 pu kV  1489
73 SPRCKTAP 115.0  >0.95    0.946  1.00 pu kV  1489
73 BUSHNELL 115.0  >0.95    0.949  1.00 pu kV  1863

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
40 GAR2EAST 500.0  1.009   0.926  1.00 pu kV  138
40 GAR1EAST 500.0  1.009   0.926  1.00 pu kV  139

Area Count, Volts new and worse:
Area 40: 85
Area 62: 47
Area 63: 1
Area 73: 6

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
62 COLSTRP  500 to 62 COLSTRP  230 CKT 2    1.01    <= 0.95  500.00   1717
62 COLSTRP  500 to 62 COLSTRP  230 CKT 1    1.01    <= 0.95  500.00   1718

Area Count, Rates better and away:
Area 62: 2

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
40 KALISPEL 115.0 0.962  0.95 <= pu <= 1.05   1.00 pu kV  353

Area Count, Volts better and away:
Area 40: 1
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Compost found the following for comparisons:
     27 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\lsbs\plsbs-2.out
     115 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\lsbs\plsbs-2.out
     43 lines of MVA Rating Violations read from c:\uwk\mts\a\spl1b\pspl1b-2.out
     251 lines of kV Voltage Violations read from c:\uwk\mts\a\spl1b\pspl1b-2.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.42   1732.10   138
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.42   1732.10   139
40 BEACON S 115 to 40 BELL BPA 115 CKT 1    <0.95     1.15   85.80   274
40 BURKE    115 to 40 HECLA    115 CKT 1    <0.95     1.14   92.80   315
40 OSBURN   115 to 40 PINE CRK 115 CKT 1    <0.95     1.12   85.80   315
40 WALLACE  115 to 40 OSBURN   115 CKT 1    <0.95     1.10   92.80   315
40 BIGCREEK 115 to 40 BUNKRHIL 115 CKT 1    <0.95     1.10   85.80   314
40 BUNKRHIL 115 to 40 PINE CRK 115 CKT 1    <0.95     1.07   85.80   314
40 BELL BPA 500 to 40 BELL SO  230 CKT 1    <0.95     1.07   1512.00   412
40 PLUMMER  115 to 40 OGARA    115 CKT 1    <0.95     1.03   61.30   284
40 BEACON N 230 to 40 BELL SO  230 CKT 5    <0.95     1.01   366.50   274
40 POSTSTRT 115 to 40 THIRHACH 115 CKT 1    <0.95     1.01   110.90   278
40 BEACON N 115 to 40 NORTHEAS 115 CKT 1    <0.95     0.99   110.90   274
40 HATWAI   230 to 40 MOSCOW   230 CKT 1    <0.95     0.96   372.10   411
40 HECLA    115 to 40 WALLACE  115 CKT 1    <0.95     0.95   110.90   315
65 CARBON   138 to 65 SPAN F&1 138 CKT 1    <0.95     0.95   113.00   722

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   2.44   113.70   411
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.41   2.13   944.00   445
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.41   2.13   944.00   446
40 BURKE    115 to 40 BURKAVAA 115 CKT 1    1.26   1.44   73.90   173
40 BURKE    115 to 40 BURKAVAB 115 CKT 1    1.21   1.46   73.90   312
40 BEACON N 115 to 40 ROSSPARK 115 CKT 1    1.18   1.36   138.20   278
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.04   1.31   213.10   411
40 BURKE    115 to 40 LUCKYFTP 115 CKT 1    1.02   1.23   85.80   314
40 BEACON N 230 to 40 BEACON N 115 CKT 1    0.97   1.19   287.00   274
40 BEACON S 230 to 40 BEACON S 115 CKT 1    0.97   1.19   287.00   274
40 HECLAT   115 to 40 BIGCREEK 115 CKT 1    0.96   1.16   85.80   314
40 LUCKYFTP 115 to 40 HECLAT   115 CKT 1    0.96   1.16   85.80   314

Area Count, Rates new and worse:
Area 40: 27
Area 65: 1

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
62 BONNERMT 161.0  >0.95    0.935  1.00 pu kV  138
62 ANACOND  230.0  >0.95    0.909  1.00 pu kV  138
62 ANACOND  161.0  >0.95    0.899  1.00 pu kV  138
62 RATTLE S 161.0  >0.95    0.939  1.00 pu kV  138
62 TOWN2    500.0  >0.95    0.941  1.00 pu kV  139
62 TOWN1    500.0  >0.95    0.941  1.00 pu kV  138
62 BUTTEMHD 161.0  >0.95    0.878  1.00 pu kV  138
62 WILSALL  161.0  >0.95    0.903  1.00 pu kV  138
62 MT ASIMI 161.0  >0.95    0.882  1.00 pu kV  138
62 WILSALL  230.0  >0.95    0.907  1.00 pu kV  138
62 SHELBY   230.0  >0.95    0.958  1.00 pu kV  138
62 SHELBY   115.0  >0.95    0.954  1.00 pu kV  138
62 PTRSNFLT 230.0  >0.95    0.942  1.00 pu kV  138
62 CUTBANK  115.0  >0.95    0.944  1.00 pu kV  138
62 ANA BPA  115.0  >0.95    0.932  1.00 pu kV  138
62 BOLE     230.0  >0.95    0.957  1.00 pu kV  138
62 CNRDWAPA 230.0  >0.95    0.959  1.00 pu kV  138
62 JUDITHGP 230.0  >0.95    0.962  1.00 pu kV  138
62 BROADV&2 500.0  >0.95    1.013  1.00 pu kV  138
62 BROADV&1 500.0  >0.95    1.014  1.00 pu kV  138
62 BRADLEYC 161.0  >0.95    0.884  1.00 pu kV  138
62 ENNIS MT 161.0  >0.95    0.889  1.00 pu kV  138
62 CNRDWAPA 115.0  >0.95    0.960  1.00 pu kV  138
62 GT FALLS 230.0  >0.95    0.950  1.00 pu kV  138
62 OVANDO   230.0  >0.95    0.931  1.00 pu kV  138
62 TRIDENT  161.0  >0.95    0.873  1.00 pu kV  138
62 BUTTE MT 161.0  >0.95    0.877  1.00 pu kV  138
62 RESERVST 161.0  >0.95    0.934  1.00 pu kV  138
62 MILLERCK 161.0  >0.95    0.933  1.00 pu kV  138
62 DILLON S 161.0  >0.95    0.916  1.00 pu kV  138
62 CTBPUMP  115.0  >0.95    0.944  1.00 pu kV  138
62 CLYDE P  161.0  >0.95    0.888  1.00 pu kV  138
62 LANDRSFK 230.0  >0.95    0.932  1.00 pu kV  138
62 SHERDNMT 161.0  >0.95    0.899  1.00 pu kV  138
62 GLDNSNLT 161.0  >0.95    0.873  1.00 pu kV  138
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62 VAL-WILL 115.0  >0.95    0.954  1.00 pu kV  138
62 CNRD-SRA 115.0  >0.95    0.959  1.00 pu kV  138
62 COLRPLJE 161.0  >0.95    0.923  1.00 pu kV  138
62 CLMBUSPM 161.0  >0.95    0.923  1.00 pu kV  138
62 EGALTN A 161.0  >0.95    0.879  1.00 pu kV  138
62 BGTMBERA 161.0  >0.95    0.894  1.00 pu kV  138
62 JACKRABT 161.0  >0.95    0.878  1.00 pu kV  138
62 EMIGT AT 161.0  >0.95    0.891  1.00 pu kV  138
62 EGALTN B 161.0  >0.95    0.879  1.00 pu kV  138
62 MISSLA 7 161.0  >0.95    0.934  1.00 pu kV  138
62 HAMLTNMA 161.0  >0.95    0.927  1.00 pu kV  138
62 HAMLTNMB 161.0  >0.95    0.927  1.00 pu kV  138
40 DIXON    230.0  >0.95    0.961  1.00 pu kV  138
40 GARRISON 230.0  >0.95    0.919  1.00 pu kV  138
40 GARRISON 500.0  >0.95    0.926  1.00 pu kV  138
40 HOT SPR  230.0  >0.95    0.977  1.00 pu kV  138
40 HOT SPR  500.0  >0.95    1.020  1.00 pu kV  138
40 RATTLE S 230.0  >0.95    0.941  1.00 pu kV  138
40 TAFT     500.0  >0.95    1.010  1.00 pu kV  138
63 TIBERTAP 115.0  >0.95    0.947  1.00 pu kV  1689
40 ARMSTRNG 115.0  >0.95    0.939  1.00 pu kV  411
40 BRINKENS 115.0  >0.95    0.932  1.00 pu kV  411
40 CHAMBERS 115.0  >0.95    0.940  1.00 pu kV  411
40 EGRANVIL 115.0  >0.95    0.927  1.00 pu kV  411
40 HOPKINSB 115.0  >0.95    0.940  1.00 pu kV  412
40 MICA     115.0  >0.95    0.940  1.00 pu kV  412
40 MICA TAP 115.0  >0.95    0.940  1.00 pu kV  412
40 PLUMMER  115.0  >0.95    0.939  1.00 pu kV  412
40 RALSTONB 115.0  >0.95    0.924  1.00 pu kV  412
40 SCOTPAPR 115.0  >0.95    0.933  1.00 pu kV  411
40 STMARIES 115.0  >0.95    0.935  1.00 pu kV  412
40 SULLIVNB 115.0  >0.95    0.930  1.00 pu kV  412
40 VALY WAY 115.0  >0.95    0.931  1.00 pu kV  412
40 VERA     115.0  >0.95    0.929  1.00 pu kV  412
40 VERA TAP 115.0  >0.95    0.931  1.00 pu kV  412
40 4LAKE TP 115.0  >0.95    0.936  1.00 pu kV  412
40 4TH&HRLD 115.0  >0.95    0.942  1.00 pu kV  412
40 4TH&HRTP 115.0  >0.95    0.942  1.00 pu kV  412
40 AIRWAYHT 115.0  >0.95    0.937  1.00 pu kV  412
40 AIRWAYTP 115.0  >0.95    0.934  1.00 pu kV  412
40 BEACON N 115.0  >0.95    0.948  1.00 pu kV  412
40 BEACON N 230.0  >0.95    0.971  1.00 pu kV  412
40 BEACON S 115.0  >0.95    0.948  1.00 pu kV  412
40 BEACON S 230.0  >0.95    0.971  1.00 pu kV  412
40 BELL BPA 115.0  >0.95    0.945  1.00 pu kV  412
40 BELL BPA 500.0  >0.95    1.009  1.00 pu kV  412
40 BELL MI  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL NO  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL SO  230.0  >0.95    0.978  1.00 pu kV  412
40 BELL TAP 115.0  >0.95    0.945  1.00 pu kV  412
40 BIGELOW  115.0  >0.95    0.937  1.00 pu kV  412
40 COLBERTT 115.0  >0.95    0.944  1.00 pu kV  412
40 COLLWALN 115.0  >0.95    0.938  1.00 pu kV  412
40 DEER PRK 115.0  >0.95    0.947  1.00 pu kV  412
40 FAIRCHLD 115.0  >0.95    0.936  1.00 pu kV  412
40 FOURLBPA 115.0  >0.95    0.934  1.00 pu kV  412
40 FRANCEDR 115.0  >0.95    0.942  1.00 pu kV  412
40 FTWRIGHT 115.0  >0.95    0.940  1.00 pu kV  412
40 GARDENSP 115.0  >0.95    0.942  1.00 pu kV  412
40 GLENROSE 115.0  >0.95    0.939  1.00 pu kV  412
40 GLENTAP  115.0  >0.95    0.939  1.00 pu kV  412
40 GREEN BL 115.0  >0.95    0.936  1.00 pu kV  412
40 HAL&WHIT 115.0  >0.95    0.934  1.00 pu kV  412
40 HALFMOON 115.0  >0.95    0.944  1.00 pu kV  412
40 HANGMAN  115.0  >0.95    0.936  1.00 pu kV  412
40 HAYFORD  115.0  >0.95    0.935  1.00 pu kV  412
40 I.E.PAPR 115.0  >0.95    0.941  1.00 pu kV  412
40 INLD EMP 115.0  >0.95    0.937  1.00 pu kV  412
40 LYONSTND 115.0  >0.95    0.941  1.00 pu kV  412
40 MEAD     115.0  >0.95    0.944  1.00 pu kV  412
40 METRO    115.0  >0.95    0.938  1.00 pu kV  412
40 MILLWOOD 115.0  >0.95    0.941  1.00 pu kV  412
40 NINEMILE 115.0  >0.95    0.950  1.00 pu kV  412
40 NINTHCNT 115.0  >0.95    0.942  1.00 pu kV  412
40 NORTHEAS 115.0  >0.95    0.944  1.00 pu kV  412
40 NORTHWES 115.0  >0.95    0.944  1.00 pu kV  412
40 OGARA    115.0  >0.95    0.944  1.00 pu kV  412
40 OPORTUNW 115.0  >0.95    0.944  1.00 pu kV  412
40 PINE CRK 230.0  >0.95    0.960  1.00 pu kV  412
40 POSTSTRT 115.0  >0.95    0.938  1.00 pu kV  412
40 ROSSPARK 115.0  >0.95    0.943  1.00 pu kV  412
40 SEVENTAP 115.0  >0.95    0.943  1.00 pu kV  412
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40 SOUTHEAS 115.0  >0.95    0.938  1.00 pu kV  412
40 SPKINDPK 115.0  >0.95    0.934  1.00 pu kV  412
40 SPKWASTE 115.0  >0.95    0.943  1.00 pu kV  412
40 SPRNGHIL 115.0  >0.95    0.949  1.00 pu kV  412
40 SUNSET   115.0  >0.95    0.938  1.00 pu kV  412
40 THIRHACH 115.0  >0.95    0.939  1.00 pu kV  412
40 TRENTWOD 115.0  >0.95    0.932  1.00 pu kV  412
40 TUM TUM  115.0  >0.95    0.945  1.00 pu kV  412
40 WAIKIKI  115.0  >0.95    0.941  1.00 pu kV  412
40 WAIKIKIT 115.0  >0.95    0.944  1.00 pu kV  412
40 WEST     115.0  >0.95    0.948  1.00 pu kV  412
40 WEST     230.0  >0.95    0.973  1.00 pu kV  412
40 WESTBPA1 230.0  >0.95    0.974  1.00 pu kV  412
40 WESTBPA2 230.0  >0.95    0.974  1.00 pu kV  412
73 GRANDJCT 345.0  >0.95    0.946  1.00 pu kV  693
73 MONTROSE 115.0  >0.95    0.949  1.00 pu kV  1489
73 HAPPYCAN 115.0  >0.95    0.946  1.00 pu kV  1489
73 GARNETAP 115.0  >0.95    0.947  1.00 pu kV  1489
73 SPRCKTAP 115.0  >0.95    0.946  1.00 pu kV  1489
73 BUSHNELL 115.0  >0.95    0.949  1.00 pu kV  1863

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
40 GAR2EAST 500.0  1.009   0.926  1.00 pu kV  138
40 GAR1EAST 500.0  1.009   0.926  1.00 pu kV  139

Area Count, Volts new and worse:
Area 40: 85
Area 62: 47
Area 63: 1
Area 73: 6

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#

Area Count, Rates better and away:

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
40 KALISPEL 115.0 0.962  0.95 <= pu <= 1.05   1.00 pu kV  353

Area Count, Volts better and away:
Area 40: 1
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Compost found the following for comparisons:
     136 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     163 lines of MVA Rating Violations read from c:\uwk\mts\a\slcl1b\pslcl1b-1.out
     434 lines of kV Voltage Violations read from c:\uwk\mts\a\slcl1b\pslcl1b-1.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
62 BROADV&2 500 to 62 BROADVU  500 CKT 2    <0.95     1.37   1732.00   151
73 CARTERMT 115 to 73 THERMOPL 115 CKT 1    <0.95     1.29   40.00   1598
65 BIGGRASS 161 to 65 JFRSNPHA 161 CKT 1    <0.95     1.26   148.10   417
62 DILLON S 161 to 65 BIGGRASS 161 CKT 1    <0.95     1.24   164.50   417
73 BASIN    115 to 73 GREYBULL 115 CKT 1    <0.95     1.23   109.00   1598
40 CLARKSTN 115 to 40 POMEROY  115 CKT 1    <0.95     1.18   63.70   469
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.17   1732.10   144
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.17   1732.10   145
40 HATWAI   230 to 40 MOSCOW   230 CKT 1    <0.95     1.16   372.10   417
73 LOVELL   115 to 73 YELLOWBR 115 CKT 1    <0.95     1.16   109.00   1329
62 ANACOND  161 to 62 DILLON S 161 CKT 1    <0.95     1.15   165.00   158
73 ARTESIA  138 to 73 HAYDEN   138 CKT 1    <0.95     1.13   90.00   1602
40 POMEROY  115 to 40 WALAWALA 115 CKT 1    <0.95     1.12   63.70   469
62 ANACOND  230 to 40 GARRISON 230 CKT 1    <0.95     1.12   358.50   1571
40 LOLO     230 to 60 IMNAHA   230 CKT 1    <0.95     1.09   366.50   469
40 HATWAI   230 to 40 LOLO     230 CKT 1    <0.95     1.07   429.00   469
40 HATWAI   230 to 40 N LEWIST 230 CKT 1    <0.95     1.03   425.10   469
73 BASIN    115 to 73 WORLANTP 115 CKT 1    <0.95     1.03   109.00   1598
65 ANTLOPE  161 to 65 GOSHEN   161 CKT 1    <0.95     1.03   158.10   1607
40 BURKE    115 to 40 BURKAVAA 115 CKT 1    <0.95     1.02   73.90   179
40 PLUMMER  115 to 40 OGARA    115 CKT 1    <0.95     1.02   61.30   290
60 EMMETT   138 to 60 MCCALL   138 CKT 1    <0.95     1.01   32.30   92
40 NOXON    230 to 40 PINE CRK 230 CKT 1    <0.95     1.00   308.30   417
73 MEEKER   138 to 65 RANGELY  138 CKT 1    <0.95     0.99   115.00   1602
63 CRSOVRUM 230 to 63 CROS PHA 230 CKT 1    <0.95     0.98   300.00   176
73 ARCHER   230 to 73 STEGALL  230 CKT 1    <0.95     0.98   400.00   1166
40 COLUMBIA 230 to 40 VANTAGE  230 CKT 1    <0.95     0.97   378.50   610
65 PLATTE   230 to 65 PLATTE   115 CKT 1    <0.95     0.97   100.00   670
40 NINTHCNT 115 to 40 GLENTAP  115 CKT 1    <0.95     0.96   85.80   449
73 HOYT     115 to 73 ADENA    115 CKT 1    <0.95     0.96   109.00   1178
73 LOVELL   115 to 73 YELLOWBR 115 CKT 2    <0.95     0.96   133.90   1328
40 BENEWAH  230 to 40 PINE CRK 230 CKT 1    <0.95     0.95   308.30   417
40 COLUMBIA 230 to 40 ROCKYRH2 230 CKT 1    <0.95     0.95   478.00   519
73 KIOWA CK 115 to 73 WIGGINS  115 CKT 1    <0.95     0.95   59.60   1178
73 STEGALL  230 to 73 STEGALL  115 CKT 1    <0.95     0.95   100.00   1906

**** RATES: WORSE ****
Component                                   w/o Prj  w/ Prj Rating   Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   2.51   113.70   417
40 BEACON N 115 to 40 ROSSPARK 115 CKT 1    1.27   1.41   138.20   284
40 N LEWIST 115 to 40 CLEARWTR 115 CKT 1    1.26   1.60   113.70   465
65 FISHCREK 161 to 65 GOSHEN   161 CKT 1    1.17   1.26   148.10   1612
65 JFRSNPHA 161 to 65 JEFFERSN 161 CKT 1    1.17   1.75   100.00   417
65 FISHCREK 161 to 65 GRACE    161 CKT 1    1.14   1.24   148.00   1615
73 GREYBULL 115 to 73 LOVELL   115 CKT 1    1.07   1.41   109.00   1598
40 BELL MI  230 to 40 BELL BPA 115 CKT 1    1.05   1.13   249.00   417
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.05   1.35   213.10   417
65 GRACE    161 to 65 GRACE    138 CKT 1    1.02   1.10   168.00   1612
60 HELLSCYN 230 to 60 BROWNLEE 230 CKT 1    1.01   1.13   478.00   92
60 OXBOW    230 to 60 BROWNLEE 230 CKT 1    1.00   1.14   478.00   469
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.00   1.52   944.00   451
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.00   1.52   944.00   452
60 MCCALL   138 to 60 WEISER   138 CKT 1    0.97   1.10   32.30   92
40 BEACON S 230 to 40 BEACON S 115 CKT 1    0.96   1.03   287.00   1748
40 BEACON N 230 to 40 BEACON N 115 CKT 1    0.96   1.03   287.00   1749
62 BROADV&1 500 to 62 BROADVU  500 CKT 1    0.95   1.37   1732.00   150

Area Count, Rates new and worse:
Area 40: 24
Area 60: 4
Area 62: 5
Area 63: 1
Area 65: 7
Area 73: 12

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
65 ANTLOPE  230.0  >0.95    0.885  1.00 pu kV  417
60 ONTARIO  138.0  >0.95    0.973  1.00 pu kV  122
60 ONTARIO  230.0  >0.95    0.958  1.00 pu kV  122
62 BONNERMT 161.0  >0.95    0.948  1.00 pu kV  144
62 ANACOND  230.0  >0.95    0.895  1.00 pu kV  144
62 ANACOND  161.0  >0.95    0.878  1.00 pu kV  144
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62 RATTLE S 161.0  >0.95    0.953  1.00 pu kV  144
62 TOWN2    500.0  >0.95    0.984  1.00 pu kV  144
62 TOWN1    500.0  >0.95    0.984  1.00 pu kV  145
62 WILSALL  161.0  >0.95    0.881  1.00 pu kV  144
62 MT ASIMI 161.0  >0.95    0.858  1.00 pu kV  144
62 WILSALL  230.0  >0.95    0.895  1.00 pu kV  144
62 SHELBY   230.0  >0.95    0.950  1.00 pu kV  144
62 SHELBY   115.0  >0.95    0.943  1.00 pu kV  144
62 ANA BPA  115.0  >0.95    0.945  1.00 pu kV  144
62 CNRDWAPA 230.0  >0.95    0.953  1.00 pu kV  144
62 JUDITHGP 230.0  >0.95    0.957  1.00 pu kV  144
62 BLGS PHA 230.0  >0.95    0.930  1.00 pu kV  144
62 HARDIN   230.0  >0.95    0.930  1.00 pu kV  144
62 ALKALI   230.0  >0.95    0.942  1.00 pu kV  144
62 BROADV&2 500.0  >0.95    1.025  1.00 pu kV  144
62 BROADV&1 500.0  >0.95    1.026  1.00 pu kV  144
62 BASELINE 230.0  >0.95    0.937  1.00 pu kV  144
62 HUNTLEY  230.0  >0.95    0.932  1.00 pu kV  144
62 SHOREYRD 230.0  >0.95    0.937  1.00 pu kV  144
62 RMRK PHA 161.0  >0.95    0.929  1.00 pu kV  144
62 RIMROCK  161.0  >0.95    0.934  1.00 pu kV  144
62 CNRDWAPA 115.0  >0.95    0.951  1.00 pu kV  144
62 GT FALLS 230.0  >0.95    0.953  1.00 pu kV  144
62 OVANDO   230.0  >0.95    0.959  1.00 pu kV  144
62 RESERVST 161.0  >0.95    0.949  1.00 pu kV  144
62 MILLERCK 161.0  >0.95    0.947  1.00 pu kV  144
62 HARDIN   115.0  >0.95    0.937  1.00 pu kV  144
62 BILINGS  230.0  >0.95    0.940  1.00 pu kV  144
62 ALKALI   161.0  >0.95    0.935  1.00 pu kV  144
62 BILINGSW 230.0  >0.95    0.946  1.00 pu kV  144
62 LANDRSFK 230.0  >0.95    0.959  1.00 pu kV  144
62 CNRD-SRA 115.0  >0.95    0.951  1.00 pu kV  144
62 COLRPLJE 161.0  >0.95    0.882  1.00 pu kV  144
62 CLMBUSPM 161.0  >0.95    0.882  1.00 pu kV  144
62 BROADVU  230.0  >0.95    0.973  1.00 pu kV  144
62 MISSLA 7 161.0  >0.95    0.948  1.00 pu kV  144
40 GARRISON 230.0  >0.95    0.940  1.00 pu kV  144
40 GARRISON 500.0  >0.95    0.967  1.00 pu kV  144
40 RATTLE S 230.0  >0.95    0.957  1.00 pu kV  144
40 TAFT     500.0  >0.95    1.027  1.00 pu kV  144
65 BADWATER 230.0  >0.95    0.936  1.00 pu kV  417
65 BUFFALO  230.0  >0.95    0.939  1.00 pu kV  417
65 DECKER   230.0  >0.95    0.898  1.00 pu kV  417
65 GOOSE CK 230.0  >0.95    0.899  1.00 pu kV  417
65 GRASS CK 230.0  >0.95    0.863  1.00 pu kV  417
65 RIVERTON 230.0  >0.95    0.934  1.00 pu kV  417
65 SHERIDAN 230.0  >0.95    0.900  1.00 pu kV  417
65 THERMOPL 230.0  >0.95    0.896  1.00 pu kV  417
65 THERPACE 115.0  >0.95    0.892  1.00 pu kV  417
65 WYOMONT  230.0  >0.95    0.898  1.00 pu kV  417
65 YELOWTLP 230.0  >0.95    0.895  1.00 pu kV  417
65 YELOWTLP 161.0  >0.95    0.906  1.00 pu kV  144
73 BOYSEN   115.0  >0.95    0.918  1.00 pu kV  417
73 COPPERMT 115.0  >0.95    0.921  1.00 pu kV  417
73 HDOME    115.0  >0.95    0.899  1.00 pu kV  417
73 JIMREADY 115.0  >0.95    0.894  1.00 pu kV  417
73 PILOT BU 115.0  >0.95    0.925  1.00 pu kV  417
73 TCAPS    115.0  >0.95    0.892  1.00 pu kV  417
73 THERMOPL 115.0  >0.95    0.892  1.00 pu kV  417
73 YELLOWBR 115.0  >0.95    0.897  1.00 pu kV  417
73 YELLOWBR 230.0  >0.95    0.895  1.00 pu kV  417
73 JIMRDYTP 115.0  >0.95    0.894  1.00 pu kV  417
73 HARRSBRG 115.0  >0.95    0.922  1.00 pu kV  417
63 CROS PHA 230.0  >0.95    0.899  1.00 pu kV  144
63 CRSOVRUM 230.0  >0.95    0.922  1.00 pu kV  144
63 CUSTER   230.0  >0.95    0.892  1.00 pu kV  144
63 MILCTYDC 230.0  >0.95    0.843  1.00 pu kV  144
63 ROSEBUD  230.0  >0.95    0.852  1.00 pu kV  144
63 TIBERTAP 115.0  >0.95    0.924  1.00 pu kV  1697
62 ARMELLCR 115.0  >0.95    0.970  1.00 pu kV  174
40 EGRANVIL 115.0  >0.95    0.905  1.00 pu kV  417
40 AIRWAYTP 115.0  >0.95    0.927  1.00 pu kV  417
40 FOURLBPA 115.0  >0.95    0.928  1.00 pu kV  417
40 FOURLKS  115.0  >0.95    0.928  1.00 pu kV  417
40 HAL&WHIT 115.0  >0.95    0.927  1.00 pu kV  417
40 HAYFORD  115.0  >0.95    0.930  1.00 pu kV  417
40 4LAKE TP 115.0  >0.95    0.929  1.00 pu kV  417
40 4TH&HRLD 115.0  >0.95    0.941  1.00 pu kV  417
40 4TH&HRTP 115.0  >0.95    0.941  1.00 pu kV  417
40 AIRWAYHT 115.0  >0.95    0.941  1.00 pu kV  417
40 BELL TAP 115.0  >0.95    0.947  1.00 pu kV  417
40 COLLWALN 115.0  >0.95    0.937  1.00 pu kV  417
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40 DWORSHAK 115.0  >0.95    0.966  1.00 pu kV  417
40 FAIRCHLD 115.0  >0.95    0.940  1.00 pu kV  417
40 FRANCEDR 115.0  >0.95    0.943  1.00 pu kV  417
40 FTWRIGHT 115.0  >0.95    0.940  1.00 pu kV  417
40 GARDENSP 115.0  >0.95    0.941  1.00 pu kV  417
40 GLENROSE 115.0  >0.95    0.938  1.00 pu kV  417
40 GLENTAP  115.0  >0.95    0.938  1.00 pu kV  417
40 HANGMAN  115.0  >0.95    0.930  1.00 pu kV  417
40 HOPKINSB 115.0  >0.95    0.923  1.00 pu kV  417
40 I.E.PAPR 115.0  >0.95    0.941  1.00 pu kV  417
40 LYONSTND 115.0  >0.95    0.942  1.00 pu kV  417
40 METRO    115.0  >0.95    0.937  1.00 pu kV  417
40 MICA     115.0  >0.95    0.923  1.00 pu kV  417
40 MICA TAP 115.0  >0.95    0.923  1.00 pu kV  417
40 MILLWOOD 115.0  >0.95    0.942  1.00 pu kV  417
40 NINTHCNT 115.0  >0.95    0.943  1.00 pu kV  417
40 NORTHWES 115.0  >0.95    0.947  1.00 pu kV  417
40 OGARA    115.0  >0.95    0.935  1.00 pu kV  417
40 OPORTUNW 115.0  >0.95    0.945  1.00 pu kV  417
40 PINE CRK 230.0  >0.95    0.959  1.00 pu kV  417
40 PLUMMER  115.0  >0.95    0.929  1.00 pu kV  417
40 POSTSTRT 115.0  >0.95    0.937  1.00 pu kV  417
40 ROSSPARK 115.0  >0.95    0.943  1.00 pu kV  417
40 SCOTPAPR 115.0  >0.95    0.914  1.00 pu kV  417
40 SEVENTAP 115.0  >0.95    0.944  1.00 pu kV  417
40 SOUTHEAS 115.0  >0.95    0.936  1.00 pu kV  417
40 SPKINDPK 115.0  >0.95    0.936  1.00 pu kV  417
40 SPKWASTE 115.0  >0.95    0.943  1.00 pu kV  417
40 STMARIES 115.0  >0.95    0.922  1.00 pu kV  417
40 SUNSET   115.0  >0.95    0.937  1.00 pu kV  417
40 THIRHACH 115.0  >0.95    0.939  1.00 pu kV  417
40 WAIKIKI  115.0  >0.95    0.949  1.00 pu kV  417
65 ATLANTIC 230.0  >0.95    0.942  1.00 pu kV  417
65 JEFFERSN 161.0  >0.95    0.948  1.00 pu kV  417
65 WYOPO    230.0  >0.95    0.934  1.00 pu kV  417
40 HATWAI   500.0  >0.95    1.007  1.00 pu kV  469
40 POMEROY  115.0  >0.95    0.946  1.00 pu kV  469
65 ANGEL ST 138.0  >0.95    0.949  1.00 pu kV  684
65 COLUMBIA 138.0  >0.95    0.975  1.00 pu kV  699
65 SUNNYSID 138.0  >0.95    0.978  1.00 pu kV  699
73 PROSPEC  115.0  >0.95    0.949  1.00 pu kV  1178
63 MTSHARLM 230.0  >0.95    0.981  1.00 pu kV  1559
63 HAVRE    115.0  >0.95    0.856  1.00 pu kV  1697
63 RUDYARD  115.0  >0.95    0.892  1.00 pu kV  1697
65 WHISKEYP 115.0  >0.95    0.957  1.00 pu kV  1835

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
62 JACKRABT 161.0  0.921   0.816  1.00 pu kV  144
62 TRIDENT  161.0  0.944   0.839  1.00 pu kV  144
62 CLYDE P  161.0  0.926   0.850  1.00 pu kV  144
62 EGALTN A 161.0  0.921   0.826  1.00 pu kV  144
62 BGTMBERA 161.0  0.936   0.855  1.00 pu kV  144
62 EMIGT AT 161.0  0.930   0.853  1.00 pu kV  144
62 EGALTN B 161.0  0.921   0.826  1.00 pu kV  144
62 BUTTEMHD 161.0  0.947   0.853  1.00 pu kV  144
62 BUTTE MT 161.0  0.946   0.851  1.00 pu kV  144
40 GAR1EAST 500.0  1.031   0.967  1.00 pu kV  145
40 GAR2EAST 500.0  1.031   0.967  1.00 pu kV  144
73 BGEORGE  115.0  0.902   0.819  1.00 pu kV  1598
73 MEETSETP 115.0  0.911   0.832  1.00 pu kV  417
65 FRANNIE  230.0  0.940   0.818  1.00 pu kV  417
65 GARLAND  230.0  0.941   0.810  1.00 pu kV  417
65 OREBASIN 230.0  0.946   0.811  1.00 pu kV  417
73 CARTERMT 115.0  0.924   0.844  1.00 pu kV  417
73 GREYBULL 115.0  0.918   0.831  1.00 pu kV  1598
73 NAHNEJEN 115.0  0.916   0.829  1.00 pu kV  1598
65 WORLAND  115.0  0.958   0.878  1.00 pu kV  417
73 BASIN    115.0  0.934   0.858  1.00 pu kV  417
73 LOVELL   115.0  0.928   0.832  1.00 pu kV  417
73 WORLANTP 115.0  0.953   0.874  1.00 pu kV  417
62 GLDNSNLT 161.0  0.944   0.843  1.00 pu kV  144

Area Count, Volts new and worse:
Area 40: 52
Area 60: 2
Area 62: 50
Area 63: 9
Area 65: 24
Area 73: 20

**** RATES: BETTER ****
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Component                                   w/o Prj  w/ Prj Rating  Cont#
65 BONANZA  345 to 65 BONANZA  138 CKT 1    1.20   1.08   392.00   1602
73 GOREPASS 138 to 73 HAYDEN   138 CKT 1    1.18   1.11   96.00   1642
40 BOUNDARY 230 to 40 BOUNDARY 115 CKT 1    1.09   1.03   125.00   230
40 DIAM LAK 115 to 40 SACHEEN  115 CKT 1    1.05   0.95   131.50   283

**** RATES:  AWAY ****
Component                                     w/o Prj  w/ Prj  Rating   Cont#
65 BONANZA  138 to 65 RANGELY  138 CKT 1    1.19    <= 0.95  115.00   1799
65 BRIDGER  230 to 65 ROCKSPGS 230 CKT 1    1.11    <= 0.95  423.90   48
60 AMFLS    138 to 60 BRADY    138 CKT 1    1.03    <= 0.95  236.60   23
60 BRIDGER  345 to 60 BORAH    345 CKT 1    1.03    <= 0.95  892.20   49
73 CRAIG    230 to 73 RIFLE WA 230 CKT 1    1.03    <= 0.95  324.00   1647
60 BRIDGER  345 to 60 KINPORT  345 CKT 1    0.99    <= 0.95  892.20   1608
40 ATHOLTAP 115 to 40 SCARCELO 115 CKT 1    0.98    <= 0.95  113.70   283
60 BRIDGER  345 to 65 GOSHEN   345 CKT 1    0.97    <= 0.95  892.20   49
73 VERNAL   138 to 65 BONANZA  138 CKT 1    0.96    <= 0.95  192.00   699
73 ARCHER   230 to 73 ARCHER   115 CKT 1    0.95    <= 0.95  167.00   1313

Area Count, Rates better and away:
Area 40: 3
Area 60: 4
Area 65: 3
Area 73: 4

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
60 PLST VLY 138.0 0.970  0.95 <= pu <= 1.05   1.00 pu kV  25
65 BIGGRASS 161.0 0.919  0.95 <= pu <= 1.05   1.00 pu kV  418
60 NELSN TP 138.0 0.968  0.95 <= pu <= 1.05   1.00 pu kV  100
62 ENNIS MT 161.0 0.934  0.95 <= pu <= 1.05   1.00 pu kV  185
62 SHERDNMT 161.0 0.932  0.95 <= pu <= 1.05   1.00 pu kV  418
62 TAFTAUTO 115.0 0.933  0.95 <= pu <= 1.05   1.00 pu kV  135
62 BRADLEYC 161.0 0.932  0.95 <= pu <= 1.05   1.00 pu kV  185
62 DILLON S 161.0 0.922  0.95 <= pu <= 1.05   1.00 pu kV  418
62 PTRSNFLT 230.0 0.908  0.95 <= pu <= 1.05   1.00 pu kV  418
65 AMPS     230.0 0.929  0.95 <= pu <= 1.05   1.00 pu kV  418
65 JFRSNPHA 161.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1608
65 AEC IPC  138.0 0.936  0.95 <= pu <= 1.05   1.00 pu kV  661
65 AEC SCOV 138.0 0.936  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOP 1 138.0 0.937  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOP 2 138.0 0.937  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOPE  161.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  661
73 COYOTE G 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 SUNSH SM 115.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1929

Area Count, Volts better and away:
Area 60: 2
Area 62: 6
Area 65: 8
Area 73: 2
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Compost found the following for comparisons:
     80 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     98 lines of MVA Rating Violations read from c:\uwk\mts\a\slcl1b\pslcl1b-2.out
     434 lines of kV Voltage Violations read from c:\uwk\mts\a\slcl1b\pslcl1b-2.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 CLARKSTN 115 to 40 POMEROY  115 CKT 1    <0.95     1.18   63.70   469
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.17   1732.10   144
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.17   1732.10   145
40 HATWAI   230 to 40 MOSCOW   230 CKT 1    <0.95     1.16   372.10   417
40 POMEROY  115 to 40 WALAWALA 115 CKT 1    <0.95     1.12   63.70   469
65 BIGGRASS 161 to 65 JFRSNPHA 161 CKT 1    <0.95     1.06   176.00   417
40 HATWAI   230 to 40 N LEWIST 230 CKT 1    <0.95     1.03   425.10   469
40 BURKE    115 to 40 BURKAVAA 115 CKT 1    <0.95     1.02   73.90   179
40 PLUMMER  115 to 40 OGARA    115 CKT 1    <0.95     1.02   61.30   290
40 NOXON    230 to 40 PINE CRK 230 CKT 1    <0.95     1.00   308.30   417
60 OXBOW    230 to 60 BROWNLEE 230 CKT 1    <0.95     0.99   549.80   469
60 HELLSCYN 230 to 60 BROWNLEE 230 CKT 1    <0.95     0.98   549.80   92
40 COLUMBIA 230 to 40 VANTAGE  230 CKT 1    <0.95     0.97   378.50   610
65 PLATTE   230 to 65 PLATTE   115 CKT 1    <0.95     0.97   100.00   670
60 MCCALL   138 to 60 WEISER   138 CKT 1    <0.95     0.96   37.10   92
40 NINTHCNT 115 to 40 GLENTAP  115 CKT 1    <0.95     0.96   85.80   449
40 LOLO     230 to 60 IMNAHA   230 CKT 1    <0.95     0.96   417.00   469
40 BENEWAH  230 to 40 PINE CRK 230 CKT 1    <0.95     0.95   308.30   417
40 COLUMBIA 230 to 40 ROCKYRH2 230 CKT 1    <0.95     0.95   478.00   519

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   2.51   113.70   417
40 BEACON N 115 to 40 ROSSPARK 115 CKT 1    1.27   1.41   138.20   284
40 N LEWIST 115 to 40 CLEARWTR 115 CKT 1    1.26   1.60   113.70   465
65 JFRSNPHA 161 to 65 JEFFERSN 161 CKT 1    1.17   1.75   100.00   417
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.05   1.35   213.10   417
65 GRACE    161 to 65 GRACE    138 CKT 1    1.02   1.10   168.00   1612
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.00   1.52   944.00   451
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.00   1.52   944.00   452
65 FISHCREK 161 to 65 GOSHEN   161 CKT 1    0.98   1.06   176.00   1612
65 FISHCREK 161 to 65 GRACE    161 CKT 1    0.96   1.04   176.00   1615
40 BEACON S 230 to 40 BEACON S 115 CKT 1    0.96   1.03   287.00   1748
40 BEACON N 230 to 40 BEACON N 115 CKT 1    0.96   1.03   287.00   1749

Area Count, Rates new and worse:
Area 40: 22
Area 60: 3
Area 65: 6

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
65 ANTLOPE  230.0  >0.95    0.885  1.00 pu kV  417
60 ONTARIO  138.0  >0.95    0.973  1.00 pu kV  122
60 ONTARIO  230.0  >0.95    0.958  1.00 pu kV  122
62 BONNERMT 161.0  >0.95    0.948  1.00 pu kV  144
62 ANACOND  230.0  >0.95    0.895  1.00 pu kV  144
62 ANACOND  161.0  >0.95    0.878  1.00 pu kV  144
62 RATTLE S 161.0  >0.95    0.953  1.00 pu kV  144
62 TOWN2    500.0  >0.95    0.984  1.00 pu kV  144
62 TOWN1    500.0  >0.95    0.984  1.00 pu kV  145
62 WILSALL  161.0  >0.95    0.881  1.00 pu kV  144
62 MT ASIMI 161.0  >0.95    0.858  1.00 pu kV  144
62 WILSALL  230.0  >0.95    0.895  1.00 pu kV  144
62 SHELBY   230.0  >0.95    0.950  1.00 pu kV  144
62 SHELBY   115.0  >0.95    0.943  1.00 pu kV  144
62 ANA BPA  115.0  >0.95    0.945  1.00 pu kV  144
62 CNRDWAPA 230.0  >0.95    0.953  1.00 pu kV  144
62 JUDITHGP 230.0  >0.95    0.957  1.00 pu kV  144
62 BLGS PHA 230.0  >0.95    0.930  1.00 pu kV  144
62 HARDIN   230.0  >0.95    0.930  1.00 pu kV  144
62 ALKALI   230.0  >0.95    0.942  1.00 pu kV  144
62 BROADV&2 500.0  >0.95    1.025  1.00 pu kV  144
62 BROADV&1 500.0  >0.95    1.026  1.00 pu kV  144
62 BASELINE 230.0  >0.95    0.937  1.00 pu kV  144
62 HUNTLEY  230.0  >0.95    0.932  1.00 pu kV  144
62 SHOREYRD 230.0  >0.95    0.937  1.00 pu kV  144
62 RMRK PHA 161.0  >0.95    0.929  1.00 pu kV  144
62 RIMROCK  161.0  >0.95    0.934  1.00 pu kV  144
62 CNRDWAPA 115.0  >0.95    0.951  1.00 pu kV  144
62 GT FALLS 230.0  >0.95    0.953  1.00 pu kV  144
62 OVANDO   230.0  >0.95    0.959  1.00 pu kV  144
62 RESERVST 161.0  >0.95    0.949  1.00 pu kV  144
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62 MILLERCK 161.0  >0.95    0.947  1.00 pu kV  144
62 HARDIN   115.0  >0.95    0.937  1.00 pu kV  144
62 BILINGS  230.0  >0.95    0.940  1.00 pu kV  144
62 ALKALI   161.0  >0.95    0.935  1.00 pu kV  144
62 BILINGSW 230.0  >0.95    0.946  1.00 pu kV  144
62 LANDRSFK 230.0  >0.95    0.959  1.00 pu kV  144
62 CNRD-SRA 115.0  >0.95    0.951  1.00 pu kV  144
62 COLRPLJE 161.0  >0.95    0.882  1.00 pu kV  144
62 CLMBUSPM 161.0  >0.95    0.882  1.00 pu kV  144
62 BROADVU  230.0  >0.95    0.973  1.00 pu kV  144
62 MISSLA 7 161.0  >0.95    0.948  1.00 pu kV  144
40 GARRISON 230.0  >0.95    0.940  1.00 pu kV  144
40 GARRISON 500.0  >0.95    0.967  1.00 pu kV  144
40 RATTLE S 230.0  >0.95    0.957  1.00 pu kV  144
40 TAFT     500.0  >0.95    1.027  1.00 pu kV  144
65 BADWATER 230.0  >0.95    0.936  1.00 pu kV  417
65 BUFFALO  230.0  >0.95    0.939  1.00 pu kV  417
65 DECKER   230.0  >0.95    0.898  1.00 pu kV  417
65 GOOSE CK 230.0  >0.95    0.899  1.00 pu kV  417
65 GRASS CK 230.0  >0.95    0.863  1.00 pu kV  417
65 RIVERTON 230.0  >0.95    0.934  1.00 pu kV  417
65 SHERIDAN 230.0  >0.95    0.900  1.00 pu kV  417
65 THERMOPL 230.0  >0.95    0.896  1.00 pu kV  417
65 THERPACE 115.0  >0.95    0.892  1.00 pu kV  417
65 WYOMONT  230.0  >0.95    0.898  1.00 pu kV  417
65 YELOWTLP 230.0  >0.95    0.895  1.00 pu kV  417
65 YELOWTLP 161.0  >0.95    0.906  1.00 pu kV  144
73 BOYSEN   115.0  >0.95    0.918  1.00 pu kV  417
73 COPPERMT 115.0  >0.95    0.921  1.00 pu kV  417
73 HDOME    115.0  >0.95    0.899  1.00 pu kV  417
73 JIMREADY 115.0  >0.95    0.894  1.00 pu kV  417
73 PILOT BU 115.0  >0.95    0.925  1.00 pu kV  417
73 TCAPS    115.0  >0.95    0.892  1.00 pu kV  417
73 THERMOPL 115.0  >0.95    0.892  1.00 pu kV  417
73 YELLOWBR 115.0  >0.95    0.897  1.00 pu kV  417
73 YELLOWBR 230.0  >0.95    0.895  1.00 pu kV  417
73 JIMRDYTP 115.0  >0.95    0.894  1.00 pu kV  417
73 HARRSBRG 115.0  >0.95    0.922  1.00 pu kV  417
63 CROS PHA 230.0  >0.95    0.899  1.00 pu kV  144
63 CRSOVRUM 230.0  >0.95    0.922  1.00 pu kV  144
63 CUSTER   230.0  >0.95    0.892  1.00 pu kV  144
63 MILCTYDC 230.0  >0.95    0.843  1.00 pu kV  144
63 ROSEBUD  230.0  >0.95    0.852  1.00 pu kV  144
63 TIBERTAP 115.0  >0.95    0.924  1.00 pu kV  1697
62 ARMELLCR 115.0  >0.95    0.970  1.00 pu kV  174
40 EGRANVIL 115.0  >0.95    0.905  1.00 pu kV  417
40 AIRWAYTP 115.0  >0.95    0.927  1.00 pu kV  417
40 FOURLBPA 115.0  >0.95    0.928  1.00 pu kV  417
40 FOURLKS  115.0  >0.95    0.928  1.00 pu kV  417
40 HAL&WHIT 115.0  >0.95    0.927  1.00 pu kV  417
40 HAYFORD  115.0  >0.95    0.930  1.00 pu kV  417
40 4LAKE TP 115.0  >0.95    0.929  1.00 pu kV  417
40 4TH&HRLD 115.0  >0.95    0.941  1.00 pu kV  417
40 4TH&HRTP 115.0  >0.95    0.941  1.00 pu kV  417
40 AIRWAYHT 115.0  >0.95    0.941  1.00 pu kV  417
40 BELL TAP 115.0  >0.95    0.947  1.00 pu kV  417
40 COLLWALN 115.0  >0.95    0.937  1.00 pu kV  417
40 DWORSHAK 115.0  >0.95    0.966  1.00 pu kV  417
40 FAIRCHLD 115.0  >0.95    0.940  1.00 pu kV  417
40 FRANCEDR 115.0  >0.95    0.943  1.00 pu kV  417
40 FTWRIGHT 115.0  >0.95    0.940  1.00 pu kV  417
40 GARDENSP 115.0  >0.95    0.941  1.00 pu kV  417
40 GLENROSE 115.0  >0.95    0.938  1.00 pu kV  417
40 GLENTAP  115.0  >0.95    0.938  1.00 pu kV  417
40 HANGMAN  115.0  >0.95    0.930  1.00 pu kV  417
40 HOPKINSB 115.0  >0.95    0.923  1.00 pu kV  417
40 I.E.PAPR 115.0  >0.95    0.941  1.00 pu kV  417
40 LYONSTND 115.0  >0.95    0.942  1.00 pu kV  417
40 METRO    115.0  >0.95    0.937  1.00 pu kV  417
40 MICA     115.0  >0.95    0.923  1.00 pu kV  417
40 MICA TAP 115.0  >0.95    0.923  1.00 pu kV  417
40 MILLWOOD 115.0  >0.95    0.942  1.00 pu kV  417
40 NINTHCNT 115.0  >0.95    0.943  1.00 pu kV  417
40 NORTHWES 115.0  >0.95    0.947  1.00 pu kV  417
40 OGARA    115.0  >0.95    0.935  1.00 pu kV  417
40 OPORTUNW 115.0  >0.95    0.945  1.00 pu kV  417
40 PINE CRK 230.0  >0.95    0.959  1.00 pu kV  417
40 PLUMMER  115.0  >0.95    0.929  1.00 pu kV  417
40 POSTSTRT 115.0  >0.95    0.937  1.00 pu kV  417
40 ROSSPARK 115.0  >0.95    0.943  1.00 pu kV  417
40 SCOTPAPR 115.0  >0.95    0.914  1.00 pu kV  417
40 SEVENTAP 115.0  >0.95    0.944  1.00 pu kV  417
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40 SOUTHEAS 115.0  >0.95    0.936  1.00 pu kV  417
40 SPKINDPK 115.0  >0.95    0.936  1.00 pu kV  417
40 SPKWASTE 115.0  >0.95    0.943  1.00 pu kV  417
40 STMARIES 115.0  >0.95    0.922  1.00 pu kV  417
40 SUNSET   115.0  >0.95    0.937  1.00 pu kV  417
40 THIRHACH 115.0  >0.95    0.939  1.00 pu kV  417
40 WAIKIKI  115.0  >0.95    0.949  1.00 pu kV  417
65 ATLANTIC 230.0  >0.95    0.942  1.00 pu kV  417
65 JEFFERSN 161.0  >0.95    0.948  1.00 pu kV  417
65 WYOPO    230.0  >0.95    0.934  1.00 pu kV  417
40 HATWAI   500.0  >0.95    1.007  1.00 pu kV  469
40 POMEROY  115.0  >0.95    0.946  1.00 pu kV  469
65 ANGEL ST 138.0  >0.95    0.949  1.00 pu kV  684
65 COLUMBIA 138.0  >0.95    0.975  1.00 pu kV  699
65 SUNNYSID 138.0  >0.95    0.978  1.00 pu kV  699
73 PROSPEC  115.0  >0.95    0.949  1.00 pu kV  1178
63 MTSHARLM 230.0  >0.95    0.981  1.00 pu kV  1559
63 HAVRE    115.0  >0.95    0.856  1.00 pu kV  1697
63 RUDYARD  115.0  >0.95    0.892  1.00 pu kV  1697
65 WHISKEYP 115.0  >0.95    0.957  1.00 pu kV  1835

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
62 JACKRABT 161.0  0.921   0.816  1.00 pu kV  144
62 TRIDENT  161.0  0.944   0.839  1.00 pu kV  144
62 CLYDE P  161.0  0.926   0.850  1.00 pu kV  144
62 EGALTN A 161.0  0.921   0.826  1.00 pu kV  144
62 BGTMBERA 161.0  0.936   0.855  1.00 pu kV  144
62 EMIGT AT 161.0  0.930   0.853  1.00 pu kV  144
62 EGALTN B 161.0  0.921   0.826  1.00 pu kV  144
62 BUTTEMHD 161.0  0.947   0.853  1.00 pu kV  144
62 BUTTE MT 161.0  0.946   0.851  1.00 pu kV  144
40 GAR1EAST 500.0  1.031   0.967  1.00 pu kV  145
40 GAR2EAST 500.0  1.031   0.967  1.00 pu kV  144
73 BGEORGE  115.0  0.902   0.819  1.00 pu kV  1598
73 MEETSETP 115.0  0.911   0.832  1.00 pu kV  417
65 FRANNIE  230.0  0.940   0.818  1.00 pu kV  417
65 GARLAND  230.0  0.941   0.810  1.00 pu kV  417
65 OREBASIN 230.0  0.946   0.811  1.00 pu kV  417
73 CARTERMT 115.0  0.924   0.844  1.00 pu kV  417
73 GREYBULL 115.0  0.918   0.831  1.00 pu kV  1598
73 NAHNEJEN 115.0  0.916   0.829  1.00 pu kV  1598
65 WORLAND  115.0  0.958   0.878  1.00 pu kV  417
73 BASIN    115.0  0.934   0.858  1.00 pu kV  417
73 LOVELL   115.0  0.928   0.832  1.00 pu kV  417
73 WORLANTP 115.0  0.953   0.874  1.00 pu kV  417
62 GLDNSNLT 161.0  0.944   0.843  1.00 pu kV  144

Area Count, Volts new and worse:
Area 40: 52
Area 60: 2
Area 62: 50
Area 63: 9
Area 65: 24
Area 73: 20

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#
65 BONANZA  345 to 65 BONANZA  138 CKT 1    1.20   1.08   392.00   1602
40 BOUNDARY 230 to 40 BOUNDARY 115 CKT 1    1.09   1.03   125.00   230
40 DIAM LAK 115 to 40 SACHEEN  115 CKT 1    1.05   0.95   131.50   283

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 ATHOLTAP 115 to 40 SCARCELO 115 CKT 1    0.98    <= 0.95  113.70   283

Area Count, Rates better and away:
Area 40: 3
Area 65: 1

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
60 PLST VLY 138.0 0.970  0.95 <= pu <= 1.05   1.00 pu kV  25
65 BIGGRASS 161.0 0.919  0.95 <= pu <= 1.05   1.00 pu kV  418
60 NELSN TP 138.0 0.968  0.95 <= pu <= 1.05   1.00 pu kV  100
62 ENNIS MT 161.0 0.934  0.95 <= pu <= 1.05   1.00 pu kV  185
62 SHERDNMT 161.0 0.932  0.95 <= pu <= 1.05   1.00 pu kV  418
62 TAFTAUTO 115.0 0.933  0.95 <= pu <= 1.05   1.00 pu kV  135
62 BRADLEYC 161.0 0.932  0.95 <= pu <= 1.05   1.00 pu kV  185
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62 DILLON S 161.0 0.922  0.95 <= pu <= 1.05   1.00 pu kV  418
62 PTRSNFLT 230.0 0.908  0.95 <= pu <= 1.05   1.00 pu kV  418
65 AMPS     230.0 0.929  0.95 <= pu <= 1.05   1.00 pu kV  418
65 JFRSNPHA 161.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1608
65 AEC IPC  138.0 0.936  0.95 <= pu <= 1.05   1.00 pu kV  661
65 AEC SCOV 138.0 0.936  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOP 1 138.0 0.937  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOP 2 138.0 0.937  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOPE  161.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  661
73 COYOTE G 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 SUNSH SM 115.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1929

Area Count, Volts better and away:
Area 60: 2
Area 62: 6
Area 65: 8
Area 73: 2
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Compost found the following for comparisons:
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     115 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\lsbs\plsbs-1.out
     73 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\spl2\pspl2-1.out
     196 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\spl2\pspl2-1.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 BELL BPA 500 to 40 BELL SO  230 CKT 1    <0.95     1.50   1220.00   412
40 BEACON S 115 to 40 BELL BPA 115 CKT 1    <0.95     1.25   85.80   274
40 BEACON N 230 to 40 BELL SO  230 CKT 5    <0.95     1.12   366.50   274
40 POSTSTRT 115 to 40 THIRHACH 115 CKT 1    <0.95     1.08   110.90   278
40 BEACON N 115 to 40 NORTHEAS 115 CKT 1    <0.95     1.07   110.90   274
40 BURKE    115 to 40 HECLA    115 CKT 1    <0.95     1.05   92.80   315
40 HATWAI   230 to 40 N LEWIST 230 CKT 1    <0.95     1.05   425.10   463
40 OSBURN   115 to 40 PINE CRK 115 CKT 1    <0.95     1.02   85.80   315
40 WALLACE  115 to 40 OSBURN   115 CKT 1    <0.95     1.02   92.80   315
40 CLARKSTN 115 to 40 POMEROY  115 CKT 1    <0.95     1.02   63.70   463
40 BIGCREEK 115 to 40 BUNKRHIL 115 CKT 1    <0.95     1.00   85.80   314
40 HATWAI   230 to 40 MOSCOW   230 CKT 1    <0.95     1.00   372.10   411
40 PLUMMER  115 to 40 OGARA    115 CKT 1    <0.95     0.99   61.30   284
40 POMEROY  115 to 40 WALAWALA 115 CKT 1    <0.95     0.99   63.70   463
40 BUNKRHIL 115 to 40 PINE CRK 115 CKT 1    <0.95     0.97   85.80   314
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     0.95   1732.10   138
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     0.95   1732.10   139
73 CURECANT 115 to 73 SOCANAL  115 CKT 1    <0.95     0.95   120.00   1489

**** RATES: WORSE ****
Component                                    w/o Prj  w/ Prj Rating   Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   2.39   113.70   411
40 N LEWIST 115 to 40 CLEARWTR 115 CKT 1    1.31   1.40   113.70   459
40 BURKE    115 to 40 BURKAVAA 115 CKT 1    1.26   1.36   73.90   173
40 BURKE    115 to 40 BURKAVAB 115 CKT 1    1.21   1.35   73.90   312
40 BEACON N 115 to 40 ROSSPARK 115 CKT 1    1.18   1.43   138.20   278
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.04   1.29   213.10   411
40 BEACON S 115 to 40 NINTHCNT 115 CKT 1    1.02   1.08   91.00   251
40 BURKE    115 to 40 LUCKYFTP 115 CKT 1    1.02   1.14   85.80   314
40 BEACON N 230 to 40 BEACON N 115 CKT 1    0.97   1.27   287.00   274
40 BEACON S 230 to 40 BEACON S 115 CKT 1    0.97   1.27   287.00   274
40 HECLAT   115 to 40 BIGCREEK 115 CKT 1    0.96   1.07   85.80   314
40 LUCKYFTP 115 to 40 HECLAT   115 CKT 1    0.96   1.07   85.80   314
40 BELL MI  230 to 40 BELL BPA 115 CKT 1    0.95   1.12   249.00   412

Area Count, Rates new and worse:
Area 40: 30
Area 73: 1

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
40 4LAKE TP 115.0  >0.95    0.931  1.00 pu kV  412
40 AIRWAYHT 115.0  >0.95    0.932  1.00 pu kV  412
40 AIRWAYTP 115.0  >0.95    0.928  1.00 pu kV  412
40 ARMSTRNG 115.0  >0.95    0.934  1.00 pu kV  411
40 BIGELOW  115.0  >0.95    0.935  1.00 pu kV  412
40 BRINKENS 115.0  >0.95    0.926  1.00 pu kV  411
40 CHAMBERS 115.0  >0.95    0.935  1.00 pu kV  411
40 COLLWALN 115.0  >0.95    0.933  1.00 pu kV  412
40 EGRANVIL 115.0  >0.95    0.925  1.00 pu kV  411
40 FAIRCHLD 115.0  >0.95    0.931  1.00 pu kV  412
40 FOURLBPA 115.0  >0.95    0.929  1.00 pu kV  412
40 FTWRIGHT 115.0  >0.95    0.934  1.00 pu kV  412
40 GLENROSE 115.0  >0.95    0.934  1.00 pu kV  412
40 GLENTAP  115.0  >0.95    0.935  1.00 pu kV  412
40 GREEN BL 115.0  >0.95    0.934  1.00 pu kV  412
40 HAL&WHIT 115.0  >0.95    0.928  1.00 pu kV  412
40 HANGMAN  115.0  >0.95    0.931  1.00 pu kV  412
40 HAYFORD  115.0  >0.95    0.930  1.00 pu kV  412
40 HOPKINSB 115.0  >0.95    0.936  1.00 pu kV  412
40 INLD EMP 115.0  >0.95    0.935  1.00 pu kV  412
40 METRO    115.0  >0.95    0.933  1.00 pu kV  412
40 MICA     115.0  >0.95    0.936  1.00 pu kV  412
40 MICA TAP 115.0  >0.95    0.936  1.00 pu kV  412
40 OGARA    115.0  >0.95    0.943  1.00 pu kV  412
40 PLUMMER  115.0  >0.95    0.936  1.00 pu kV  412
40 POSTSTRT 115.0  >0.95    0.933  1.00 pu kV  412
40 RALSTONB 115.0  >0.95    0.919  1.00 pu kV  412
40 SCOTPAPR 115.0  >0.95    0.931  1.00 pu kV  411
40 SOUTHEAS 115.0  >0.95    0.933  1.00 pu kV  412
40 SPKINDPK 115.0  >0.95    0.930  1.00 pu kV  412
40 STMARIES 115.0  >0.95    0.934  1.00 pu kV  412
40 SULLIVNB 115.0  >0.95    0.928  1.00 pu kV  412
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40 SUNSET   115.0  >0.95    0.933  1.00 pu kV  412
40 THIRHACH 115.0  >0.95    0.935  1.00 pu kV  412
40 TRENTWOD 115.0  >0.95    0.930  1.00 pu kV  412
40 VALY WAY 115.0  >0.95    0.929  1.00 pu kV  412
40 VERA     115.0  >0.95    0.927  1.00 pu kV  412
40 VERA TAP 115.0  >0.95    0.929  1.00 pu kV  412
62 PTRSNFLT 230.0  >0.95    0.975  1.00 pu kV  412
40 4TH&HRLD 115.0  >0.95    0.937  1.00 pu kV  412
40 4TH&HRTP 115.0  >0.95    0.937  1.00 pu kV  412
40 BEACON N 115.0  >0.95    0.943  1.00 pu kV  412
40 BEACON N 230.0  >0.95    0.971  1.00 pu kV  412
40 BEACON S 115.0  >0.95    0.944  1.00 pu kV  412
40 BEACON S 230.0  >0.95    0.971  1.00 pu kV  412
40 BELL BPA 115.0  >0.95    0.943  1.00 pu kV  412
40 BELL BPA 500.0  >0.95    1.025  1.00 pu kV  412
40 BELL MI  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL NO  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL SO  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL TAP 115.0  >0.95    0.940  1.00 pu kV  412
40 COLBERTT 115.0  >0.95    0.943  1.00 pu kV  412
40 DEER PRK 115.0  >0.95    0.948  1.00 pu kV  412
40 FRANCEDR 115.0  >0.95    0.937  1.00 pu kV  412
40 GARDENSP 115.0  >0.95    0.937  1.00 pu kV  412
40 HALFMOON 115.0  >0.95    0.943  1.00 pu kV  412
40 I.E.PAPR 115.0  >0.95    0.936  1.00 pu kV  412
40 LYONSTND 115.0  >0.95    0.936  1.00 pu kV  412
40 MEAD     115.0  >0.95    0.942  1.00 pu kV  412
40 MILLWOOD 115.0  >0.95    0.937  1.00 pu kV  412
40 NINEMILE 115.0  >0.95    0.945  1.00 pu kV  412
40 NINTHCNT 115.0  >0.95    0.938  1.00 pu kV  412
40 NORTHEAS 115.0  >0.95    0.942  1.00 pu kV  412
40 NORTHWES 115.0  >0.95    0.939  1.00 pu kV  412
40 OPORTUNW 115.0  >0.95    0.939  1.00 pu kV  412
40 PINE CRK 230.0  >0.95    0.967  1.00 pu kV  412
40 ROSSPARK 115.0  >0.95    0.938  1.00 pu kV  412
40 SEVENTAP 115.0  >0.95    0.938  1.00 pu kV  412
40 SPKWASTE 115.0  >0.95    0.938  1.00 pu kV  412
40 SPRNGHIL 115.0  >0.95    0.947  1.00 pu kV  412
40 TUM TUM  115.0  >0.95    0.944  1.00 pu kV  412
40 WAIKIKI  115.0  >0.95    0.939  1.00 pu kV  412
40 WAIKIKIT 115.0  >0.95    0.942  1.00 pu kV  412
40 WEST     115.0  >0.95    0.943  1.00 pu kV  412
40 WEST     230.0  >0.95    0.972  1.00 pu kV  412
40 WESTBPA1 230.0  >0.95    0.973  1.00 pu kV  412
40 WESTBPA2 230.0  >0.95    0.972  1.00 pu kV  412
73 GRANDJCT 345.0  >0.95    0.948  1.00 pu kV  693
73 HAPPYCAN 115.0  >0.95    0.948  1.00 pu kV  1489
73 GARNETAP 115.0  >0.95    0.949  1.00 pu kV  1489
73 SPRCKTAP 115.0  >0.95    0.948  1.00 pu kV  1489

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#

Area Count, Volts new and worse:
Area 40: 76
Area 62: 1
Area 73: 4

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
62 BROADV&1 500 to 62 BROADVU  500 CKT 1    1.03    <= 0.95  1732.00   144
62 BROADV&2 500 to 62 BROADVU  500 CKT 2    1.02    <= 0.95  1732.00   145

Area Count, Rates better and away:
Area 62: 2

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#

Area Count, Volts better and away:
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Compost found the following for comparisons:
     27 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\lsbs\plsbs-2.out
     115 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\lsbs\plsbs-2.out
     44 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\spl2\pspl2-2.out
     196 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\spl2\pspl2-2.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 BEACON S 115 to 40 BELL BPA 115 CKT 1    <0.95     1.25   85.80   274
40 BELL BPA 500 to 40 BELL SO  230 CKT 1    <0.95     1.21   1512.00   412
40 BEACON N 230 to 40 BELL SO  230 CKT 5    <0.95     1.12   366.50   274
40 POSTSTRT 115 to 40 THIRHACH 115 CKT 1    <0.95     1.08   110.90   278
40 BEACON N 115 to 40 NORTHEAS 115 CKT 1    <0.95     1.07   110.90   274
40 BURKE    115 to 40 HECLA    115 CKT 1    <0.95     1.05   92.80   315
40 HATWAI   230 to 40 N LEWIST 230 CKT 1    <0.95     1.05   425.10   463
40 OSBURN   115 to 40 PINE CRK 115 CKT 1    <0.95     1.02   85.80   315
40 WALLACE  115 to 40 OSBURN   115 CKT 1    <0.95     1.02   92.80   315
40 CLARKSTN 115 to 40 POMEROY  115 CKT 1    <0.95     1.02   63.70   463
40 BIGCREEK 115 to 40 BUNKRHIL 115 CKT 1    <0.95     1.00   85.80   314
40 HATWAI   230 to 40 MOSCOW   230 CKT 1    <0.95     1.00   372.10   411
40 PLUMMER  115 to 40 OGARA    115 CKT 1    <0.95     0.99   61.30   284
40 POMEROY  115 to 40 WALAWALA 115 CKT 1    <0.95     0.99   63.70   463
40 BUNKRHIL 115 to 40 PINE CRK 115 CKT 1    <0.95     0.97   85.80   314
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     0.95   1732.10   138
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     0.95   1732.10   139

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   2.39   113.70   411
40 N LEWIST 115 to 40 CLEARWTR 115 CKT 1    1.31   1.40   113.70   459
40 BURKE    115 to 40 BURKAVAA 115 CKT 1    1.26   1.36   73.90   173
40 BURKE    115 to 40 BURKAVAB 115 CKT 1    1.21   1.35   73.90   312
40 BEACON N 115 to 40 ROSSPARK 115 CKT 1    1.18   1.43   138.20   278
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.04   1.29   213.10   411
40 BEACON S 115 to 40 NINTHCNT 115 CKT 1    1.02   1.08   91.00   251
40 BURKE    115 to 40 LUCKYFTP 115 CKT 1    1.02   1.14   85.80   314
40 BEACON N 230 to 40 BEACON N 115 CKT 1    0.97   1.27   287.00   274
40 BEACON S 230 to 40 BEACON S 115 CKT 1    0.97   1.27   287.00   274
40 HECLAT   115 to 40 BIGCREEK 115 CKT 1    0.96   1.07   85.80   314
40 LUCKYFTP 115 to 40 HECLAT   115 CKT 1    0.96   1.07   85.80   314

Area Count, Rates new and worse:
Area 40: 29

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
40 4LAKE TP 115.0  >0.95    0.931  1.00 pu kV  412
40 AIRWAYHT 115.0  >0.95    0.932  1.00 pu kV  412
40 AIRWAYTP 115.0  >0.95    0.928  1.00 pu kV  412
40 ARMSTRNG 115.0  >0.95    0.934  1.00 pu kV  411
40 BIGELOW  115.0  >0.95    0.935  1.00 pu kV  412
40 BRINKENS 115.0  >0.95    0.926  1.00 pu kV  411
40 CHAMBERS 115.0  >0.95    0.935  1.00 pu kV  411
40 COLLWALN 115.0  >0.95    0.933  1.00 pu kV  412
40 EGRANVIL 115.0  >0.95    0.925  1.00 pu kV  411
40 FAIRCHLD 115.0  >0.95    0.931  1.00 pu kV  412
40 FOURLBPA 115.0  >0.95    0.929  1.00 pu kV  412
40 FTWRIGHT 115.0  >0.95    0.934  1.00 pu kV  412
40 GLENROSE 115.0  >0.95    0.934  1.00 pu kV  412
40 GLENTAP  115.0  >0.95    0.935  1.00 pu kV  412
40 GREEN BL 115.0  >0.95    0.934  1.00 pu kV  412
40 HAL&WHIT 115.0  >0.95    0.928  1.00 pu kV  412
40 HANGMAN  115.0  >0.95    0.931  1.00 pu kV  412
40 HAYFORD  115.0  >0.95    0.930  1.00 pu kV  412
40 HOPKINSB 115.0  >0.95    0.936  1.00 pu kV  412
40 INLD EMP 115.0  >0.95    0.935  1.00 pu kV  412
40 METRO    115.0  >0.95    0.933  1.00 pu kV  412
40 MICA     115.0  >0.95    0.936  1.00 pu kV  412
40 MICA TAP 115.0  >0.95    0.936  1.00 pu kV  412
40 OGARA    115.0  >0.95    0.943  1.00 pu kV  412
40 PLUMMER  115.0  >0.95    0.936  1.00 pu kV  412
40 POSTSTRT 115.0  >0.95    0.933  1.00 pu kV  412
40 RALSTONB 115.0  >0.95    0.919  1.00 pu kV  412
40 SCOTPAPR 115.0  >0.95    0.931  1.00 pu kV  411
40 SOUTHEAS 115.0  >0.95    0.933  1.00 pu kV  412
40 SPKINDPK 115.0  >0.95    0.930  1.00 pu kV  412
40 STMARIES 115.0  >0.95    0.934  1.00 pu kV  412
40 SULLIVNB 115.0  >0.95    0.928  1.00 pu kV  412
40 SUNSET   115.0  >0.95    0.933  1.00 pu kV  412
40 THIRHACH 115.0  >0.95    0.935  1.00 pu kV  412
40 TRENTWOD 115.0  >0.95    0.930  1.00 pu kV  412
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40 VALY WAY 115.0  >0.95    0.929  1.00 pu kV  412
40 VERA     115.0  >0.95    0.927  1.00 pu kV  412
40 VERA TAP 115.0  >0.95    0.929  1.00 pu kV  412
62 PTRSNFLT 230.0  >0.95    0.975  1.00 pu kV  412
40 4TH&HRLD 115.0  >0.95    0.937  1.00 pu kV  412
40 4TH&HRTP 115.0  >0.95    0.937  1.00 pu kV  412
40 BEACON N 115.0  >0.95    0.943  1.00 pu kV  412
40 BEACON N 230.0  >0.95    0.971  1.00 pu kV  412
40 BEACON S 115.0  >0.95    0.944  1.00 pu kV  412
40 BEACON S 230.0  >0.95    0.971  1.00 pu kV  412
40 BELL BPA 115.0  >0.95    0.943  1.00 pu kV  412
40 BELL BPA 500.0  >0.95    1.025  1.00 pu kV  412
40 BELL MI  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL NO  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL SO  230.0  >0.95    0.979  1.00 pu kV  412
40 BELL TAP 115.0  >0.95    0.940  1.00 pu kV  412
40 COLBERTT 115.0  >0.95    0.943  1.00 pu kV  412
40 DEER PRK 115.0  >0.95    0.948  1.00 pu kV  412
40 FRANCEDR 115.0  >0.95    0.937  1.00 pu kV  412
40 GARDENSP 115.0  >0.95    0.937  1.00 pu kV  412
40 HALFMOON 115.0  >0.95    0.943  1.00 pu kV  412
40 I.E.PAPR 115.0  >0.95    0.936  1.00 pu kV  412
40 LYONSTND 115.0  >0.95    0.936  1.00 pu kV  412
40 MEAD     115.0  >0.95    0.942  1.00 pu kV  412
40 MILLWOOD 115.0  >0.95    0.937  1.00 pu kV  412
40 NINEMILE 115.0  >0.95    0.945  1.00 pu kV  412
40 NINTHCNT 115.0  >0.95    0.938  1.00 pu kV  412
40 NORTHEAS 115.0  >0.95    0.942  1.00 pu kV  412
40 NORTHWES 115.0  >0.95    0.939  1.00 pu kV  412
40 OPORTUNW 115.0  >0.95    0.939  1.00 pu kV  412
40 PINE CRK 230.0  >0.95    0.967  1.00 pu kV  412
40 ROSSPARK 115.0  >0.95    0.938  1.00 pu kV  412
40 SEVENTAP 115.0  >0.95    0.938  1.00 pu kV  412
40 SPKWASTE 115.0  >0.95    0.938  1.00 pu kV  412
40 SPRNGHIL 115.0  >0.95    0.947  1.00 pu kV  412
40 TUM TUM  115.0  >0.95    0.944  1.00 pu kV  412
40 WAIKIKI  115.0  >0.95    0.939  1.00 pu kV  412
40 WAIKIKIT 115.0  >0.95    0.942  1.00 pu kV  412
40 WEST     115.0  >0.95    0.943  1.00 pu kV  412
40 WEST     230.0  >0.95    0.972  1.00 pu kV  412
40 WESTBPA1 230.0  >0.95    0.973  1.00 pu kV  412
40 WESTBPA2 230.0  >0.95    0.972  1.00 pu kV  412
73 GRANDJCT 345.0  >0.95    0.948  1.00 pu kV  693
73 HAPPYCAN 115.0  >0.95    0.948  1.00 pu kV  1489
73 GARNETAP 115.0  >0.95    0.949  1.00 pu kV  1489
73 SPRCKTAP 115.0  >0.95    0.948  1.00 pu kV  1489

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#

Area Count, Volts new and worse:
Area 40: 76
Area 62: 1
Area 73: 4

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#

Area Count, Rates better and away:

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#

Area Count, Volts better and away:
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Compost found the following for comparisons:
     136 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     156 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\slcl3\pslcl3-1.out
     330 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\slcl3\pslcl3-1.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
73 ARTESIA  138 to 73 HAYDEN   138 CKT 1    <0.95     1.63   90.00   1602
73 MEEKER   138 to 65 RANGELY  138 CKT 1    <0.95     1.46   115.00   1602
73 HOTCHKIS 115 to 73 GARNETAP 115 CKT 1    <0.95     1.25   85.00   1495
73 ARTESIA  138 to 73 VERNAL   138 CKT 1    <0.95     1.20   96.00   1602
73 DURANGO  115 to 73 COYOTE G 115 CKT 1    <0.95     1.20   85.00   1513
73 LOSTCANY 230 to 73 LOSTCANY 115 CKT 1    <0.95     1.17   112.00   1947
65 PLATTE   230 to 65 PLATTE   115 CKT 1    <0.95     1.14   100.00   670
73 BEARS    345 to 65 BONANZA  345 CKT 1    <0.95     1.10   650.00   1799
62 BROADV&2 500 to 62 BROADVU  500 CKT 2    <0.95     1.08   1732.00   151
73 FLAMGORG 138 to 73 VERNAL   138 CKT 1    <0.95     1.07   96.00   699
65 MONUMENT 230 to 65 NAUGHTON 230 CKT 1    <0.95     1.04   423.90   699
73 CURECANT 115 to 73 SOCANAL  115 CKT 1    <0.95     1.04   120.00   1495
73 COYOTE G 115 to 73 ELPASOTP 115 CKT 1    <0.95     1.03   85.00   1513
19 GLADETAP 115 to 73 ELPASOTP 115 CKT 1    <0.95     1.03   85.00   1513
62 ANACOND  230 to 40 GARRISON 230 CKT 1    <0.95     1.03   358.50   1571
73 MONTROSE 115 to 73 SOCANAL  115 CKT 1    <0.95     1.02   120.00   1495
70 GRANDJCT 115 to 73 MONTROSE 115 CKT 1    <0.95     1.01   76.50   1495
62 ANACOND  161 to 62 DILLON S 161 CKT 1    <0.95     0.99   165.00   158
62 DILLON S 161 to 65 BIGGRASS 161 CKT 1    <0.95     0.99   164.50   418
65 BONANZA  138 to 65 DG UPLCO 138 CKT 1    <0.95     0.99   192.00   699
73 HAYDEN   230 to 73 HAYDEN   138 CKT 1    <0.95     0.99   150.00   1602
73 STEGALL  230 to 73 STEGALL  115 CKT 1    <0.95     0.99   100.00   1906
73 NORTHMSA 115 to 73 GARNETAP 115 CKT 1    <0.95     0.98   85.00   1495
65 BIGGRASS 161 to 65 JFRSNPHA 161 CKT 1    <0.95     0.97   148.10   418
73 KIOWA CK 115 to 73 WIGGINS  115 CKT 1    <0.95     0.97   59.60   1178
73 CURECANT 230 to 73 CURECANT 115 CKT 1    <0.95     0.97   75.00   1483
73 HAYDEN   230 to 73 HAYDEN   138 CKT 2    <0.95     0.97   150.00   1602
70 DANIELPK 230 to 70 PRAIRIE  230 CKT 1    <0.95     0.96   494.80   979
73 RIFLE WA 230 to 73 NORTHFRK 230 CKT 1    <0.95     0.96   239.00   1495
40 COLUMBIA 230 to 40 ROCKYRH2 230 CKT 1    <0.95     0.95   478.00   519

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
65 CARBON   138 to 65 SPAN F&1 138 CKT 1    1.55   1.74   75.10   728
65 SPAN F&1 138 to 65 SPAN FRK 138 CKT 1    1.55   1.74   75.00   728
65 EMMAPARK 138 to 65 UPALCO   138 CKT 1    1.43   1.72   136.00   699
65 EMMAPARK 138 to 65 PANTHER  138 CKT 1    1.42   1.71   136.00   699
65 CARBON   138 to 65 PANTHER  138 CKT 1    1.38   1.67   136.00   699
40 N LEWIST 115 to 40 CLEARWTR 115 CKT 1    1.26   1.39   113.70   465
65 BONANZA  138 to 65 RANGELY  138 CKT 1    1.19   1.37   115.00   1602
65 JFRSNPHA 161 to 65 JEFFERSN 161 CKT 1    1.17   1.40   100.00   418
65 FLAMGORG 230 to 73 FLAMGORG 138 CKT 1    1.16   1.48   100.00   699
65 FLAMGORG 230 to 73 FLAMGORG 138 CKT 2    1.16   1.48   100.00   699
65 BONANZA  345 to 65 MONA     345 CKT 1    1.07   1.38   650.00   1508
70 SMOKYHIL 115 to 70 SMOKYHIL 230 CKT 1    1.04   1.12   150.00   1868
65 CARBON   138 to 65 SPAN FRK 138 CKT 2    1.02   1.17   208.00   699
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.00   1.15   944.00   451
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.00   1.15   944.00   452
70 WATERTON 115 to 70 WATERTON 230 CKT 2    1.00   1.11   100.00   1870
70 WATERTON 115 to 70 WATERTON 230 CKT 1    0.99   1.10   100.00   1871
60 MCCALL   138 to 60 WEISER   138 CKT 1    0.97   1.02   32.30   92
65 ASHLEY   138 to 73 VERNAL   138 CKT 1    0.97   1.14   136.00   697
73 VERNAL   138 to 65 BONANZA  138 CKT 1    0.96   1.20   192.00   699
62 BROADV&1 500 to 62 BROADVU  500 CKT 1    0.95   1.08   1732.00   146

Area Count, Rates new and worse:
Area 19: 1
Area 40: 4
Area 60: 1
Area 62: 5
Area 65: 16
Area 70: 5
Area 73: 19

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
70 MTSDAN   500.0  >0.95    0.998  1.00 pu kV  4
40 OPPORTUN 115.0  >0.95    0.864  1.00 pu kV  576
65 FT CREEK 230.0  >0.95    0.942  1.00 pu kV  699
60 ONTARIO  138.0  >0.95    0.977  1.00 pu kV  122
62 MT ASIMI 161.0  >0.95    0.928  1.00 pu kV  1768
40 IRVIN    115.0  >0.95    0.867  1.00 pu kV  576
40 OPORTUNE 115.0  >0.95    0.866  1.00 pu kV  576
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40 AIRWAYTP 115.0  >0.95    0.949  1.00 pu kV  278
40 BELL BPA 500.0  >0.95    0.969  1.00 pu kV  278
40 HAL&WHIT 115.0  >0.95    0.949  1.00 pu kV  278
65 LOST RIV 230.0  >0.95    0.933  1.00 pu kV  661
65 ANTLOPE  230.0  >0.95    0.942  1.00 pu kV  661
65 ANGEL ST 138.0  >0.95    0.948  1.00 pu kV  684
65 ASHLEY   138.0  >0.95    0.924  1.00 pu kV  699
65 ATLANTIC 230.0  >0.95    0.931  1.00 pu kV  699
65 BAIROIL  115.0  >0.95    0.940  1.00 pu kV  1835
65 BLUE RIM 230.0  >0.95    0.943  1.00 pu kV  699
65 BRDGR PP 230.0  >0.95    0.941  1.00 pu kV  699
65 COLUMBIA 138.0  >0.95    0.895  1.00 pu kV  699
65 FIREHOLE 230.0  >0.95    0.939  1.00 pu kV  699
65 FLAMGORG 230.0  >0.95    0.924  1.00 pu kV  699
65 JERUSALM 138.0  >0.95    0.943  1.00 pu kV  699
65 LITTLEMT 230.0  >0.95    0.924  1.00 pu kV  699
65 MART MAR 138.0  >0.95    0.942  1.00 pu kV  699
65 PALISADE 230.0  >0.95    0.943  1.00 pu kV  699
65 RAVEN    230.0  >0.95    0.947  1.00 pu kV  699
65 ROCKSPGS 230.0  >0.95    0.943  1.00 pu kV  699
65 S. TRONA 230.0  >0.95    0.947  1.00 pu kV  699
65 SUNNYSID 138.0  >0.95    0.898  1.00 pu kV  699
65 WESTVACO 230.0  >0.95    0.947  1.00 pu kV  699
65 WHISKEYP 115.0  >0.95    0.937  1.00 pu kV  1835
65 WOLD     230.0  >0.95    0.947  1.00 pu kV  699
65 WYOPO    230.0  >0.95    0.944  1.00 pu kV  699
73 CAHONE   115.0  >0.95    0.933  1.00 pu kV  1508
73 CORTEZ   115.0  >0.95    0.942  1.00 pu kV  699
73 FLAMGORG 138.0  >0.95    0.926  1.00 pu kV  699
73 GRANDJCT 345.0  >0.95    0.935  1.00 pu kV  699
73 LOSTCANY 115.0  >0.95    0.947  1.00 pu kV  699
73 LOSTCANY 230.0  >0.95    0.942  1.00 pu kV  699
73 MONTROSE 115.0  >0.95    0.938  1.00 pu kV  699
73 MONTROSE 345.0  >0.95    0.924  1.00 pu kV  699
73 BLUEDOOR 115.0  >0.95    0.943  1.00 pu kV  699
73 E.CORTEZ 115.0  >0.95    0.944  1.00 pu kV  699
73 EMPIRETS 115.0  >0.95    0.943  1.00 pu kV  699
73 BULLOCK  115.0  >0.95    0.934  1.00 pu kV  699
73 HAPPYCAN 115.0  >0.95    0.935  1.00 pu kV  699
73 JUANITA  115.0  >0.95    0.944  1.00 pu kV  699
73 NORTHMSA 115.0  >0.95    0.935  1.00 pu kV  699
73 GARNET M 115.0  >0.95    0.931  1.00 pu kV  699
73 GARNETAP 115.0  >0.95    0.936  1.00 pu kV  699
73 HOVEN NO 115.0  >0.95    0.932  1.00 pu kV  1508
73 HOVENWEP 115.0  >0.95    0.926  1.00 pu kV  1508
73 MAIN  CO 115.0  >0.95    0.934  1.00 pu kV  699
73 SPRCKTAP 115.0  >0.95    0.935  1.00 pu kV  699
73 Y.JACK 2 115.0  >0.95    0.932  1.00 pu kV  1508
73 Y.JACK W 115.0  >0.95    0.932  1.00 pu kV  1508
73 MOQUI C  115.0  >0.95    0.933  1.00 pu kV  699
73 SANDCANY 115.0  >0.95    0.930  1.00 pu kV  1508
73 TOWAOC   115.0  >0.95    0.942  1.00 pu kV  699
73 GRT CUT  115.0  >0.95    0.943  1.00 pu kV  699
73 GRCUT TP 115.0  >0.95    0.943  1.00 pu kV  699
73 CEMNT CK 115.0  >0.95    0.935  1.00 pu kV  699
65 GRASS CK 230.0  >0.95    0.949  1.00 pu kV  794
65 ABAJO    138.0  >0.95    0.949  1.00 pu kV  835
65 BONANZA  345.0  >0.95    0.936  1.00 pu kV  1799
65 RANGELY  138.0  >0.95    0.924  1.00 pu kV  1602
73 ARTESIA  138.0  >0.95    0.931  1.00 pu kV  1602
73 AXIAL    138.0  >0.95    0.946  1.00 pu kV  1602
73 MEEKER   138.0  >0.95    0.928  1.00 pu kV  1602
62 ANACOND  161.0  >0.95    0.944  1.00 pu kV  1768
62 WILSALL  161.0  >0.95    0.954  1.00 pu kV  1768
62 WILSALL  230.0  >0.95    0.963  1.00 pu kV  1768
40 GARRISON 230.0  >0.95    0.975  1.00 pu kV  1768
40 EGRANVIL 115.0  >0.95    0.949  1.00 pu kV  1769
62 RESERVST 161.0  >0.95    0.948  1.00 pu kV  1936
62 MILLERCK 161.0  >0.95    0.947  1.00 pu kV  1936
62 MISSLA 7 161.0  >0.95    0.948  1.00 pu kV  1936

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
65 CARBON   138.0  0.944   0.858  1.00 pu kV  699
65 DG UPLCO 138.0  0.940   0.873  1.00 pu kV  699
65 EMMAPARK 138.0  0.931   0.840  1.00 pu kV  699
65 HELPER   138.0  0.942   0.856  1.00 pu kV  699
65 HELPER T 138.0  0.946   0.859  1.00 pu kV  699
65 MOUND SW 138.0  0.974   0.888  1.00 pu kV  699
65 PANTHER  138.0  0.942   0.855  1.00 pu kV  699
65 SPAN F&1 138.0  0.857   0.811  1.00 pu kV  699
65 SPHINX T 138.0  0.976   0.889  1.00 pu kV  699
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65 UPALCO   138.0  0.940   0.873  1.00 pu kV  699
65 WILLOW C 138.0  0.942   0.855  1.00 pu kV  699

Area Count, Volts new and worse:
Area 40: 8
Area 60: 1
Area 62: 7
Area 65: 39
Area 70: 1
Area 73: 32

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   1.61   113.70   1766
73 CARTERLK 115 to 73 FLATIRON 115 CKT 1    1.37   1.23   80.00   1275
70 LOOKOUT  115 to 70 LOOKOUT  230 CKT 1    1.17   1.04   150.00   1864
70 LOOKOUT  115 to 70 LOOKOUT  230 CKT 2    1.15   1.03   150.00   1863
73 MIDWAYBR 230 to 73 MIDWAYBR 115 CKT 1    1.11   0.99   100.00   1457
70 CHEROKEN 115 to 70 DERBY 2  115 CKT 1    1.10   0.99   135.00   962
70 CHEROKEN 115 to 70 DERBY 1  115 CKT 1    1.06   0.96   135.00   963
60 AMFLS    138 to 60 BRADY    138 CKT 1    1.03   0.97   236.60   23

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
73 GOREPASS 138 to 73 HAYDEN   138 CKT 1    1.18    <= 0.95  96.00   1642
65 BRIDGER  230 to 65 ROCKSPGS 230 CKT 1    1.11    <= 0.95  423.90   48
70 CABINCRK 115 to 70 CABINCRK 230 CKT 2    1.10    <= 0.95  50.00   987
70 CABINCRK 115 to 70 CABINCRK 230 CKT 1    1.08    <= 0.95  50.00   987
70 WELD  PS 230 to 73 WELD  LM 230 CKT 1    1.06    <= 0.95  500.00   1626
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.05    <= 0.95  213.10   417
73 WELD  LM 115 to 73 WELD  LM 230 CKT 1    1.04    <= 0.95  150.00   1624
60 BRIDGER  345 to 60 BORAH    345 CKT 1    1.03    <= 0.95  892.20   49
73 SIDNEY   115 to 73 SIDNEY   230 CKT 1    1.00    <= 0.95  167.00   1344
60 BRIDGER  345 to 60 KINPORT  345 CKT 1    0.99    <= 0.95  892.20   1608
60 BRIDGER  345 to 65 GOSHEN   345 CKT 1    0.97    <= 0.95  892.20   49
70 FTLUPTON 230 to 70 PAWNEE   230 CKT 1    0.97    <= 0.95  413.50   1066
70 LOOKOUT  115 to 70 HOGBACK  115 CKT 1    0.96    <= 0.95  192.00   1034

Area Count, Rates better and away:
Area 40: 2
Area 60: 4
Area 65: 1
Area 70: 9
Area 73: 5

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
60 PLST VLY 138.0 0.970  0.95 <= pu <= 1.05   1.00 pu kV  25
65 BIGGRASS 161.0 0.919  0.95 <= pu <= 1.05   1.00 pu kV  418
60 NELSN TP 138.0 0.968  0.95 <= pu <= 1.05   1.00 pu kV  100
62 DILLON S 161.0 0.922  0.95 <= pu <= 1.05   1.00 pu kV  418
62 PTRSNFLT 230.0 0.908  0.95 <= pu <= 1.05   1.00 pu kV  418
70 JEWELL2  230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  990
70 TOLGATE  230.0 0.941  0.95 <= pu <= 1.05   1.00 pu kV  990
70 BARRLAKE 230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  939
70 SKYRANCH 230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  940
70 TOWER    230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  940
70 DERBY 2  115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  963
70 MARCY    230.0 0.935  0.95 <= pu <= 1.05   1.00 pu kV  980
70 WATERTON 230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  980
70 SURREYRG 230.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  981
70 MURPHY   230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  981
70 LEETSDAL 230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  990
70 BUCKLEY2 230.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  990
70 BUCKLEY1 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 ELATI1   230.0 0.938  0.95 <= pu <= 1.05   1.00 pu kV  990
70 ELATI2   230.0 0.938  0.95 <= pu <= 1.05   1.00 pu kV  990
70 MONACO   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  990
70 MEADOWHL 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 MONROEPS 230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  990
70 SULLIVN  230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 TECH CTR 230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 JEWELL1  230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 RIVERDAL 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1009
70 CHEROKEE 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 DENVTM   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 GLENN PS 230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1010
70 LACOMBE  230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 WASHINGT 230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1010
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70 CLARK    230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  1024
70 JORDAN   230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  1024
70 CHATFLD  230.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1049
70 RIDGE    230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1052
70 WESTPS   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1053
70 QUINCY   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 SMOKYHIL 230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 GREENWD  230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 GUNBARRE 230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1106
70 LEGGETT  230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1106
70 NIWOT    230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1106
73 LOST CK  115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1178
73 LOSTCKTP 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1178
73 WINDRIVR 115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  1368
73 WINDRIVT 115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  1368
73 TORRNGTN 115.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1382
73 BETHELLM 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1401
73 MCGREW   115.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  1903
73 COYOTE G 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 RIVERTON 115.0 0.960  0.95 <= pu <= 1.05   1.00 pu kV  1939

Area Count, Volts better and away:
Area 60: 2
Area 62: 2
Area 65: 1
Area 70: 38
Area 73: 9
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Compost found the following for comparisons:
     80 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     84 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\slcl3\pslcl3-2.out
     330 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\slcl3\pslcl3-2.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
65 PLATTE   230 to 65 PLATTE   115 CKT 1    <0.95     1.14   100.00   670
73 MEEKER   138 to 65 RANGELY  138 CKT 1    <0.95     1.05   160.00   1602
73 COYOTE G 115 to 73 ELPASOTP 115 CKT 1    <0.95     1.03   85.00   1513
19 GLADETAP 115 to 73 ELPASOTP 115 CKT 1    <0.95     1.03   85.00   1513
65 BONANZA  138 to 65 DG UPLCO 138 CKT 1    <0.95     0.99   192.00   699
65 BONANZA  138 to 65 RANGELY  138 CKT 1    <0.95     0.99   160.00   1602
65 CARBON   138 to 65 SPAN FRK 138 CKT 2    <0.95     0.96   254.00   699
70 DANIELPK 230 to 70 PRAIRIE  230 CKT 1    <0.95     0.96   494.80   979
40 COLUMBIA 230 to 40 ROCKYRH2 230 CKT 1    <0.95     0.95   478.00   519

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
40 N LEWIST 115 to 40 CLEARWTR 115 CKT 1    1.26   1.39   113.70   465
65 EMMAPARK 138 to 65 UPALCO   138 CKT 1    1.20   1.43   163.00   699
65 EMMAPARK 138 to 65 PANTHER  138 CKT 1    1.19   1.42   163.00   699
65 JFRSNPHA 161 to 65 JEFFERSN 161 CKT 1    1.17   1.40   100.00   418
65 CARBON   138 to 65 PANTHER  138 CKT 1    1.15   1.39   163.00   699
70 SMOKYHIL 115 to 70 SMOKYHIL 230 CKT 1    1.04   1.12   150.00   1868
65 CARBON   138 to 65 SPAN F&1 138 CKT 1    1.03   1.16   113.00   728
65 SPAN F&1 138 to 65 SPAN FRK 138 CKT 1    1.03   1.16   113.00   728
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.00   1.15   944.00   451
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.00   1.15   944.00   452
70 WATERTON 115 to 70 WATERTON 230 CKT 2    1.00   1.11   100.00   1870
70 WATERTON 115 to 70 WATERTON 230 CKT 1    0.99   1.10   100.00   1871

Area Count, Rates new and worse:
Area 19: 1
Area 40: 4
Area 65: 10
Area 70: 4
Area 73: 2

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
70 MTSDAN   500.0  >0.95    0.998  1.00 pu kV  4
40 OPPORTUN 115.0  >0.95    0.864  1.00 pu kV  576
65 FT CREEK 230.0  >0.95    0.942  1.00 pu kV  699
60 ONTARIO  138.0  >0.95    0.977  1.00 pu kV  122
62 MT ASIMI 161.0  >0.95    0.928  1.00 pu kV  1768
40 IRVIN    115.0  >0.95    0.867  1.00 pu kV  576
40 OPORTUNE 115.0  >0.95    0.866  1.00 pu kV  576
40 AIRWAYTP 115.0  >0.95    0.949  1.00 pu kV  278
40 BELL BPA 500.0  >0.95    0.969  1.00 pu kV  278
40 HAL&WHIT 115.0  >0.95    0.949  1.00 pu kV  278
65 LOST RIV 230.0  >0.95    0.933  1.00 pu kV  661
65 ANTLOPE  230.0  >0.95    0.942  1.00 pu kV  661
65 ANGEL ST 138.0  >0.95    0.948  1.00 pu kV  684
65 ASHLEY   138.0  >0.95    0.924  1.00 pu kV  699
65 ATLANTIC 230.0  >0.95    0.931  1.00 pu kV  699
65 BAIROIL  115.0  >0.95    0.940  1.00 pu kV  1835
65 BLUE RIM 230.0  >0.95    0.943  1.00 pu kV  699
65 BRDGR PP 230.0  >0.95    0.941  1.00 pu kV  699
65 COLUMBIA 138.0  >0.95    0.895  1.00 pu kV  699
65 FIREHOLE 230.0  >0.95    0.939  1.00 pu kV  699
65 FLAMGORG 230.0  >0.95    0.924  1.00 pu kV  699
65 JERUSALM 138.0  >0.95    0.943  1.00 pu kV  699
65 LITTLEMT 230.0  >0.95    0.924  1.00 pu kV  699
65 MART MAR 138.0  >0.95    0.942  1.00 pu kV  699
65 PALISADE 230.0  >0.95    0.943  1.00 pu kV  699
65 RAVEN    230.0  >0.95    0.947  1.00 pu kV  699
65 ROCKSPGS 230.0  >0.95    0.943  1.00 pu kV  699
65 S. TRONA 230.0  >0.95    0.947  1.00 pu kV  699
65 SUNNYSID 138.0  >0.95    0.898  1.00 pu kV  699
65 WESTVACO 230.0  >0.95    0.947  1.00 pu kV  699
65 WHISKEYP 115.0  >0.95    0.937  1.00 pu kV  1835
65 WOLD     230.0  >0.95    0.947  1.00 pu kV  699
65 WYOPO    230.0  >0.95    0.944  1.00 pu kV  699
73 CAHONE   115.0  >0.95    0.933  1.00 pu kV  1508
73 CORTEZ   115.0  >0.95    0.942  1.00 pu kV  699
73 FLAMGORG 138.0  >0.95    0.926  1.00 pu kV  699
73 GRANDJCT 345.0  >0.95    0.935  1.00 pu kV  699
73 LOSTCANY 115.0  >0.95    0.947  1.00 pu kV  699
73 LOSTCANY 230.0  >0.95    0.942  1.00 pu kV  699
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73 MONTROSE 115.0  >0.95    0.938  1.00 pu kV  699
73 MONTROSE 345.0  >0.95    0.924  1.00 pu kV  699
73 BLUEDOOR 115.0  >0.95    0.943  1.00 pu kV  699
73 E.CORTEZ 115.0  >0.95    0.944  1.00 pu kV  699
73 EMPIRETS 115.0  >0.95    0.943  1.00 pu kV  699
73 BULLOCK  115.0  >0.95    0.934  1.00 pu kV  699
73 HAPPYCAN 115.0  >0.95    0.935  1.00 pu kV  699
73 JUANITA  115.0  >0.95    0.944  1.00 pu kV  699
73 NORTHMSA 115.0  >0.95    0.935  1.00 pu kV  699
73 GARNET M 115.0  >0.95    0.931  1.00 pu kV  699
73 GARNETAP 115.0  >0.95    0.936  1.00 pu kV  699
73 HOVEN NO 115.0  >0.95    0.932  1.00 pu kV  1508
73 HOVENWEP 115.0  >0.95    0.926  1.00 pu kV  1508
73 MAIN  CO 115.0  >0.95    0.934  1.00 pu kV  699
73 SPRCKTAP 115.0  >0.95    0.935  1.00 pu kV  699
73 Y.JACK 2 115.0  >0.95    0.932  1.00 pu kV  1508
73 Y.JACK W 115.0  >0.95    0.932  1.00 pu kV  1508
73 MOQUI C  115.0  >0.95    0.933  1.00 pu kV  699
73 SANDCANY 115.0  >0.95    0.930  1.00 pu kV  1508
73 TOWAOC   115.0  >0.95    0.942  1.00 pu kV  699
73 GRT CUT  115.0  >0.95    0.943  1.00 pu kV  699
73 GRCUT TP 115.0  >0.95    0.943  1.00 pu kV  699
73 CEMNT CK 115.0  >0.95    0.935  1.00 pu kV  699
65 GRASS CK 230.0  >0.95    0.949  1.00 pu kV  794
65 ABAJO    138.0  >0.95    0.949  1.00 pu kV  835
65 BONANZA  345.0  >0.95    0.936  1.00 pu kV  1799
65 RANGELY  138.0  >0.95    0.924  1.00 pu kV  1602
73 ARTESIA  138.0  >0.95    0.931  1.00 pu kV  1602
73 AXIAL    138.0  >0.95    0.946  1.00 pu kV  1602
73 MEEKER   138.0  >0.95    0.928  1.00 pu kV  1602
62 ANACOND  161.0  >0.95    0.944  1.00 pu kV  1768
62 WILSALL  161.0  >0.95    0.954  1.00 pu kV  1768
62 WILSALL  230.0  >0.95    0.963  1.00 pu kV  1768
40 GARRISON 230.0  >0.95    0.975  1.00 pu kV  1768
40 EGRANVIL 115.0  >0.95    0.949  1.00 pu kV  1769
62 RESERVST 161.0  >0.95    0.948  1.00 pu kV  1936
62 MILLERCK 161.0  >0.95    0.947  1.00 pu kV  1936
62 MISSLA 7 161.0  >0.95    0.948  1.00 pu kV  1936

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
65 CARBON   138.0  0.944   0.858  1.00 pu kV  699
65 DG UPLCO 138.0  0.940   0.873  1.00 pu kV  699
65 EMMAPARK 138.0  0.931   0.840  1.00 pu kV  699
65 HELPER   138.0  0.942   0.856  1.00 pu kV  699
65 HELPER T 138.0  0.946   0.859  1.00 pu kV  699
65 MOUND SW 138.0  0.974   0.888  1.00 pu kV  699
65 PANTHER  138.0  0.942   0.855  1.00 pu kV  699
65 SPAN F&1 138.0  0.857   0.811  1.00 pu kV  699
65 SPHINX T 138.0  0.976   0.889  1.00 pu kV  699
65 UPALCO   138.0  0.940   0.873  1.00 pu kV  699
65 WILLOW C 138.0  0.942   0.855  1.00 pu kV  699

Area Count, Volts new and worse:
Area 40: 8
Area 60: 1
Area 62: 7
Area 65: 39
Area 70: 1
Area 73: 32

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   1.61   113.70   1766
70 LOOKOUT  115 to 70 LOOKOUT  230 CKT 1    1.17   1.04   150.00   1864
70 LOOKOUT  115 to 70 LOOKOUT  230 CKT 2    1.15   1.03   150.00   1863
70 CHEROKEN 115 to 70 DERBY 2  115 CKT 1    1.10   0.99   135.00   962
70 CHEROKEN 115 to 70 DERBY 1  115 CKT 1    1.06   0.96   135.00   963

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
70 CABINCRK 115 to 70 CABINCRK 230 CKT 2    1.10    <= 0.95  50.00   987
70 CABINCRK 115 to 70 CABINCRK 230 CKT 1    1.08    <= 0.95  50.00   987
70 WELD  PS 230 to 73 WELD  LM 230 CKT 1    1.06    <= 0.95  500.00   1626
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.05    <= 0.95  213.10   417
70 FTLUPTON 230 to 70 PAWNEE   230 CKT 1    0.97    <= 0.95  413.50   1066
70 LOOKOUT  115 to 70 HOGBACK  115 CKT 1    0.96    <= 0.95  192.00   1034

Area Count, Rates better and away:
Area 40: 2
Area 70: 9
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**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
60 PLST VLY 138.0 0.970  0.95 <= pu <= 1.05   1.00 pu kV  25
65 BIGGRASS 161.0 0.919  0.95 <= pu <= 1.05   1.00 pu kV  418
60 NELSN TP 138.0 0.968  0.95 <= pu <= 1.05   1.00 pu kV  100
62 DILLON S 161.0 0.922  0.95 <= pu <= 1.05   1.00 pu kV  418
62 PTRSNFLT 230.0 0.908  0.95 <= pu <= 1.05   1.00 pu kV  418
70 JEWELL2  230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  990
70 TOLGATE  230.0 0.941  0.95 <= pu <= 1.05   1.00 pu kV  990
70 BARRLAKE 230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  939
70 SKYRANCH 230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  940
70 TOWER    230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  940
70 DERBY 2  115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  963
70 MARCY    230.0 0.935  0.95 <= pu <= 1.05   1.00 pu kV  980
70 WATERTON 230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  980
70 SURREYRG 230.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  981
70 MURPHY   230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  981
70 LEETSDAL 230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  990
70 BUCKLEY2 230.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  990
70 BUCKLEY1 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 ELATI1   230.0 0.938  0.95 <= pu <= 1.05   1.00 pu kV  990
70 ELATI2   230.0 0.938  0.95 <= pu <= 1.05   1.00 pu kV  990
70 MONACO   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  990
70 MEADOWHL 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 MONROEPS 230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  990
70 SULLIVN  230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 TECH CTR 230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 JEWELL1  230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 RIVERDAL 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1009
70 CHEROKEE 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 DENVTM   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 GLENN PS 230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1010
70 LACOMBE  230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 WASHINGT 230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1010
70 CLARK    230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  1024
70 JORDAN   230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  1024
70 CHATFLD  230.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1049
70 RIDGE    230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1052
70 WESTPS   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1053
70 QUINCY   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 SMOKYHIL 230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 GREENWD  230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 GUNBARRE 230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1106
70 LEGGETT  230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1106
70 NIWOT    230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1106
73 LOST CK  115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1178
73 LOSTCKTP 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1178
73 WINDRIVR 115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  1368
73 WINDRIVT 115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  1368
73 TORRNGTN 115.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1382
73 BETHELLM 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1401
73 MCGREW   115.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  1903
73 COYOTE G 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 RIVERTON 115.0 0.960  0.95 <= pu <= 1.05   1.00 pu kV  1939

Area Count, Volts better and away:
Area 60: 2
Area 62: 2
Area 65: 1
Area 70: 38
Area 73: 9
```

```
Compost found the following for comparisons:
     136 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     142 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\denl3\pdenl3-1.out
     282 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\denl3\pdenl3-1.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
65 DAVEJOHN 230 to 73 LAR.RIVR 230 CKT 1    <0.95     1.51   265.70   4
70 DANIELPK 230 to 70 PRAIRIE  230 CKT 1    <0.95     1.08   494.80   979
70 DANIELPK 230 to 70 GREENWD  230 CKT 1    <0.95     1.05   494.80   983
73 STEGALDC 230 to 73 STEGALL  230 CKT 1    <0.95     1.03   150.00   4
62 BROADV&2 500 to 62 BROADVU  500 CKT 2    <0.95     0.96   1732.00   151
40 NEWPORTB 115 to 40 PINE ST  115 CKT 1    <0.95     0.96   120.10   283
73 CARTERMT 115 to 73 THERMOPL 115 CKT 1    <0.95     0.96   40.00   1598
73 GLENDO   115 to 73 GLENRCKN 115 CKT 1    <0.95     0.95   80.00   4
70 CASTLRCK 115 to 70 DANIELPK 115 CKT 1    <0.95     0.95   134.80   1093
62 ANACOND  230 to 40 GARRISON 230 CKT 1    <0.95     0.95   358.50   1571
70 RIDGE    115 to 70 RIDGE    230 CKT 2    <0.95     0.95   100.00   1865

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
73 WELD  LM 115 to 73 WELD  LM 230 CKT 1    1.04   1.11   150.00   1624
70 SMOKYHIL 115 to 70 SMOKYHIL 230 CKT 1    1.04   1.17   150.00   1868
70 WATERTON 115 to 70 WATERTON 230 CKT 2    1.00   1.20   100.00   1870
70 WATERTON 115 to 70 WATERTON 230 CKT 1    0.99   1.19   100.00   1871

Area Count, Rates new and worse:
Area 40: 1
Area 62: 2
Area 65: 1
Area 70: 7
Area 73: 4

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
62 SHELBY   115.0  >0.95    0.938  1.00 pu kV  163
62 SHELBY   230.0  >0.95    0.942  1.00 pu kV  163
62 CNRDWAPA 230.0  >0.95    0.944  1.00 pu kV  163
62 CNRDWAPA 115.0  >0.95    0.943  1.00 pu kV  163
62 CNRD-SRA 115.0  >0.95    0.943  1.00 pu kV  163
40 EGRANVIL 115.0  >0.95    0.947  1.00 pu kV  1769
40 AIRWAYTP 115.0  >0.95    0.949  1.00 pu kV  278
40 HAL&WHIT 115.0  >0.95    0.949  1.00 pu kV  278
62 MT ASIMI 161.0  >0.95    0.942  1.00 pu kV  1768
73 PROSPEC  115.0  >0.95    0.949  1.00 pu kV  1178
73 LYMAN    115.0  >0.95    0.949  1.00 pu kV  1382
73 HOVENWEP 115.0  >0.95    0.947  1.00 pu kV  1536
62 RESERVST 161.0  >0.95    0.949  1.00 pu kV  1936
62 MILLERCK 161.0  >0.95    0.948  1.00 pu kV  1936
62 MISSLA 7 161.0  >0.95    0.949  1.00 pu kV  1936

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#

Area Count, Volts new and worse:
Area 40: 3
Area 62: 9
Area 73: 3

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#
70 BRUSHCPP 115 to 73 B.CK PS  115 CKT 1    1.48   1.22   162.00   1628
73 EFMORGTP 115 to 73 FMWEST   115 CKT 1    1.29   1.22   80.00   1166
70 BRUSHCPP 115 to 73 B.CK PS  115 CKT 2    1.28   1.06   187.00   1627
65 FLAMGORG 230 to 73 FLAMGORG 138 CKT 1    1.16   1.09   100.00   699
65 FLAMGORG 230 to 73 FLAMGORG 138 CKT 2    1.16   1.09   100.00   699
73 MIDWAYBR 230 to 73 MIDWAYBR 115 CKT 1    1.11   1.01   100.00   1457

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
70 CHEROKEN 115 to 70 DERBY 2  115 CKT 1    1.10    <= 0.95  135.00   962
70 CHEROKEN 115 to 70 DERBY 1  115 CKT 1    1.06    <= 0.95  135.00   963
73 B.CK PS  115 to 73 B.CK PS  230 CKT 1    1.06    <= 0.95  224.00   1168
73 BIJOUTAP 115 to 73 FMWEST   115 CKT 1    0.99    <= 0.95  80.00   1166
73 BRUSHTAP 115 to 73 EFMORGTP 115 CKT 1    0.98    <= 0.95  121.70   1166
70 FTLUPTON 230 to 70 PAWNEE   230 CKT 1    0.97    <= 0.95  413.50   1066
73 VERNAL   138 to 65 BONANZA  138 CKT 1    0.96    <= 0.95  192.00   699
70 LOOKOUT  115 to 70 HOGBACK  115 CKT 1    0.96    <= 0.95  192.00   1034

Area Count, Rates better and away:
```

```
Area 65: 2
Area 70: 6
Area 73: 6

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
65 MOUND SW 138.0 0.974  0.95 <= pu <= 1.05   1.00 pu kV  699
65 SPHINX T 138.0 0.976  0.95 <= pu <= 1.05   1.00 pu kV  699
70 BARRLAKE 230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  939
70 SKYRANCH 230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  940
70 TOWER    230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  940
70 MARCY    230.0 0.935  0.95 <= pu <= 1.05   1.00 pu kV  980
70 WATERTON 230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  980
70 SURREYRG 230.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  981
70 MURPHY   230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  981
70 BUCKLEY1 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 ELATI1   230.0 0.938  0.95 <= pu <= 1.05   1.00 pu kV  990
70 ELATI2   230.0 0.938  0.95 <= pu <= 1.05   1.00 pu kV  990
70 MONACO   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  990
70 MEADOWHL 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 TECH CTR 230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 JEWELL1  230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 RIVERDAL 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1009
70 CHEROKEE 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 DENVTM   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 GLENN PS 230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1010
70 LACOMBE  230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 WASHINGT 230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1010
70 CLARK    230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  1024
70 JORDAN   230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  1024
70 CHATFLD  230.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1049
70 RIDGE    230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1052
70 WESTPS   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1053
70 QUINCY   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 SMOKYHIL 230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 GREENWD  230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 GUNBARRE 230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1106
70 LEGGETT  230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1106
70 NIWOT    230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1106
73 BETHELLM 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1401
73 MANCOSTP 115.0 0.951  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 COYOTE G 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 AMES     115.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 SUNSH SM 115.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1929

Area Count, Volts better and away:
Area 65: 2
Area 70: 31
Area 73: 5
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Compost found the following for comparisons:
     80 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     82 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\denl3\pdenl3-2.out
     282 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\denl3\pdenl3-2.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
70 DANIELPK 230 to 70 PRAIRIE  230 CKT 1    <0.95     1.08   494.80   979
70 DANIELPK 230 to 70 GREENWD  230 CKT 1    <0.95     1.05   494.80   983
40 NEWPORTB 115 to 40 PINE ST  115 CKT 1    <0.95     0.96   120.10   283
70 CASTLRCK 115 to 70 DANIELPK 115 CKT 1    <0.95     0.95   134.80   1093
70 RIDGE    115 to 70 RIDGE    230 CKT 2    <0.95     0.95   100.00   1865

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
70 SMOKYHIL 115 to 70 SMOKYHIL 230 CKT 1    1.04   1.17   150.00   1868
70 WATERTON 115 to 70 WATERTON 230 CKT 2    1.00   1.20   100.00   1870
70 WATERTON 115 to 70 WATERTON 230 CKT 1    0.99   1.19   100.00   1871

Area Count, Rates new and worse:
Area 40: 1
Area 70: 7

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
62 SHELBY   115.0  >0.95    0.938  1.00 pu kV  163
62 SHELBY   230.0  >0.95    0.942  1.00 pu kV  163
62 CNRDWAPA 230.0  >0.95    0.944  1.00 pu kV  163
62 CNRDWAPA 115.0  >0.95    0.943  1.00 pu kV  163
62 CNRD-SRA 115.0  >0.95    0.943  1.00 pu kV  163
40 EGRANVIL 115.0  >0.95    0.947  1.00 pu kV  1769
40 AIRWAYTP 115.0  >0.95    0.949  1.00 pu kV  278
40 HAL&WHIT 115.0  >0.95    0.949  1.00 pu kV  278
62 MT ASIMI 161.0  >0.95    0.942  1.00 pu kV  1768
73 PROSPEC  115.0  >0.95    0.949  1.00 pu kV  1178
73 LYMAN    115.0  >0.95    0.949  1.00 pu kV  1382
73 HOVENWEP 115.0  >0.95    0.947  1.00 pu kV  1536
62 RESERVST 161.0  >0.95    0.949  1.00 pu kV  1936
62 MILLERCK 161.0  >0.95    0.948  1.00 pu kV  1936
62 MISSLA 7 161.0  >0.95    0.949  1.00 pu kV  1936

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#

Area Count, Volts new and worse:
Area 40: 3
Area 62: 9
Area 73: 3

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#
70 BRUSHCPP 115 to 73 B.CK PS  115 CKT 1    1.48   1.22   162.00   1628
70 BRUSHCPP 115 to 73 B.CK PS  115 CKT 2    1.28   1.06   187.00   1627

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
70 CHEROKEN 115 to 70 DERBY 2  115 CKT 1    1.10    <= 0.95  135.00   962
70 CHEROKEN 115 to 70 DERBY 1  115 CKT 1    1.06    <= 0.95  135.00   963
70 FTLUPTON 230 to 70 PAWNEE   230 CKT 1    0.97    <= 0.95  413.50   1066
70 LOOKOUT  115 to 70 HOGBACK  115 CKT 1    0.96    <= 0.95  192.00   1034

Area Count, Rates better and away:
Area 70: 6

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
65 MOUND SW 138.0 0.974  0.95 <= pu <= 1.05   1.00 pu kV  699
65 SPHINX T 138.0 0.976  0.95 <= pu <= 1.05   1.00 pu kV  699
70 BARRLAKE 230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  939
70 SKYRANCH 230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  940
70 TOWER    230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  940
70 MARCY    230.0 0.935  0.95 <= pu <= 1.05   1.00 pu kV  980
70 WATERTON 230.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  980
70 SURREYRG 230.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  981
70 MURPHY   230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  981
70 BUCKLEY1 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 ELATI1   230.0 0.938  0.95 <= pu <= 1.05   1.00 pu kV  990
```

```
70 ELATI2   230.0 0.938  0.95 <= pu <= 1.05   1.00 pu kV  990
70 MONACO   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  990
70 MEADOWHL 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 TECH CTR 230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 JEWELL1  230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1026
70 RIVERDAL 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1009
70 CHEROKEE 230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 DENVTM   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 GLENN PS 230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1010
70 LACOMBE  230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 WASHINGT 230.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  1010
70 CLARK    230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  1024
70 JORDAN   230.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  1024
70 CHATFLD  230.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1049
70 RIDGE    230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1052
70 WESTPS   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1053
70 QUINCY   230.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 SMOKYHIL 230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1065
70 GREENWD  230.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1066
70 GUNBARRE 230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1106
70 LEGGETT  230.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1106
70 NIWOT    230.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1106
73 BETHELLM 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1401
73 MANCOSTP 115.0 0.951  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 COYOTE G 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 AMES     115.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1929
73 SUNSH SM 115.0 0.945  0.95 <= pu <= 1.05   1.00 pu kV  1929

Area Count, Volts better and away:
Area 65: 2
Area 70: 31
Area 73: 5
```

```
Compost found the following for comparisons:
     136 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     135 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\slcl4\pslcl4-1.out
     365 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\slcl4\pslcl4-1.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
62 ANACOND  161 to 62 DILLON S 161 CKT 1    <0.95     1.89   165.00   7
62 DILLON S 161 to 65 BIGGRASS 161 CKT 1    <0.95     1.29   164.50   8
65 BIGGRASS 161 to 65 JFRSNPHA 161 CKT 1    <0.95     1.28   148.10   8
62 ANACOND  230 to 40 GARRISON 230 CKT 1    <0.95     1.22   358.50   1571
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.13   1732.10   446
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.13   1732.10   447
73 CARTERMT 115 to 73 THERMOPL 115 CKT 1    <0.95     1.12   40.00   1598
73 BASIN    115 to 73 GREYBULL 115 CKT 1    <0.95     1.08   109.00   1598
62 CLYDE P  161 to 62 WILSALL  161 CKT 1    <0.95     1.02   203.60   196
73 LOVELL   115 to 73 YELLOWBR 115 CKT 1    <0.95     1.00   109.00   1598
62 ENNIS MT 161 to 62 BRADLEYC 161 CKT 1    <0.95     0.97   203.60   7
40 GARRISON 500 to 40 GARRISON 230 CKT 1    <0.95     0.97   1029.00   417
73 ARTESIA  138 to 73 HAYDEN   138 CKT 1    <0.95     0.97   90.00   1471
73 STEGALL  230 to 73 STEGALL  115 CKT 1    <0.95     0.97   100.00   1906
73 HOYT     115 to 73 ADENA    115 CKT 1    <0.95     0.95   109.00   1178

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   2.07   113.70   417
65 JFRSNPHA 161 to 65 JEFFERSN 161 CKT 1    1.17   1.86   100.00   8
73 GREYBULL 115 to 73 LOVELL   115 CKT 1    1.07   1.26   109.00   1598
65 BENLOMND 230 to 65 BENLOMND 138 CKT 1    1.06   1.14   267.00   1794
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.05   1.12   213.10   417
62 ANACOND  230 to 62 ANACOND  161 CKT 2    1.01   1.50   200.00   1698
62 ANACOND  230 to 62 ANACOND  161 CKT 1    1.01   1.50   200.00   1699
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.00   1.28   944.00   451
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.00   1.28   944.00   452
62 BROADV&1 500 to 62 BROADVU  500 CKT 1    0.95   1.47   1732.00   146

Area Count, Rates new and worse:
Area 40: 7
Area 62: 8
Area 65: 3
Area 73: 7

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
63 MTSHAVRE 230.0  >0.95    0.665  1.00 pu kV  1552
63 MTSMALTA 230.0  >0.95    0.237  1.00 pu kV  1552
63 MTSVER   230.0  >0.95    0.730  1.00 pu kV  1552
62 MTSGFALL 230.0  >0.95    0.877  1.00 pu kV  1552
62 MTSRNBW  230.0  >0.95    0.886  1.00 pu kV  1552
62 MTSGFALL 500.0  >0.95    0.963  1.00 pu kV  6
62 MTSDILL  500.0  >0.95    0.945  1.00 pu kV  7
62 SHELBY   230.0  >0.95    0.898  1.00 pu kV  6
62 SHELBY   115.0  >0.95    0.883  1.00 pu kV  1552
62 CNRDWAPA 230.0  >0.95    0.903  1.00 pu kV  6
62 JUDITHGP 230.0  >0.95    0.894  1.00 pu kV  446
62 CNRDWAPA 115.0  >0.95    0.900  1.00 pu kV  6
62 GT FALLS 115.0  >0.95    0.956  1.00 pu kV  6
62 GT FALLS 230.0  >0.95    0.910  1.00 pu kV  6
62 DUTTON   115.0  >0.95    0.934  1.00 pu kV  6
62 CNRD-SRA 115.0  >0.95    0.900  1.00 pu kV  6
63 HAVRE    115.0  >0.95    0.674  1.00 pu kV  1552
63 RUDYARD  115.0  >0.95    0.742  1.00 pu kV  1552
63 TIBERTAP 115.0  >0.95    0.804  1.00 pu kV  1552
62 ANACOND  230.0  >0.95    0.936  1.00 pu kV  7
62 ANACOND  161.0  >0.95    0.912  1.00 pu kV  7
62 WILSALL  161.0  >0.95    0.914  1.00 pu kV  7
62 MT ASIMI 161.0  >0.95    0.893  1.00 pu kV  7
62 WILSALL  230.0  >0.95    0.929  1.00 pu kV  446
62 ANA BPA  115.0  >0.95    0.977  1.00 pu kV  7
62 COLRPLJE 161.0  >0.95    0.893  1.00 pu kV  446
62 CLMBUSPM 161.0  >0.95    0.893  1.00 pu kV  446
63 MILCTYDC 230.0  >0.95    0.851  1.00 pu kV  146
65 LOST RIV 230.0  >0.95    0.944  1.00 pu kV  8
60 PINGREE  138.0  >0.95    0.969  1.00 pu kV  95
63 MTSRICHC 230.0  >0.95    0.060  1.00 pu kV  1552
62 BLGS PHA 230.0  >0.95    0.936  1.00 pu kV  146
62 BROADVU  500.0  >0.95    0.979  1.00 pu kV  146
62 HARDIN   230.0  >0.95    0.928  1.00 pu kV  146
62 ALKALI   230.0  >0.95    0.930  1.00 pu kV  146
62 BASELINE 230.0  >0.95    0.931  1.00 pu kV  146
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62 HUNTLEY  230.0  >0.95    0.923  1.00 pu kV  146
62 SHOREYRD 230.0  >0.95    0.931  1.00 pu kV  146
62 RMRK PHA 161.0  >0.95    0.938  1.00 pu kV  146
62 RIMROCK  161.0  >0.95    0.933  1.00 pu kV  146
62 HARDIN   115.0  >0.95    0.930  1.00 pu kV  146
62 BILINGS  230.0  >0.95    0.929  1.00 pu kV  146
62 ALKALI   161.0  >0.95    0.930  1.00 pu kV  146
62 BILINGSW 230.0  >0.95    0.929  1.00 pu kV  146
62 BROADVU  230.0  >0.95    0.933  1.00 pu kV  146
65 YELOWTLP 230.0  >0.95    0.948  1.00 pu kV  446
65 YELOWTLP 161.0  >0.95    0.947  1.00 pu kV  146
73 YELLOWBR 230.0  >0.95    0.949  1.00 pu kV  146
63 CROS PHA 230.0  >0.95    0.934  1.00 pu kV  146
63 CRSOVRUM 230.0  >0.95    0.921  1.00 pu kV  146
63 CUSTER   230.0  >0.95    0.893  1.00 pu kV  146
63 ROSEBUD  230.0  >0.95    0.858  1.00 pu kV  146
62 ARMELLCR 115.0  >0.95    0.965  1.00 pu kV  174
40 EGRANVIL 115.0  >0.95    0.945  1.00 pu kV  231
62 LANDRSFK 230.0  >0.95    0.972  1.00 pu kV  418
40 4LAKE TP 115.0  >0.95    0.947  1.00 pu kV  418
40 AIRWAYTP 115.0  >0.95    0.942  1.00 pu kV  418
40 FOURLBPA 115.0  >0.95    0.942  1.00 pu kV  418
40 FOURLKS  115.0  >0.95    0.942  1.00 pu kV  418
40 HAL&WHIT 115.0  >0.95    0.942  1.00 pu kV  418
40 HANGMAN  115.0  >0.95    0.948  1.00 pu kV  418
40 HAYFORD  115.0  >0.95    0.944  1.00 pu kV  418
40 SPKINDPK 115.0  >0.95    0.948  1.00 pu kV  418
40 STMARIES 115.0  >0.95    0.948  1.00 pu kV  418
62 TOWN2    500.0  >0.95    0.983  1.00 pu kV  446
40 GARRISON 230.0  >0.95    0.970  1.00 pu kV  1768
40 GARRISON 500.0  >0.95    0.963  1.00 pu kV  451
65 GRASS CK 230.0  >0.95    0.945  1.00 pu kV  446
62 TOWN1    500.0  >0.95    0.983  1.00 pu kV  447
65 THERPACE 115.0  >0.95    0.948  1.00 pu kV  1598
73 HDOME    115.0  >0.95    0.949  1.00 pu kV  1598
73 JIMREADY 115.0  >0.95    0.949  1.00 pu kV  1598
73 TCAPS    115.0  >0.95    0.948  1.00 pu kV  1598
73 THERMOPL 115.0  >0.95    0.948  1.00 pu kV  1598
73 JIMRDYTP 115.0  >0.95    0.949  1.00 pu kV  1598

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
65 BIGGRASS 161.0  0.919   0.869  1.00 pu kV  8
62 ENNIS MT 161.0  0.934   0.802  1.00 pu kV  7
62 SHERDNMT 161.0  0.932   0.815  1.00 pu kV  7
62 BRADLEYC 161.0  0.932   0.808  1.00 pu kV  7
62 DILLON S 161.0  0.922   0.871  1.00 pu kV  7
62 JACKRABT 161.0  0.921   0.826  1.00 pu kV  7
62 CUTBANK  115.0  0.945   0.874  1.00 pu kV  6
62 BOLE     230.0  0.963   0.906  1.00 pu kV  6
62 CTBPUMP  115.0  0.945   0.875  1.00 pu kV  6
62 VAL-WILL 115.0  0.941   0.891  1.00 pu kV  6
62 TRIDENT  161.0  0.944   0.869  1.00 pu kV  7
62 CLYDE P  161.0  0.926   0.876  1.00 pu kV  7
62 EGALTN A 161.0  0.921   0.841  1.00 pu kV  7
62 BGTMBERA 161.0  0.936   0.879  1.00 pu kV  446
62 EMIGT AT 161.0  0.930   0.879  1.00 pu kV  7
62 EGALTN B 161.0  0.921   0.841  1.00 pu kV  7
62 BUTTEMHD 161.0  0.947   0.887  1.00 pu kV  7
62 BUTTE MT 161.0  0.946   0.885  1.00 pu kV  7
40 GAR1EAST 500.0  1.031   0.966  1.00 pu kV  1573
40 GAR2EAST 500.0  1.031   0.966  1.00 pu kV  1572
73 BGEORGE  115.0  0.902   0.855  1.00 pu kV  1598
62 GLDNSNLT 161.0  0.944   0.876  1.00 pu kV  7

Area Count, Volts new and worse:
Area 40: 14
Area 60: 1
Area 62: 57
Area 63: 12
Area 65: 6
Area 73: 7

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#
65 CARBON   138 to 65 SPAN F&1 138 CKT 1    1.55   1.46   75.10   728
65 SPAN F&1 138 to 65 SPAN FRK 138 CKT 1    1.55   1.46   75.00   728
65 EMMAPARK 138 to 65 UPALCO   138 CKT 1    1.43   1.30   136.00   699
65 EMMAPARK 138 to 65 PANTHER  138 CKT 1    1.42   1.29   136.00   699
65 CARBON   138 to 65 PANTHER  138 CKT 1    1.38   1.25   136.00   699
65 TREASTON 230 to 65 TREASTON 138 CKT 1    1.29   1.19   200.00   1847
65 BONANZA  345 to 65 BONANZA  138 CKT 1    1.20   1.06   392.00   1471
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40 ADDY 2   230 to 40 ADDY     115 CKT 1    1.11   1.05   163.00   229
40 BOUNDARY 230 to 40 BOUNDARY 115 CKT 1    1.09   1.00   125.00   230
65 BONANZA  345 to 65 MONA     345 CKT 1    1.07   1.00   650.00   1508

**** RATES:  AWAY ****
Component                                   w/o Prj  w/ Prj  Rating   Cont#
65 BONANZA  138 to 65 RANGELY  138 CKT 1    1.19    <= 0.95  115.00   1799
65 BRIDGER  230 to 65 ROCKSPGS 230 CKT 1    1.11    <= 0.95  423.90   48
65 PALISADE 230 to 65 ROCKSPGS 230 CKT 1    1.11    <= 0.95  423.90   703
40 DIAM LAK 115 to 40 SACHEEN  115 CKT 1    1.05    <= 0.95  131.50   283
60 AMFLS    138 to 60 BRADY    138 CKT 1    1.03    <= 0.95  236.60   23
60 BRIDGER  345 to 60 BORAH    345 CKT 1    1.03    <= 0.95  892.20   49
65 BRDGR PP 230 to 65 FIREHOLE 230 CKT 1    1.03    <= 0.95  424.00   886
65 PALISADE 230 to 65 RAVEN    230 CKT 1    1.02    <= 0.95  461.00   703
65 CARBON   138 to 65 SPAN FRK 138 CKT 2    1.02    <= 0.95  208.00   699
60 BRIDGER  345 to 60 KINPORT  345 CKT 1    0.99    <= 0.95  892.20   1608
65 BLUE RIM 230 to 65 BRDGR PP 230 CKT 1    0.99    <= 0.95  423.90   886
65 BLUE RIM 230 to 65 S. TRONA 230 CKT 1    0.99    <= 0.95  423.90   886
40 ATHOLTAP 115 to 40 SCARCELO 115 CKT 1    0.98    <= 0.95  113.70   283
60 BRIDGER  345 to 65 GOSHEN   345 CKT 1    0.97    <= 0.95  892.20   49
65 ASHLEY   138 to 73 VERNAL   138 CKT 1    0.97    <= 0.95  136.00   697
73 VERNAL   138 to 65 BONANZA  138 CKT 1    0.96    <= 0.95  192.00   699
65 BENLOMND 138 to 65 EL MONTE 138 CKT 2    0.95    <= 0.95  205.10   680
65 BENLOMND 138 to 65 EL MONTE 138 CKT 1    0.95    <= 0.95  205.10   681

Area Count, Rates better and away:
Area 40: 4
Area 60: 4
Area 65: 19
Area 73: 1

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
60 PLST VLY 138.0 0.970  0.95 <= pu <= 1.05   1.00 pu kV  25
60 NELSN TP 138.0 0.968  0.95 <= pu <= 1.05   1.00 pu kV  100
65 ANGEL    138.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  684
65 CARBON   138.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  699
65 DG UPLCO 138.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  699
65 HELPER   138.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  699
65 HELPER T 138.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  699
65 MOUND SW 138.0 0.974  0.95 <= pu <= 1.05   1.00 pu kV  699
65 PANTHER  138.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  699
65 SPHINX T 138.0 0.976  0.95 <= pu <= 1.05   1.00 pu kV  699
65 UPALCO   138.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  699
65 WILLOW C 138.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  699
73 LOST CK  115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1178
73 LOSTCKTP 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1178
73 MCGREW   115.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  1903
73 COYOTE G 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1929

Area Count, Volts better and away:
Area 60: 2
Area 65: 10
Area 73: 4
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Compost found the following for comparisons:
     80 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     79 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\slcl4\pslcl4-2.out
     365 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\slcl4\pslcl4-2.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.13   1732.10   446
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.13   1732.10   447
65 BIGGRASS 161 to 65 JFRSNPHA 161 CKT 1    <0.95     1.08   176.00   8

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
40 OROFINO  115 to 40 AHSAHKA  115 CKT 1    1.94   2.07   113.70   417
65 JFRSNPHA 161 to 65 JEFFERSN 161 CKT 1    1.17   1.86   100.00   8
65 BENLOMND 230 to 65 BENLOMND 138 CKT 1    1.06   1.14   267.00   1794
40 AHSAHKA  115 to 40 DWORSHAK 115 CKT 1    1.05   1.12   213.10   417
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.00   1.28   944.00   451
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.00   1.28   944.00   452

Area Count, Rates new and worse:
Area 40: 6
Area 65: 3

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
63 MTSHAVRE 230.0  >0.95    0.665  1.00 pu kV  1552
63 MTSMALTA 230.0  >0.95    0.237  1.00 pu kV  1552
63 MTSVER   230.0  >0.95    0.730  1.00 pu kV  1552
62 MTSGFALL 230.0  >0.95    0.877  1.00 pu kV  1552
62 MTSRNBW  230.0  >0.95    0.886  1.00 pu kV  1552
62 MTSGFALL 500.0  >0.95    0.963  1.00 pu kV  6
62 MTSDILL  500.0  >0.95    0.945  1.00 pu kV  7
62 SHELBY   230.0  >0.95    0.898  1.00 pu kV  6
62 SHELBY   115.0  >0.95    0.883  1.00 pu kV  1552
62 CNRDWAPA 230.0  >0.95    0.903  1.00 pu kV  6
62 JUDITHGP 230.0  >0.95    0.894  1.00 pu kV  446
62 CNRDWAPA 115.0  >0.95    0.900  1.00 pu kV  6
62 GT FALLS 115.0  >0.95    0.956  1.00 pu kV  6
62 GT FALLS 230.0  >0.95    0.910  1.00 pu kV  6
62 DUTTON   115.0  >0.95    0.934  1.00 pu kV  6
62 CNRD-SRA 115.0  >0.95    0.900  1.00 pu kV  6
63 HAVRE    115.0  >0.95    0.674  1.00 pu kV  1552
63 RUDYARD  115.0  >0.95    0.742  1.00 pu kV  1552
63 TIBERTAP 115.0  >0.95    0.804  1.00 pu kV  1552
62 ANACOND  230.0  >0.95    0.936  1.00 pu kV  7
62 ANACOND  161.0  >0.95    0.912  1.00 pu kV  7
62 WILSALL  161.0  >0.95    0.914  1.00 pu kV  7
62 MT ASIMI 161.0  >0.95    0.893  1.00 pu kV  7
62 WILSALL  230.0  >0.95    0.929  1.00 pu kV  446
62 ANA BPA  115.0  >0.95    0.977  1.00 pu kV  7
62 COLRPLJE 161.0  >0.95    0.893  1.00 pu kV  446
62 CLMBUSPM 161.0  >0.95    0.893  1.00 pu kV  446
63 MILCTYDC 230.0  >0.95    0.851  1.00 pu kV  146
65 LOST RIV 230.0  >0.95    0.944  1.00 pu kV  8
60 PINGREE  138.0  >0.95    0.969  1.00 pu kV  95
63 MTSRICHC 230.0  >0.95    0.060  1.00 pu kV  1552
62 BLGS PHA 230.0  >0.95    0.936  1.00 pu kV  146
62 BROADVU  500.0  >0.95    0.979  1.00 pu kV  146
62 HARDIN   230.0  >0.95    0.928  1.00 pu kV  146
62 ALKALI   230.0  >0.95    0.930  1.00 pu kV  146
62 BASELINE 230.0  >0.95    0.931  1.00 pu kV  146
62 HUNTLEY  230.0  >0.95    0.923  1.00 pu kV  146
62 SHOREYRD 230.0  >0.95    0.931  1.00 pu kV  146
62 RMRK PHA 161.0  >0.95    0.938  1.00 pu kV  146
62 RIMROCK  161.0  >0.95    0.933  1.00 pu kV  146
62 HARDIN   115.0  >0.95    0.930  1.00 pu kV  146
62 BILINGS  230.0  >0.95    0.929  1.00 pu kV  146
62 ALKALI   161.0  >0.95    0.930  1.00 pu kV  146
62 BILINGSW 230.0  >0.95    0.929  1.00 pu kV  146
62 BROADVU  230.0  >0.95    0.933  1.00 pu kV  146
65 YELOWTLP 230.0  >0.95    0.948  1.00 pu kV  446
65 YELOWTLP 161.0  >0.95    0.947  1.00 pu kV  146
73 YELLOWBR 230.0  >0.95    0.949  1.00 pu kV  146
63 CROS PHA 230.0  >0.95    0.934  1.00 pu kV  146
63 CRSOVRUM 230.0  >0.95    0.921  1.00 pu kV  146
63 CUSTER   230.0  >0.95    0.893  1.00 pu kV  146
63 ROSEBUD  230.0  >0.95    0.858  1.00 pu kV  146
62 ARMELLCR 115.0  >0.95    0.965  1.00 pu kV  174
40 EGRANVIL 115.0  >0.95    0.945  1.00 pu kV  231
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62 LANDRSFK 230.0  >0.95    0.972  1.00 pu kV  418
40 4LAKE TP 115.0  >0.95    0.947  1.00 pu kV  418
40 AIRWAYTP 115.0  >0.95    0.942  1.00 pu kV  418
40 FOURLBPA 115.0  >0.95    0.942  1.00 pu kV  418
40 FOURLKS  115.0  >0.95    0.942  1.00 pu kV  418
40 HAL&WHIT 115.0  >0.95    0.942  1.00 pu kV  418
40 HANGMAN  115.0  >0.95    0.948  1.00 pu kV  418
40 HAYFORD  115.0  >0.95    0.944  1.00 pu kV  418
40 SPKINDPK 115.0  >0.95    0.948  1.00 pu kV  418
40 STMARIES 115.0  >0.95    0.948  1.00 pu kV  418
62 TOWN2    500.0  >0.95    0.983  1.00 pu kV  446
40 GARRISON 230.0  >0.95    0.970  1.00 pu kV  1768
40 GARRISON 500.0  >0.95    0.963  1.00 pu kV  451
65 GRASS CK 230.0  >0.95    0.945  1.00 pu kV  446
62 TOWN1    500.0  >0.95    0.983  1.00 pu kV  447
65 THERPACE 115.0  >0.95    0.948  1.00 pu kV  1598
73 HDOME    115.0  >0.95    0.949  1.00 pu kV  1598
73 JIMREADY 115.0  >0.95    0.949  1.00 pu kV  1598
73 TCAPS    115.0  >0.95    0.948  1.00 pu kV  1598
73 THERMOPL 115.0  >0.95    0.948  1.00 pu kV  1598
73 JIMRDYTP 115.0  >0.95    0.949  1.00 pu kV  1598

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
65 BIGGRASS 161.0  0.919   0.869  1.00 pu kV  8
62 ENNIS MT 161.0  0.934   0.802  1.00 pu kV  7
62 SHERDNMT 161.0  0.932   0.815  1.00 pu kV  7
62 BRADLEYC 161.0  0.932   0.808  1.00 pu kV  7
62 DILLON S 161.0  0.922   0.871  1.00 pu kV  7
62 JACKRABT 161.0  0.921   0.826  1.00 pu kV  7
62 CUTBANK  115.0  0.945   0.874  1.00 pu kV  6
62 BOLE     230.0  0.963   0.906  1.00 pu kV  6
62 CTBPUMP  115.0  0.945   0.875  1.00 pu kV  6
62 VAL-WILL 115.0  0.941   0.891  1.00 pu kV  6
62 TRIDENT  161.0  0.944   0.869  1.00 pu kV  7
62 CLYDE P  161.0  0.926   0.876  1.00 pu kV  7
62 EGALTN A 161.0  0.921   0.841  1.00 pu kV  7
62 BGTMBERA 161.0  0.936   0.879  1.00 pu kV  446
62 EMIGT AT 161.0  0.930   0.879  1.00 pu kV  7
62 EGALTN B 161.0  0.921   0.841  1.00 pu kV  7
62 BUTTEMHD 161.0  0.947   0.887  1.00 pu kV  7
62 BUTTE MT 161.0  0.946   0.885  1.00 pu kV  7
40 GAR1EAST 500.0  1.031   0.966  1.00 pu kV  1573
40 GAR2EAST 500.0  1.031   0.966  1.00 pu kV  1572
73 BGEORGE  115.0  0.902   0.855  1.00 pu kV  1598
62 GLDNSNLT 161.0  0.944   0.876  1.00 pu kV  7

Area Count, Volts new and worse:
Area 40: 14
Area 60: 1
Area 62: 57
Area 63: 12
Area 65: 6
Area 73: 7

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#
65 TREASTON 230 to 65 TREASTON 138 CKT 1    1.29   1.19   200.00   1847
65 EMMAPARK 138 to 65 UPALCO   138 CKT 1    1.20   1.08   163.00   699
65 BONANZA  345 to 65 BONANZA  138 CKT 1    1.20   1.06   392.00   1471
65 EMMAPARK 138 to 65 PANTHER  138 CKT 1    1.19   1.07   163.00   699
65 CARBON   138 to 65 PANTHER  138 CKT 1    1.15   1.04   163.00   699
40 BOUNDARY 230 to 40 BOUNDARY 115 CKT 1    1.09   1.00   125.00   230
65 CARBON   138 to 65 SPAN F&1 138 CKT 1    1.03   0.97   113.00   728
65 SPAN F&1 138 to 65 SPAN FRK 138 CKT 1    1.03   0.97   113.00   728

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 DIAM LAK 115 to 40 SACHEEN  115 CKT 1    1.05    <= 0.95  131.50   283
40 ATHOLTAP 115 to 40 SCARCELO 115 CKT 1    0.98    <= 0.95  113.70   283
65 FISHCREK 161 to 65 GOSHEN   161 CKT 1    0.98    <= 0.95  176.00   1615
65 FISHCREK 161 to 65 GRACE    161 CKT 1    0.96    <= 0.95  176.00   1615

Area Count, Rates better and away:
Area 40: 3
Area 65: 9

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
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60 PLST VLY 138.0 0.970  0.95 <= pu <= 1.05   1.00 pu kV  25
60 NELSN TP 138.0 0.968  0.95 <= pu <= 1.05   1.00 pu kV  100
65 ANGEL    138.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  684
65 CARBON   138.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  699
65 DG UPLCO 138.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  699
65 HELPER   138.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  699
65 HELPER T 138.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  699
65 MOUND SW 138.0 0.974  0.95 <= pu <= 1.05   1.00 pu kV  699
65 PANTHER  138.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  699
65 SPHINX T 138.0 0.976  0.95 <= pu <= 1.05   1.00 pu kV  699
65 UPALCO   138.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  699
65 WILLOW C 138.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  699
73 LOST CK  115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1178
73 LOSTCKTP 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1178
73 MCGREW   115.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  1903
73 COYOTE G 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1929

Area Count, Volts better and away:
Area 60: 2
Area 65: 10
Area 73: 4
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Compost found the following for comparisons:
     136 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-1.out
     124 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\lbl4\plbl4-1.out
     330 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\lbl4\plbl4-1.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
62 BROADV&2 500 to 62 BROADVU  500 CKT 2    <0.95     1.48   1732.00   148
62 ANACOND  161 to 62 DILLON S 161 CKT 1    <0.95     1.39   165.00   7
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.15   1732.10   446
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.15   1732.10   447
62 ANACOND  230 to 40 GARRISON 230 CKT 1    <0.95     1.13   358.50   1571
62 CLYDE P  161 to 62 WILSALL  161 CKT 1    <0.95     1.02   203.60   196
73 STEGALL  230 to 73 STEGALL  115 CKT 1    <0.95     0.99   100.00   1906
73 HOTCHKIS 115 to 73 GARNETAP 115 CKT 1    <0.95     0.97   85.00   1495
18 HA PS    345 to 65 REDBUTTE 345 CKT 1    <0.95     0.97   300.00   1605
40 GARRISON 500 to 40 GARRISON 230 CKT 1    <0.95     0.96   1029.00   417

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
65 BENLOMND 230 to 65 BENLOMND 138 CKT 1    1.06   1.18   267.00   1794
62 ANACOND  230 to 62 ANACOND  161 CKT 2    1.01   1.53   200.00   1698
62 ANACOND  230 to 62 ANACOND  161 CKT 1    1.01   1.53   200.00   1699
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.00   1.28   944.00   451
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.00   1.28   944.00   452
40 BEACON S 230 to 40 BEACON S 115 CKT 1    0.96   1.01   287.00   1748
40 BEACON N 230 to 40 BEACON N 115 CKT 1    0.96   1.01   287.00   1749
62 BROADV&1 500 to 62 BROADVU  500 CKT 1    0.95   1.47   1732.00   146

Area Count, Rates new and worse:
Area 18: 1
Area 40: 7
Area 62: 7
Area 65: 1
Area 73: 2

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
62 JUDITHGP 230.0  >0.95    0.867  1.00 pu kV  446
63 MTSHAVRE 230.0  >0.95    0.651  1.00 pu kV  1552
63 MTSVER   230.0  >0.95    0.715  1.00 pu kV  1552
62 MTSGFALL 230.0  >0.95    0.861  1.00 pu kV  1552
62 MTSRNBW  230.0  >0.95    0.870  1.00 pu kV  1552
62 MTSGFALL 500.0  >0.95    0.992  1.00 pu kV  6
62 MTSDILL  500.0  >0.95    0.971  1.00 pu kV  7
62 SHELBY   230.0  >0.95    0.896  1.00 pu kV  1552
62 SHELBY   115.0  >0.95    0.867  1.00 pu kV  1552
62 CNRDWAPA 230.0  >0.95    0.912  1.00 pu kV  1552
62 CNRDWAPA 115.0  >0.95    0.904  1.00 pu kV  1552
62 GT FALLS 230.0  >0.95    0.941  1.00 pu kV  6
62 CNRD-SRA 115.0  >0.95    0.903  1.00 pu kV  1552
63 HAVRE    115.0  >0.95    0.659  1.00 pu kV  1552
63 RUDYARD  115.0  >0.95    0.727  1.00 pu kV  1552
63 TIBERTAP 115.0  >0.95    0.788  1.00 pu kV  1552
62 MT ASIMI 161.0  >0.95    0.931  1.00 pu kV  446
62 COLRPLJE 161.0  >0.95    0.897  1.00 pu kV  446
62 CLMBUSPM 161.0  >0.95    0.897  1.00 pu kV  446
40 OPPORTUN 115.0  >0.95    0.865  1.00 pu kV  576
63 MTSRICHC 230.0  >0.95    0.062  1.00 pu kV  1552
62 WILSALL  161.0  >0.95    0.924  1.00 pu kV  446
62 WILSALL  230.0  >0.95    0.933  1.00 pu kV  446
62 BLGS PHA 230.0  >0.95    0.937  1.00 pu kV  148
62 BROADVU  500.0  >0.95    0.967  1.00 pu kV  148
62 HARDIN   230.0  >0.95    0.931  1.00 pu kV  148
62 ALKALI   230.0  >0.95    0.924  1.00 pu kV  148
62 BASELINE 230.0  >0.95    0.926  1.00 pu kV  148
62 HUNTLEY  230.0  >0.95    0.921  1.00 pu kV  148
62 SHOREYRD 230.0  >0.95    0.925  1.00 pu kV  148
62 RMRK PHA 161.0  >0.95    0.937  1.00 pu kV  148
62 RIMROCK  161.0  >0.95    0.929  1.00 pu kV  148
62 HARDIN   115.0  >0.95    0.934  1.00 pu kV  148
62 BILINGS  230.0  >0.95    0.925  1.00 pu kV  148
62 ALKALI   161.0  >0.95    0.925  1.00 pu kV  148
62 BILINGSW 230.0  >0.95    0.924  1.00 pu kV  148
62 BROADVU  230.0  >0.95    0.922  1.00 pu kV  148
40 IRVIN    115.0  >0.95    0.868  1.00 pu kV  576
40 OPORTUNE 115.0  >0.95    0.867  1.00 pu kV  576
63 CRSOVRUM 230.0  >0.95    0.924  1.00 pu kV  148
63 CUSTER   230.0  >0.95    0.893  1.00 pu kV  148
63 MILCTYDC 230.0  >0.95    0.841  1.00 pu kV  148
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63 ROSEBUD  230.0  >0.95    0.852  1.00 pu kV  148
62 TOWN2    500.0  >0.95    0.972  1.00 pu kV  446
62 TOWN1    500.0  >0.95    0.972  1.00 pu kV  447
62 BROADV&2 500.0  >0.95    0.971  1.00 pu kV  148
65 YELOWTLP 161.0  >0.95    0.960  1.00 pu kV  148
63 CROS PHA 230.0  >0.95    0.948  1.00 pu kV  148
62 ARMELLCR 115.0  >0.95    0.974  1.00 pu kV  174
62 ANACOND  230.0  >0.95    0.958  1.00 pu kV  446
62 ANACOND  161.0  >0.95    0.950  1.00 pu kV  446
62 ANA BPA  115.0  >0.95    0.976  1.00 pu kV  446
62 LANDRSFK 230.0  >0.95    0.967  1.00 pu kV  418
40 GARRISON 230.0  >0.95    0.976  1.00 pu kV  446
40 GARRISON 500.0  >0.95    0.954  1.00 pu kV  446
65 GRASS CK 230.0  >0.95    0.964  1.00 pu kV  818
73 HOVENWEP 115.0  >0.95    0.946  1.00 pu kV  1536
62 GT FALLS 115.0  >0.95    0.953  1.00 pu kV  1552
62 DUTTON   115.0  >0.95    0.933  1.00 pu kV  1552
73 ELPASOTP 115.0  >0.95    0.948  1.00 pu kV  1929

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
62 ENNIS MT 161.0  0.934   0.885  1.00 pu kV  7
62 CUTBANK  115.0  0.945   0.864  1.00 pu kV  1552
62 CTBPUMP  115.0  0.945   0.865  1.00 pu kV  1552
62 VAL-WILL 115.0  0.941   0.889  1.00 pu kV  1552
62 BGTMBERA 161.0  0.936   0.882  1.00 pu kV  446
40 GAR1EAST 500.0  1.031   0.954  1.00 pu kV  1573
40 GAR2EAST 500.0  1.031   0.954  1.00 pu kV  1572

Area Count, Volts new and worse:
Area 40: 7
Area 62: 45
Area 63: 11
Area 65: 2
Area 73: 2

**** RATES: BETTER ****
Component                                    w/o Prj  w/ Prj Rating  Cont#
65 SPAN F&1 138 to 65 SPAN FRK 138 CKT 1    1.55   1.47   75.00   728
65 EMMAPARK 138 to 65 UPALCO   138 CKT 1    1.43   1.31   136.00   699
65 EMMAPARK 138 to 65 PANTHER  138 CKT 1    1.42   1.30   136.00   699
65 CARBON   138 to 65 PANTHER  138 CKT 1    1.38   1.26   136.00   699
65 TREASTON 230 to 65 TREASTON 138 CKT 1    1.29   1.15   200.00   1847
40 N LEWIST 115 to 40 CLEARWTR 115 CKT 1    1.26   1.11   113.70   465
65 BONANZA  345 to 65 BONANZA  138 CKT 1    1.20   1.14   392.00   1471
65 FISHCREK 161 to 65 GOSHEN   161 CKT 1    1.17   1.00   148.10   9
65 JFRSNPHA 161 to 65 JEFFERSN 161 CKT 1    1.17   1.09   100.00   8
65 FISHCREK 161 to 65 GRACE    161 CKT 1    1.14   0.97   148.00   9
65 BRIDGER  230 to 65 ROCKSPGS 230 CKT 1    1.11   0.97   423.90   48
65 PALISADE 230 to 65 ROCKSPGS 230 CKT 1    1.11   1.01   423.90   703
40 MIDWAYB2 230 to 40 VANTAGE  230 CKT 1    1.02   0.96   378.50   461
40 COLUMBIA 115 to 40 GB55     115 CKT 1    1.00   0.95   127.70   241

**** RATES:  AWAY ****
Component                                      w/o Prj  w/ Prj  Rating   Cont#
40 ADDY 2   230 to 40 ADDY     115 CKT 1    1.11    <= 0.95  163.00   229
40 BOUNDARY 230 to 40 BOUNDARY 115 CKT 1    1.09    <= 0.95  125.00   230
40 NEWPORTT 115 to 40 BLANCHRD 115 CKT 1    1.08    <= 0.95  113.70   283
40 BLANCHRD 115 to 40 HOODOO   115 CKT 1    1.07    <= 0.95  113.70   283
40 HOODOO   115 to 40 SPIRITLT 115 CKT 1    1.07    <= 0.95  111.90   283
40 DIAM LAK 115 to 40 SACHEEN  115 CKT 1    1.05    <= 0.95  131.50   283
40 SPIRITLT 115 to 40 ATHOLTAP 115 CKT 1    1.04    <= 0.95  113.70   283
40 NEWPORTT 115 to 40 PINE ST  115 CKT 1    1.03    <= 0.95  120.10   283
65 BRDGR PP 230 to 65 FIREHOLE 230 CKT 1    1.03    <= 0.95  424.00   886
65 PALISADE 230 to 65 RAVEN    230 CKT 1    1.02    <= 0.95  461.00   703
65 CARBON   138 to 65 SPAN FRK 138 CKT 2    1.02    <= 0.95  208.00   699
65 GRACE    161 to 65 GRACE    138 CKT 1    1.02    <= 0.95  168.00   1615
60 HELLSCYN 230 to 60 BROWNLEE 230 CKT 1    1.01    <= 0.95  478.00   92
60 OXBOW    230 to 60 BROWNLEE 230 CKT 1    1.00    <= 0.95  478.00   62
65 BLUE RIM 230 to 65 BRDGR PP 230 CKT 1    0.99    <= 0.95  423.90   886
65 BLUE RIM 230 to 65 S. TRONA 230 CKT 1    0.99    <= 0.95  423.90   886
40 ATHOLTAP 115 to 40 SCARCELO 115 CKT 1    0.98    <= 0.95  113.70   283
40 ANC LK T 230 to 40 COLUMBIA 230 CKT 1    0.98    <= 0.95  415.50   610
60 MCCALL   138 to 60 WEISER   138 CKT 1    0.97    <= 0.95  32.30   92
40 COLUMBIA 115 to 40 VALHALLA 115 CKT 2    0.97    <= 0.95  213.10   369
40 COLUMBIA 115 to 40 VALHALLA 115 CKT 1    0.97    <= 0.95  213.10   370
65 ASHLEY   138 to 73 VERNAL   138 CKT 1    0.97    <= 0.95  136.00   697
73 VERNAL   138 to 65 BONANZA  138 CKT 1    0.96    <= 0.95  192.00   699
65 BENLOMND 138 to 65 EL MONTE 138 CKT 2    0.95    <= 0.95  205.10   680
65 BENLOMND 138 to 65 EL MONTE 138 CKT 1    0.95    <= 0.95  205.10   681

Area Count, Rates better and away:
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Area 40: 15
Area 60: 3
Area 65: 20
Area 73: 1

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
60 PLST VLY 138.0 0.970  0.95 <= pu <= 1.05   1.00 pu kV  25
62 TAFTAUTO 115.0 0.933  0.95 <= pu <= 1.05   1.00 pu kV  135
40 SPIRITLK 115.0 0.941  0.95 <= pu <= 1.05   1.00 pu kV  271
40 SPIRITLT 115.0 0.941  0.95 <= pu <= 1.05   1.00 pu kV  271
40 CHENEY   115.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  278
40 SILVRLAK 115.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  278
65 JFRSNPHA 161.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1608
65 AEC IPC  138.0 0.936  0.95 <= pu <= 1.05   1.00 pu kV  661
65 AEC SCOV 138.0 0.936  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOP 1 138.0 0.937  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOP 2 138.0 0.937  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOPE  161.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANGEL    138.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  684
65 CLINTON  138.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  684
65 CARBON   138.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  699
65 DG UPLCO 138.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  699
65 HELPER   138.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  699
65 HELPER T 138.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  699
65 MOUND SW 138.0 0.974  0.95 <= pu <= 1.05   1.00 pu kV  699
65 SPHINX T 138.0 0.976  0.95 <= pu <= 1.05   1.00 pu kV  699
65 UPALCO   138.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  699
65 SMFLD TP 138.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  792
65 SMITHFLD 138.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  792
65 FRANNIE  230.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  794
65 GARLAND  230.0 0.941  0.95 <= pu <= 1.05   1.00 pu kV  794
73 WINDRIVR 115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  1368
73 WINDRIVT 115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  1368
40 ARMSTRNG 115.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1769
40 CHAMBERS 115.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  1769
40 CLARKSTN 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1769
40 CLEARWTR 115.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1769
62 HAMLTNMA 161.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1936
62 HAMLTNMB 161.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1936
73 RIVERTON 115.0 0.960  0.95 <= pu <= 1.05   1.00 pu kV  1939

Area Count, Volts better and away:
Area 40: 8
Area 60: 1
Area 62: 3
Area 65: 19
Area 73: 3
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Compost found the following for comparisons:
     80 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     305 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\hsbs\phsbs-2.out
     70 lines of MVA Rating Violations read from c:\uwk\mts\g1\pflow\lbl4\plbl4-2.out
     330 lines of kV Voltage Violations read from c:\uwk\mts\g1\pflow\lbl4\plbl4-2.out


**** RATES:  NEW ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 GAR2EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.15   1732.10   446
40 GAR1EAST 500 to 40 GARRISON 500 CKT 1    <0.95     1.15   1732.10   447
18 HA PS    345 to 65 REDBUTTE 345 CKT 1    <0.95     0.97   300.00   1605

**** RATES: WORSE ****
Component                                  w/o Prj  w/ Prj Rating   Cont#
65 BENLOMND 230 to 65 BENLOMND 138 CKT 1    1.06   1.18   267.00   1794
40 GARRISON 500 to 40 TAFT     500 CKT 2    1.00   1.28   944.00   451
40 GARRISON 500 to 40 TAFT     500 CKT 1    1.00   1.28   944.00   452
40 BEACON S 230 to 40 BEACON S 115 CKT 1    0.96   1.01   287.00   1748
40 BEACON N 230 to 40 BEACON N 115 CKT 1    0.96   1.01   287.00   1749

Area Count, Rates new and worse:
Area 18: 1
Area 40: 6
Area 65: 1

**** VOLTS:  NEW ****
Component          w/o Prj  w/ Prj  Rating     Cont#
62 JUDITHGP 230.0  >0.95    0.867  1.00 pu kV  446
63 MTSHAVRE 230.0  >0.95    0.651  1.00 pu kV  1552
63 MTSVER   230.0  >0.95    0.715  1.00 pu kV  1552
62 MTSGFALL 230.0  >0.95    0.861  1.00 pu kV  1552
62 MTSRNBW  230.0  >0.95    0.870  1.00 pu kV  1552
62 MTSGFALL 500.0  >0.95    0.992  1.00 pu kV  6
62 MTSDILL  500.0  >0.95    0.971  1.00 pu kV  7
62 SHELBY   230.0  >0.95    0.896  1.00 pu kV  1552
62 SHELBY   115.0  >0.95    0.867  1.00 pu kV  1552
62 CNRDWAPA 230.0  >0.95    0.912  1.00 pu kV  1552
62 CNRDWAPA 115.0  >0.95    0.904  1.00 pu kV  1552
62 GT FALLS 230.0  >0.95    0.941  1.00 pu kV  6
62 CNRD-SRA 115.0  >0.95    0.903  1.00 pu kV  1552
63 HAVRE    115.0  >0.95    0.659  1.00 pu kV  1552
63 RUDYARD  115.0  >0.95    0.727  1.00 pu kV  1552
63 TIBERTAP 115.0  >0.95    0.788  1.00 pu kV  1552
62 MT ASIMI 161.0  >0.95    0.931  1.00 pu kV  446
62 COLRPLJE 161.0  >0.95    0.897  1.00 pu kV  446
62 CLMBUSPM 161.0  >0.95    0.897  1.00 pu kV  446
40 OPPORTUN 115.0  >0.95    0.865  1.00 pu kV  576
63 MTSRICHC 230.0  >0.95    0.062  1.00 pu kV  1552
62 WILSALL  161.0  >0.95    0.924  1.00 pu kV  446
62 WILSALL  230.0  >0.95    0.933  1.00 pu kV  446
62 BLGS PHA 230.0  >0.95    0.937  1.00 pu kV  148
62 BROADVU  500.0  >0.95    0.967  1.00 pu kV  148
62 HARDIN   230.0  >0.95    0.931  1.00 pu kV  148
62 ALKALI   230.0  >0.95    0.924  1.00 pu kV  148
62 BASELINE 230.0  >0.95    0.926  1.00 pu kV  148
62 HUNTLEY  230.0  >0.95    0.921  1.00 pu kV  148
62 SHOREYRD 230.0  >0.95    0.925  1.00 pu kV  148
62 RMRK PHA 161.0  >0.95    0.937  1.00 pu kV  148
62 RIMROCK  161.0  >0.95    0.929  1.00 pu kV  148
62 HARDIN   115.0  >0.95    0.934  1.00 pu kV  148
62 BILINGS  230.0  >0.95    0.925  1.00 pu kV  148
62 ALKALI   161.0  >0.95    0.925  1.00 pu kV  148
62 BILINGSW 230.0  >0.95    0.924  1.00 pu kV  148
62 BROADVU  230.0  >0.95    0.922  1.00 pu kV  148
40 IRVIN    115.0  >0.95    0.868  1.00 pu kV  576
40 OPORTUNE 115.0  >0.95    0.867  1.00 pu kV  576
63 CRSOVRUM 230.0  >0.95    0.924  1.00 pu kV  148
63 CUSTER   230.0  >0.95    0.893  1.00 pu kV  148
63 MILCTYDC 230.0  >0.95    0.841  1.00 pu kV  148
63 ROSEBUD  230.0  >0.95    0.852  1.00 pu kV  148
62 TOWN2    500.0  >0.95    0.972  1.00 pu kV  446
62 TOWN1    500.0  >0.95    0.972  1.00 pu kV  447
62 BROADV&2 500.0  >0.95    0.971  1.00 pu kV  148
65 YELOWTLP 161.0  >0.95    0.960  1.00 pu kV  148
63 CROS PHA 230.0  >0.95    0.948  1.00 pu kV  148
62 ARMELLCR 115.0  >0.95    0.974  1.00 pu kV  174
62 ANACOND  230.0  >0.95    0.958  1.00 pu kV  446
62 ANACOND  161.0  >0.95    0.950  1.00 pu kV  446
62 ANA BPA  115.0  >0.95    0.976  1.00 pu kV  446
62 LANDRSFK 230.0  >0.95    0.967  1.00 pu kV  418
40 GARRISON 230.0  >0.95    0.976  1.00 pu kV  446
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40 GARRISON 500.0  >0.95    0.954  1.00 pu kV  446
65 GRASS CK 230.0  >0.95    0.964  1.00 pu kV  818
73 HOVENWEP 115.0  >0.95    0.946  1.00 pu kV  1536
62 GT FALLS 115.0  >0.95    0.953  1.00 pu kV  1552
62 DUTTON   115.0  >0.95    0.933  1.00 pu kV  1552
73 ELPASOTP 115.0  >0.95    0.948  1.00 pu kV  1929

**** VOLTS: WORSE ****
Component          w/o Prj w/ Prj  Rating     Cont#
62 ENNIS MT 161.0  0.934   0.885  1.00 pu kV  7
62 CUTBANK  115.0  0.945   0.864  1.00 pu kV  1552
62 CTBPUMP  115.0  0.945   0.865  1.00 pu kV  1552
62 VAL-WILL 115.0  0.941   0.889  1.00 pu kV  1552
62 BGTMBERA 161.0  0.936   0.882  1.00 pu kV  446
40 GAR1EAST 500.0  1.031   0.954  1.00 pu kV  1573
40 GAR2EAST 500.0  1.031   0.954  1.00 pu kV  1572

Area Count, Volts new and worse:
Area 40: 7
Area 62: 45
Area 63: 11
Area 65: 2
Area 73: 2

**** RATES: BETTER ****
Component                                  w/o Prj  w/ Prj Rating  Cont#
65 TREASTON 230 to 65 TREASTON 138 CKT 1    1.29   1.15   200.00   1847
40 N LEWIST 115 to 40 CLEARWTR 115 CKT 1    1.26   1.11   113.70   465
65 EMMAPARK 138 to 65 UPALCO   138 CKT 1    1.20   1.10   163.00   699
65 BONANZA  345 to 65 BONANZA  138 CKT 1    1.20   1.14   392.00   1471
65 EMMAPARK 138 to 65 PANTHER  138 CKT 1    1.19   1.08   163.00   699
65 JFRSNPHA 161 to 65 JEFFERSN 161 CKT 1    1.17   1.09   100.00   8
65 CARBON   138 to 65 PANTHER  138 CKT 1    1.15   1.05   163.00   699
40 MIDWAYB2 230 to 40 VANTAGE  230 CKT 1    1.02   0.96   378.50   461
40 COLUMBIA 115 to 40 GB55     115 CKT 1    1.00   0.95   127.70   241

**** RATES:  AWAY ****
Component                                    w/o Prj  w/ Prj  Rating   Cont#
40 BOUNDARY 230 to 40 BOUNDARY 115 CKT 1    1.09    <= 0.95  125.00   230
40 NEWPORTT 115 to 40 BLANCHRD 115 CKT 1    1.08    <= 0.95  113.70   283
40 BLANCHRD 115 to 40 HOODOO   115 CKT 1    1.07    <= 0.95  113.70   283
40 HOODOO   115 to 40 SPIRITLT 115 CKT 1    1.07    <= 0.95  111.90   283
40 DIAM LAK 115 to 40 SACHEEN  115 CKT 1    1.05    <= 0.95  131.50   283
40 SPIRITLT 115 to 40 ATHOLTAP 115 CKT 1    1.04    <= 0.95  113.70   283
40 NEWPORTT 115 to 40 PINE ST  115 CKT 1    1.03    <= 0.95  120.10   283
65 GRACE    161 to 65 GRACE    138 CKT 1    1.02    <= 0.95  168.00   1615
40 ATHOLTAP 115 to 40 SCARCELO 115 CKT 1    0.98    <= 0.95  113.70   283
40 ANC LK T 230 to 40 COLUMBIA 230 CKT 1    0.98    <= 0.95  415.50   610
65 FISHCREK 161 to 65 GOSHEN   161 CKT 1    0.98    <= 0.95  176.00   1615
40 COLUMBIA 115 to 40 VALHALLA 115 CKT 2    0.97    <= 0.95  213.10   369
40 COLUMBIA 115 to 40 VALHALLA 115 CKT 1    0.97    <= 0.95  213.10   370
65 FISHCREK 161 to 65 GRACE    161 CKT 1    0.96    <= 0.95  176.00   1615

Area Count, Rates better and away:
Area 40: 14
Area 65: 9

**** VOLTS: BETTER ****
Component          w/o Prj w/ Prj  Rating     Cont#

**** VOLTS:  AWAY ****
Component         w/o Prj     w/ Prj          Rating  Cont#
60 PLST VLY 138.0 0.970  0.95 <= pu <= 1.05   1.00 pu kV  25
62 TAFTAUTO 115.0 0.933  0.95 <= pu <= 1.05   1.00 pu kV  135
40 SPIRITLK 115.0 0.941  0.95 <= pu <= 1.05   1.00 pu kV  271
40 SPIRITLT 115.0 0.941  0.95 <= pu <= 1.05   1.00 pu kV  271
40 CHENEY   115.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  278
40 SILVRLAK 115.0 0.948  0.95 <= pu <= 1.05   1.00 pu kV  278
65 JFRSNPHA 161.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1608
65 AEC IPC  138.0 0.936  0.95 <= pu <= 1.05   1.00 pu kV  661
65 AEC SCOV 138.0 0.936  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOP 1 138.0 0.937  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOP 2 138.0 0.937  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANTLOPE  161.0 0.939  0.95 <= pu <= 1.05   1.00 pu kV  661
65 ANGEL    138.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  684
65 CLINTON  138.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  684
65 CARBON   138.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  699
65 DG UPLCO 138.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  699
65 HELPER   138.0 0.942  0.95 <= pu <= 1.05   1.00 pu kV  699
65 HELPER T 138.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  699
65 MOUND SW 138.0 0.974  0.95 <= pu <= 1.05   1.00 pu kV  699
65 SPHINX T 138.0 0.976  0.95 <= pu <= 1.05   1.00 pu kV  699
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65 UPALCO   138.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  699
65 SMFLD TP 138.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  792
65 SMITHFLD 138.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  792
65 FRANNIE  230.0 0.940  0.95 <= pu <= 1.05   1.00 pu kV  794
65 GARLAND  230.0 0.941  0.95 <= pu <= 1.05   1.00 pu kV  794
73 WINDRIVR 115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  1368
73 WINDRIVT 115.0 0.958  0.95 <= pu <= 1.05   1.00 pu kV  1368
40 ARMSTRNG 115.0 0.944  0.95 <= pu <= 1.05   1.00 pu kV  1769
40 CHAMBERS 115.0 0.946  0.95 <= pu <= 1.05   1.00 pu kV  1769
40 CLARKSTN 115.0 0.949  0.95 <= pu <= 1.05   1.00 pu kV  1769
40 CLEARWTR 115.0 0.947  0.95 <= pu <= 1.05   1.00 pu kV  1769
62 HAMLTNMA 161.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1936
62 HAMLTNMB 161.0 0.943  0.95 <= pu <= 1.05   1.00 pu kV  1936
73 RIVERTON 115.0 0.960  0.95 <= pu <= 1.05   1.00 pu kV  1939

Area Count, Volts better and away:
Area 40: 8
Area 60: 1
Area 62: 3
Area 65: 19
Area 73: 3
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WESTERN SYSTEMS COORDINATING COUNCIL WAPA UGP JUNE 2002
G1

FILE made from cont. file : [C:\uwk\mts\g1\pflow\lsbs\cLSBS-1.out]
DATE REPORT MADE - Tue May 07 16:27:29 2002

Outage 103 failed to converge
Outage 379 failed to converge
Outage 581 failed to converge
Outage 1629 failed to converge
Outage 1666 failed to converge
Outage 1680 failed to converge
Outage 1681 failed to converge
Outage 1766 failed to converge

--------FROM bus--------					---------TO bus---------									base	pu	rating			
#	---name---	-kv-	ar	#	---name---	-kv-	ar	ID	--mw-	-mvar	amps	load	load	[MVA]	Cnt	# freq.			
73187	"SPRINGCK"	115	73	73367	"FTSANDER"	115	73	"1 "	0	13333	66939	0.00	166.67	80.00	1249	1			
48125	"FOURLBPA"	115	40	48132	"HAL&WHIT"	115	40	"1 "	108	132	857	0.49	2.97	57.40	434	2			
48303	"OROFINO "	115	40	40023	"AHSAHKA "	115	40	"1 "	-219	1	1107	0.78	1.94	113.70	411	3			
79023	"DURANGO "	115	73	79191	"COYOTE G"	115	73	"1 "	119	-18	622	0.51	1.46	85.00	1930	2			
48319	"PLEASANT"	115	40	48355	"RATHDRUM"	115	40	"1 "	-110	-42	621	0.72	1.44	85.80	577	4			
65280	"CARBON "	138	65	66395	"SPAN F&1"	138	65	"1 "	109	-1	449	0.65	1.43	75.10	722	1			
66395	"SPAN F&1"	138	65	66405	"SPAN FRK"	138	65	"1 "	90	-23	446	0.63	1.42	75.00	722	1			
40459	"GARRISON"	500	40	41057	"TAFT "	500	40	"2 "	1327	-204	1539	0.81	1.41	944.00	445	1			
40459	"GARRISON"	500	40	41057	"TAFT "	500	40	"1 "	1327	-204	1539	0.81	1.41	944.00	446	1			
65192	"BONANZA "	138	65	66278	"RANGELY "	138	65	"1 "	161	10	660	0.40	1.37	115.00	1791	1			
40855	"PRAIRIEB"	115	40	48349	"RAMSEY "	115	40	"1 "	-110	-43	618	0.61	1.35	91.00	570	3			
79191	"COYOTE G"	115	73	79260	"ELPASOTP"	115	73	"1 "	97	-44	563	0.39	1.32	85.00	1507	2			
79105	"GLADETAP"	115	19	79260	"ELPASOTP"	115	73	"1 "	-95	49	561	0.39	1.32	85.00	1507	2			
48253	"N LEWIST"	115	40	48075	"CLEARWTR"	115	40	"1 "	146	34	750	0.47	1.31	113.70	459	1			
48311	"OTIS "	115	40	47511	"MOAB "	115	40	"1 "	-97	-34	561	0.59	1.30	85.80	577	2			
48051	"BURKE "	115	40	48053	"BURKAVAA"	115	40	"1 "	-86	34	465	0.71	1.26	73.90	173	3			
47511	"MOAB "	115	40	48319	"PLEASANT"	115	40	"1 "	-100	-37	570	0.57	1.25	91.00	577	2			
79042	"HOTCHKIS"	115	73	79104	"GARNETAP"	115	73	"1 "	102	-9	530	0.47	1.24	85.00	1489	2			
48329	"POST FLS"	115	40	40855	"PRAIRIEB"	115	40	"1 "	-93	-35	527	0.44	1.22	85.80	570	3			
48051	"BURKE "	115	40	48055	"BURKAVAB"	115	40	"1 "	-82	34	447	0.67	1.21	73.90	312	2			
48023	"BEACON N"	115	40	48371	"ROSSPARK"	115	40	"1 "	158	41	822	0.80	1.18	138.20	278	4			
79013	"CRAIG "	230	73	79059	"RIFLE WA"	230	73	"1 "	379	73	950	0.64	1.17	324.00	1641	1			
60085	"BRIDGER "	345	60	60060	"BORAH "	345	60	"1 "	993	281	1644	0.84	1.10	892.20	43	2			
73088	"HOYT "	115	73	73103	"L.MEADOW"	115	73	"1 "	43	3	220	0.14	1.10	40.00	1172	2			
79059	"RIFLE WA"	230	73	79070	"NORTHFRK"	230	73	"1 "	262	18	663	0.59	1.10	239.00	1489	1			
79034	"GRANDJCT"	115	70	79048	"MONTROSE"	115	73	"1 "	80	-9	420	0.41	1.09	76.50	1489	1			
65193	"BONANZA "	345	65	65192	"BONANZA "	138	65	"1 "	-401	135	424	0.78	1.08	392.00	1465	2			
65565	"FLAMGORG"	230	65	79026	"FLAMGORG"	138	73	"1 "	-107	11	107	0.53	1.07	100.00	693	3			
65565	"FLAMGORG"	230	65	79026	"FLAMGORG"	138	73	"2 "	-107	11	107	0.53	1.07	100.00	693	3			
46805	"CHELAN "	115	40	48149	"HEADWORK"	115	40	"1 "	-92	33	482	0.99	1.06	91.00	636	1928			
65520	"EMMAPARK"	138	65	66590	"UPALCO "	138	65	"1 "	-126	67	596	0.45	1.06	136.00	693	1			
60085	"BRIDGER "	345	60	60190	"KINPORT "	345	60	"1 "	944	287	1573	0.73	1.05	892.20	42	2			
79045	"LOSTCANY"	230	73	79044	"LOSTCANY"	115	73	"1 "	118	9	118	0.38	1.05	112.00	1935	2			
40023	"AHSAHKA "	115	40	40367	"DWORSHAK"	115	40	"1 "	-223	-9	1116	0.42	1.04	213.10	411	1			
65520	"EMMAPARK"	138	65	66183	"PANTHER "	138	65	"1 "	126	-67	595	0.44	1.04	136.00	693	1			
79085	"NORTHMSA"	115	73	79104	"GARNETAP"	115	73	"1 "	-79	27	444	0.28	1.04	85.00	1489	1			
62054	"BROADV&1"	500	62	62046	"BROADVU "	500	62	"1 "	1841	-150	2051	0.54	1.03	1732.00	144	2			
62053	"BROADV&2"	500	62	62046	"BROADVU "	500	62	"2 "	1833	-155	2044	0.52	1.02	1732.00	145	2			
48029	"BEACON S"	115	40	48271	"NINTHCNT"	115	40	"1 "	91	21	466	0.64	1.02	91.00	251	2			
48051	"BURKE "	115	40	48217	"LUCKYFTP"	115	40	"1 "	81	-29	438	0.59	1.02	85.80	314	3			
60085	"BRIDGER "	345	60	65665	"GOSHEN "	345	65	"1 "	919	221	1506	0.68	1.01	892.20	43	2			
65280	"CARBON "	138	65	66183	"PANTHER "	138	65	"1 "	-117	75	573	0.40	1.01	136.00	693	1			
62057	"COLSTRP "	500	62	62060	"COLSTRP "	230	62	"2 "	-498	87	506	0.54	1.01	500.00	1717	1			
62057	"COLSTRP "	500	62	62060	"COLSTRP "	230	62	"1 "	-499	86	507	0.54	1.01	500.00	1718	1			
73039	"CARTERLK"	115	73	73058	"FLATIRON"	115	73	"1 "	-80	-14	402	0.64	1.00	80.00	1269	1			
79085	"NORTHMSA"	115	73	79115	"SPRCKTAP"	115	73	"1 "	75	-28	427	0.24	1.00	85.00	1489	1			
65145	"BENLOMND"	138	65	66650	"WARREN "	138	65	"1 "	124	24	515	0.56	0.98	126.00	678	1			
70265	"LOOKOUT "	115	70	70266	"LOOKOUT "	230	70	"1 "	-108	99	147	0.65	0.98	150.00	1852	1			
48025	"BEACON N"	230	40	48023	"BEACON N"	115	40	"1 "	272	62	279	0.60	0.97	287.00	274	1			
48031	"BEACON S"	230	40	48029	"BEACON S"	115	40	"1 "	273	61	279	0.60	0.97	287.00	274	1			
70265	"LOOKOUT "	115	70	70266	"LOOKOUT "	230	70	"2 "	-107	98	145	0.63	0.97	150.00	1851	1			
48153	"HECLAT "	115	40	48041	"BIGCREEK"	115	40	"1 "	75	-31	411	0.53	0.96	85.80	314	2			
48217	"LUCKYFTP"	115	40	48153	"HECLAT "	115	40	"1 "	75	-31	411	0.53	0.96	85.80	314	2			
73211	"WELD LM"	115	73	73212	"WELD LM"	230	73	"1 "	-118	83	144	0.76	0.96	150.00	1618	1			
40088	"BELL MI "	230	40	40087	"BELL BPA"	115	40	"1 "	232	48	237	0.78	0.95	249.00	1740	2			

low voltage violations							delta voltage violations						high voltage violations					
CNT	freq	---name---	-kv-	ar	-base- pu vt	-cont- -case- pu vt	---name---	-kv-	ar	freq	delta V	freq	---name---	-kv-	ar	-base- pu vt	-cont- -case- pu vt
92	0		0	0	99.000	99.000	HINES	115	60	3	0.063	0		0	0	99.000	0.000
138	0		0	0	99.000	99.000	GAR2EAST	500	40	1	0.062	0		0	0	99.000	0.000
139	0		0	0	99.000	99.000	GAR1EAST	500	40	1	0.062	0		0	0	99.000	0.000
176	0		0	0	99.000	99.000	CONRAD	115	62	2	0.058	0		0	0	99.000	0.000
225	0		0	0	99.000	99.000	AHSAHKA	115	40	1	0.051	0		0	0	99.000	0.000
241	3	OTIS	230	40	0.950	0.946		0	0	0	0.000	0		0	0	99.000	0.000
248	3	OTIS	230	40	0.950	0.946		0	0	0	0.000	0		0	0	99.000	0.000
272	1	CHENEY	115	40	0.970	0.948		0	0	0	0.000	0		0	0	99.000	0.000
307	0		0	0	99.000	99.000	BRIDGPRT	115	40	2	0.060	0		0	0	99.000	0.000
321	1	OTIS	230	40	0.950	0.949		0	0	0	0.000	0		0	0	99.000	0.000
353	0		0	0	99.000	99.000	KALISPEL	115	40	1	0.057	0		0	0	99.000	0.000
396	3	OTIS	230	40	0.950	0.946		0	0	0	0.000	0		0	0	99.000	0.000
398	3	OTIS	230	40	0.950	0.947		0	0	0	0.000	0		0	0	99.000	0.000
411	1	DELIGHT	115	40	0.978	0.949		0	0	0	0.000	0		0	0	99.000	0.000
412	4	CHENEY	115	40	0.970	0.945		0	0	0	0.000	0		0	0	99.000	0.000
419	8	CHESTER	115	40	0.952	0.930		0	0	0	0.000	0		0	0	99.000	0.000
439	1	DELIGHT	115	40	0.978	0.941		0	0	0	0.000	0		0	0	99.000	0.000
445	0		0	0	99.000	99.000	GAR1EAST	500	40	5	0.073	0		0	0	99.000	0.000
446	0		0	0	99.000	99.000	GAR1EAST	500	40	5	0.073	0		0	0	99.000	0.000
456	0		0	0	99.000	99.000	HANNA	115	40	1	0.056	0		0	0	99.000	0.000
466	3	OTIS	230	40	0.950	0.945		0	0	0	0.000	0		0	0	99.000	0.000
473	3	OTIS	230	40	0.950	0.944		0	0	0	0.000	0		0	0	99.000	0.000
514	0		0	0	99.000	99.000	ROUNDUP	230	40	1	0.069	0		0	0	99.000	0.000
528	13	CHESTER	115	40	0.952	0.912		0	0	0	0.000	0		0	0	99.000	0.000
561	5	CHESTER	115	40	0.952	0.934		0	0	0	0.000	0		0	0	99.000	0.000

562	11	CHESTER	115	40	0.952	0.913		0	0	0	0.000	0		0	0	99.000	0.000
570	14	CHESTER	115	40	0.952	0.903	PLEASANT	115	40	3	0.064	0		0	0	99.000	0.000
574	11	CHESTER	115	40	0.952	0.920		0	0	0	0.000	0		0	0	99.000	0.000
577	14	CHESTER	115	40	0.952	0.904	PRAIRIEB	115	40	5	0.070	0		0	0	99.000	0.000
579	1	OTIS	230	40	0.950	0.949		0	0	0	0.000	0		0	0	99.000	0.000
580	3	OTIS	230	40	0.950	0.946		0	0	0	0.000	0		0	0	99.000	0.000
589	2	GAFFNEY	115	40	0.984	0.931	GAFFNEY	115	40	1	0.053	0		0	0	99.000	0.000
693	6	PAGOSA	115	73	0.962	0.928		0	0	0	0.000	0		0	0	99.000	0.000
722	1	SPAN F&1	138	65	0.968	0.872	SPAN F&1	138	65	1	0.096	0		0	0	99.000	0.000
829	1	PAGOSA	115	73	0.962	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1172	8	BRUSHTAP	115	73	1.011	0.929	BRUSHTAP	115	73	8	0.082	0		0	0	99.000	0.000
1196	6	FME	115	73	1.001	0.945	FME	115	73	6	0.056	0		0	0	99.000	0.000
1249	0		0	0	99.000	99.000	FTSANDER	115	73	1	0.060	0		0	0	99.000	0.000
1337	0		0	0	99.000	99.000	REDWILLW	115	73	1	0.054	0		0	0	99.000	0.000
1365	4	SANDHILL	115	73	1.012	0.936	SANDHILL	115	73	3	0.076	0		0	0	99.000	0.000
1374	0		0	0	99.000	99.000	FTSANDER	115	73	1	0.060	0		0	0	99.000	0.000
1379	3	GALIEN	115	73	0.987	0.933	GALIEN	115	73	1	0.054	0		0	0	99.000	0.000
1483	1	PAGOSA	115	73	0.962	0.941		0	0	0	0.000	0		0	0	99.000	0.000
1489	3	GARNET M	115	73	0.980	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1497	1	PAGOSA	115	73	0.962	0.945		0	0	0	0.000	0		0	0	99.000	0.000
1502	27	HOVENWEP	115	73	0.979	0.923	CAHONE	115	73	22	0.057	0		0	0	99.000	0.000
1507	21	PAGOSA	115	73	0.962	0.931		0	0	0	0.000	0		0	0	99.000	0.000
1510	1	PAGOSA	115	73	0.962	0.940		0	0	0	0.000	0		0	0	99.000	0.000
1514	1	PAGOSA	115	73	0.962	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1539	1	PAGOSA	115	73	0.962	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1552	0		0	0	99.000	99.000	HARLEM	161	63	1	0.053	0		0	0	99.000	0.000
1566	0		0	0	99.000	99.000	GAR2EAST	500	40	1	0.057	0		0	0	99.000	0.000
1567	0		0	0	99.000	99.000	GAR1EAST	500	40	1	0.057	0		0	0	99.000	0.000
1599	1	PAGOSA	115	73	0.962	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1630	1	PAGOSA	115	73	0.962	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1671	1	PAGOSA	115	73	0.962	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1779	0		0	0	99.000	99.000	WELLS	115	40	3	0.065	0		0	0	99.000	0.000
1791	1	SPAN F&1	138	65	0.968	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1863	22	WARRENLM	115	73	0.996	0.902	ARCHER	115	73	24	0.098	0		0	0	99.000	0.000
1891	4	SIDNEY	115	73	1.014	0.941	SIDNEY	115	73	5	0.073	0		0	0	99.000	0.000
1902	0		0	0	99.000	99.000	CTTNWD N	115	73	3	0.055	0		0	0	99.000	0.000
1917	10	PAGOSA	115	73	0.962	0.912	HESPERUS	115	73	4	0.054	0		0	0	99.000	0.000
1922	2	HAVRE	115	63	0.989	0.914	HAVRE	115	63	2	0.075	0		0	0	99.000	0.000
1930	1	HOVENWEP	115	73	0.979	0.948		0	0	0	0.000	0		0	0	99.000	0.000

BUSES with voltage violations

bus no	---name---	--kv-	area	-base-case- pu vt	BASE CASE VOLT VIOLATION	lowest -cont-case- pu vt	cont with lowest pu vt	contingencies with voltage violations
61825	HINES	138.0	60	1.045		0.984	92: 92	
61826	HINES	115.0	60	1.048		0.985	92: 92	
61835	WJOHN DY	138.0	60	1.038		0.977	92: 92	
40453	GAR2EAST	500.0	40	1.082		1.009	445:138	445 446 1566
40451	GAR1EAST	500.0	40	1.082		1.009	445:139	445 446 1567
62087	CONRAD	115.0	62	1.012		0.954	176:176	
48069	CHESTER	115.0	40	0.952		0.903	570:241	248 396 398 419 466 473 528 561 562 570 574 577 580
48299	OPPORTUN	115.0	40	0.953		0.905	570:241	248 396 398 419 466 473 528 561 562 570 574 577 580
48306	OTIS	230.0	40	0.950		0.904	570:241	248 321 396 398 419 466 473 528 561 562 570 574 577 579 580
40215	CHENEY	115.0	40	0.970		0.945	412:272	412
47013	BRIDGPRT	115.0	40	1.055		0.995	307:307	1779
40589	KALISPEL	115.0	40	1.019		0.962	353:353	
47025	DELIGHT	115.0	40	0.978		0.941	439:411	412 439 589
40439	FOURLKS	115.0	40	0.972		0.947	412:412	
48387	SILVRLAK	115.0	40	0.972		0.946	412:412	
48021	BARKER	115.0	40	0.967		0.919	570:419	528 562 570 574 577
48117	EASTFARM	115.0	40	0.970		0.918	577:419	528 562 570 574 577
48165	IRVIN	115.0	40	0.957		0.908	570:419	528 561 562 570 574 577
48185	LIBTYLK	115.0	40	0.966		0.919	570:419	528 561 562 570 574 577
48311	OTIS	115.0	40	0.968		0.920	570:419	528 562 570 574 577
47051	HANNA	115.0	40	1.030		0.974	456:456	
40905	ROUNDUP	230.0	40	1.029		0.960	514:514	
47033	DOWER RD	115.0	40	0.973		0.913	577:528	562 570 574 577
48111	DOWERRDT	115.0	40	0.974		0.913	577:528	562 570 574 577
47511	MOAB	115.0	40	0.974		0.918	570:528	570 577
48310	OPORTUNE	115.0	40	0.975		0.918	570:528	570 577
48329	POST FLS	115.0	40	0.974		0.913	577:528	562 570 574 577
48319	PLEASANT	115.0	40	0.981		0.917	570:570	
40855	PRAIRIEB	115.0	40	0.980		0.910	577:577	
40449	GAFFNEY	115.0	40	0.984		0.931	589:589	
66395	SPAN F&1	138.0	65	0.968		0.872	722:693	722 1791
79049	MONTROSE	345.0	73	0.985		0.942	693:693	
79077	BAYFIELD	115.0	73	0.979		0.930	1917:693	1507 1917
79086	PAGOSA	115.0	73	0.962		0.912	1917:693	829 1483 1497 1502 1507 1510 1514 1539 1599 1630 1671 1917
79108	HOVENWEP	115.0	73	0.979		0.923	1502:693	1502 1507 1930
79121	SANDCANY	115.0	73	0.982		0.926	1502:693	1502 1507
73023	BIJOUTAP	115.0	73	1.000		0.943	1172:1172	
73031	BRUSHTAP	115.0	73	1.011		0.929	1172:1172	
73305	EFMORGTP	115.0	73	1.001		0.932	1172:1172	1196
73310	FME	115.0	73	1.001		0.931	1172:1172	1196
73311	FMS	115.0	73	1.000		0.933	1172:1172	1196
73377	EXCEL	115.0	73	1.000		0.933	1172:1172	1196
73378	FMN	115.0	73	1.001		0.932	1172:1172	1196
73379	FMWEST	115.0	73	1.000		0.933	1172:1172	1196
73367	FTSANDER	115.0	73	1.020		0.941	1863:1249	1374 1863
73005	ALVIN	115.0	73	0.999		0.941	1365:1365	
73175	SANDHILL	115.0	73	1.012		0.936	1365:1365	
73210	WAUNETA	115.0	73	0.992		0.949	1365:1365	
73304	CRETESWT	115.0	73	0.999		0.941	1365:1365	
73059	FLEMING	115.0	73	0.986		0.938	1379:1379	
73080	HAXTUN	115.0	73	0.985		0.943	1379:1379	
73478	GALIEN	115.0	73	0.987		0.933	1379:1379	
79079	BULLOCK	115.0	73	0.985		0.949	1489:1489	
79085	NORTHMSA	115.0	73	0.985		0.949	1489:1489	
79103	GARNET M	115.0	73	0.980		0.947	1489:1489	
79011	CAHONE	115.0	73	0.985		0.928	1502:1502	1507
79012	CORTEZ	115.0	73	0.990		0.935	1502:1502	1507
79044	LOSTCANY	115.0	73	0.993		0.939	1502:1502	1507
79045	LOSTCANY	230.0	73	0.993		0.936	1502:1502	
79073	BLUEDOOR	115.0	73	0.990		0.935	1502:1502	1507
79074	E.CORTEZ	115.0	73	0.991		0.936	1502:1502	1507
79075	EMPIRETS	115.0	73	0.990		0.935	1502:1502	1507

79080	CASCADEL	115.0	73	0.988	0.940	1502:1502	1917
79088	ROCKWOOD	115.0	73	0.987	0.939	1917:1502	1917
79107	HOVEN NO	115.0	73	0.984	0.928	1502:1502	1507
79110	MAIN CO	115.0	73	0.984	0.928	1502:1502	1507
79111	MANCOSTP	115.0	73	0.990	0.941	1502:1502	
79117	Y.JACK 2	115.0	73	0.984	0.927	1502:1502	1507
79118	Y.JACK W	115.0	73	0.983	0.927	1502:1502	1507
79120	MOQUI C	115.0	73	0.984	0.928	1502:1502	1507
79122	TOWAOC	115.0	73	0.990	0.935	1502:1502	1507
79179	GRT CUT	115.0	73	0.990	0.935	1502:1502	1507
79180	GRCUT TP	115.0	73	0.990	0.935	1502:1502	1507
79257	AMES	115.0	73	0.992	0.942	1502:1502	
79194	BURROBDG	115.0	73	0.990	0.940	1502:1502	
79262	CEMNT CK	115.0	73	0.985	0.929	1502:1502	1507
79256	SILVERTN	115.0	73	0.990	0.939	1502:1502	
79189	SUNSH SM	115.0	73	0.992	0.943	1502:1502	
79188	TELLURID	115.0	73	0.986	0.936	1502:1502	
79191	COYOTE G	115.0	73	0.991	0.946	1507:1507	
79260	ELPASOTP	115.0	73	0.992	0.947	1507:1507	
47099	WELLS	115.0	40	1.062	0.997	1779:1779	
73008	ARCHER	115.0	73	1.009	0.911	1863:1863	
73043	CHEYENNE	115.0	73	0.999	0.908	1863:1863	
73066	GEMCTYTP	115.0	73	1.019	0.940	1863:1863	
73077	HAPPYJCK	115.0	73	0.997	0.906	1863:1863	
73109	LARAMIE	115.0	73	1.012	0.937	1863:1863	
73128	MAY	115.0	73	1.019	0.949	1863:1863	
73139	MYERS	115.0	73	1.008	0.914	1863:1863	
73140	MYERS TP	115.0	73	1.008	0.914	1863:1863	
73146	OASISTAP	115.0	73	1.020	0.949	1863:1863	
73152	PINEBLUF	115.0	73	1.004	0.935	1863:1863	
73154	POLE CK	115.0	73	1.007	0.925	1863:1863	
73161	QUALLS	115.0	73	1.006	0.924	1863:1863	
73172	ROCKPRTP	115.0	73	1.006	0.937	1863:1863	
73173	ROUNDTOP	115.0	73	1.004	0.946	1863:1863	
73178	SENTINEL	115.0	73	1.003	0.945	1863:1863	
73183	SKYLINE	115.0	73	0.998	0.903	1863:1863	
73187	SPRINGCK	115.0	73	1.020	0.941	1863:1863	
73348	CORLETT	115.0	73	0.996	0.903	1863:1863	
73375	WARRENLM	115.0	73	0.996	0.902	1863:1863	
73480	CROWCRK	115.0	73	1.000	0.907	1863:1863	
73504	PONNEQUI	115.0	73	1.003	0.925	1863:1863	
73046	DALTON	115.0	73	1.006	0.943	1891:1891	
73092	JACINTO	115.0	73	1.006	0.947	1891:1891	
73179	SIDNEY	115.0	73	1.014	0.941	1891:1891	
73236	GREENWOD	115.0	73	1.003	0.949	1891:1891	
79023	DURANGO	115.0	73	0.987	0.943	1917:1917	
79071	HESPERUS	115.0	73	0.991	0.937	1917:1917	
79076	AM EAST	115.0	73	0.983	0.932	1917:1917	
79078	BODO	115.0	73	0.986	0.941	1917:1917	
79089	SHENDOAH	115.0	73	0.987	0.947	1917:1917	
79099	FLOR.RIV	115.0	73	0.985	0.933	1917:1917	
63007	HAVRE	115.0	63	0.989	0.914	1922:1922	
63013	RUDYARD	115.0	63	0.997	0.940	1922:1922	

WESTERN SYSTEMS COORDINATING COUNCIL WAPA UGP JUNE 2002
G1

FILE made from cont. file : [C:\uwk\mts\g1\pflow\lsbs\cLSBS-2.out]
DATE REPORT MADE - Tue May 07 16:28:16 2002

Outage 103 failed to converge
Outage 379 failed to converge
Outage 581 failed to converge
Outage 1629 failed to converge
Outage 1666 failed to converge
Outage 1680 failed to converge
Outage 1681 failed to converge
Outage 1766 failed to converge

--------FROM bus--------					---------TO bus---------								base	pu	rating		
#	---name---	-kv-	ar	#	---name---	-kv-	ar	ID	--mw-	-mvar	amps	load	load	[MVA]	Cnt	# freq.
48125	"FOURLBPA"	115	40	48132	"HAL&WHIT"	115	40	"1 "	108	132	857	0.49	2.97	57.40	434	2
48303	"OROFINO "	115	40	40023	"AHSAHKA "	115	40	"1 "	-219	1	1107	0.78	1.94	113.70	411	3
48319	"PLEASANT"	115	40	48355	"RATHDRUM"	115	40	"1 "	-110	-42	621	0.72	1.44	85.80	577	4
40459	"GARRISON"	500	40	41057	"TAFT "	500	40	"2 "	1327	-204	1539	0.81	1.41	944.00	445	1
40459	"GARRISON"	500	40	41057	"TAFT "	500	40	"1 "	1327	-204	1539	0.81	1.41	944.00	446	1
40855	"PRAIRIEB"	115	40	48349	"RAMSEY "	115	40	"1 "	-110	-43	618	0.61	1.35	91.00	570	3
79191	"COYOTE G"	115	73	79260	"ELPASOTP"	115	73	"1 "	97	-44	563	0.39	1.32	85.00	1507	2
79105	"GLADETAP"	115	19	79260	"ELPASOTP"	115	73	"1 "	-95	49	561	0.39	1.32	85.00	1507	2
48253	"N LEWIST"	115	40	48075	"CLEARWTR"	115	40	"1 "	146	34	750	0.47	1.31	113.70	459	1
48311	"OTIS "	115	40	47511	"MOAB "	115	40	"1 "	-97	-34	561	0.59	1.30	85.80	577	2
48051	"BURKE "	115	40	48053	"BURKAVAA"	115	40	"1 "	-86	34	465	0.71	1.26	73.90	173	3
47511	"MOAB "	115	40	48319	"PLEASANT"	115	40	"1 "	-100	-37	570	0.57	1.25	91.00	577	2
48329	"POST FLS"	115	40	40855	"PRAIRIEB"	115	40	"1 "	-93	-35	527	0.44	1.22	85.80	570	3
48051	"BURKE "	115	40	48055	"BURKAVAB"	115	40	"1 "	-82	34	447	0.67	1.21	73.90	312	2
48023	"BEACON N"	115	40	48371	"ROSSPARK"	115	40	"1 "	158	41	822	0.80	1.18	138.20	278	4
65193	"BONANZA "	345	65	65192	"BONANZA "	138	65	"1 "	-401	135	424	0.78	1.08	392.00	1465	2
46805	"CHELAN "	115	40	48149	"HEADWORK"	115	40	"1 "	-92	33	482	0.99	1.06	91.00	636	1928
40023	"AHSAHKA "	115	40	40367	"DWORSHAK"	115	40	"1 "	-223	-9	1116	0.42	1.04	213.10	411	1
48029	"BEACON S"	115	40	48271	"NINTHCNT"	115	40	"1 "	91	21	466	0.64	1.02	91.00	251	2
48051	"BURKE "	115	40	48217	"LUCKYFTP"	115	40	"1 "	81	-29	438	0.59	1.02	85.80	314	3
65192	"BONANZA "	138	65	66278	"RANGELY "	138	65	"1 "	161	10	660	0.29	0.99	160.00	1791	1
70265	"LOOKOUT "	115	70	70266	"LOOKOUT "	230	70	"1 "	-108	99	147	0.65	0.98	150.00	1852	1
48025	"BEACON N"	230	40	48023	"BEACON N"	115	40	"1 "	272	62	279	0.60	0.97	287.00	274	1
48031	"BEACON S"	230	40	48029	"BEACON S"	115	40	"1 "	273	61	279	0.60	0.97	287.00	274	1
70265	"LOOKOUT "	115	70	70266	"LOOKOUT "	230	70	"2 "	-107	98	145	0.63	0.97	150.00	1851	1
48153	"HECLAT "	115	40	48041	"BIGCREEK"	115	40	"1 "	75	-31	411	0.53	0.96	85.80	314	2
48217	"LUCKYFTP"	115	40	48153	"HECLAT "	115	40	"1 "	75	-31	411	0.53	0.96	85.80	314	2

low voltage violations							delta voltage violations						high voltage violations					
CNT	freq	---name---	-kv-	ar	-base- pu vt	-cont- -case- pu vt	---name---	-kv-	ar	freq	delta V	freq	---name---	-kv-	ar	-base- pu vt	-cont- -case- pu vt
92	0		0	0	99.000	99.000	HINES	115	60	3	0.063	0		0	0	99.000	0.000
138	0		0	0	99.000	99.000	GAR2EAST	500	40	1	0.062	0		0	0	99.000	0.000
139	0		0	0	99.000	99.000	GAR1EAST	500	40	1	0.062	0		0	0	99.000	0.000
176	0		0	0	99.000	99.000	CONRAD	115	62	2	0.058	0		0	0	99.000	0.000
225	0		0	0	99.000	99.000	AHSAHKA	115	40	1	0.051	0		0	0	99.000	0.000
241	3	OTIS	230	40	0.950	0.946		0	0	0	0.000	0		0	0	99.000	0.000
248	3	OTIS	230	40	0.950	0.946		0	0	0	0.000	0		0	0	99.000	0.000
272	1	CHENEY	115	40	0.970	0.948		0	0	0	0.000	0		0	0	99.000	0.000
307	0		0	0	99.000	99.000	BRIDGPRT	115	40	2	0.060	0		0	0	99.000	0.000
321	1	OTIS	230	40	0.950	0.949		0	0	0	0.000	0		0	0	99.000	0.000
353	0		0	0	99.000	99.000	KALISPEL	115	40	1	0.057	0		0	0	99.000	0.000
396	3	OTIS	230	40	0.950	0.946		0	0	0	0.000	0		0	0	99.000	0.000
398	3	OTIS	230	40	0.950	0.947		0	0	0	0.000	0		0	0	99.000	0.000
411	1	DELIGHT	115	40	0.978	0.949		0	0	0	0.000	0		0	0	99.000	0.000
412	4	CHENEY	115	40	0.970	0.945		0	0	0	0.000	0		0	0	99.000	0.000
419	8	CHESTER	115	40	0.952	0.930		0	0	0	0.000	0		0	0	99.000	0.000
439	1	DELIGHT	115	40	0.978	0.941		0	0	0	0.000	0		0	0	99.000	0.000
445	0		0	0	99.000	99.000	GAR1EAST	500	40	5	0.073	0		0	0	99.000	0.000
446	0		0	0	99.000	99.000	GAR1EAST	500	40	5	0.073	0		0	0	99.000	0.000
456	0		0	0	99.000	99.000	HANNA	115	40	1	0.056	0		0	0	99.000	0.000
466	3	OTIS	230	40	0.950	0.945		0	0	0	0.000	0		0	0	99.000	0.000
473	3	OTIS	230	40	0.950	0.944		0	0	0	0.000	0		0	0	99.000	0.000
514	0		0	0	99.000	99.000	ROUNDUP	230	40	1	0.069	0		0	0	99.000	0.000
528	13	CHESTER	115	40	0.952	0.912		0	0	0	0.000	0		0	0	99.000	0.000
561	5	CHESTER	115	40	0.952	0.934		0	0	0	0.000	0		0	0	99.000	0.000
562	11	CHESTER	115	40	0.952	0.913		0	0	0	0.000	0		0	0	99.000	0.000
570	14	CHESTER	115	40	0.952	0.903	PLEASANT	115	40	3	0.064	0		0	0	99.000	0.000
574	11	CHESTER	115	40	0.952	0.920		0	0	0	0.000	0		0	0	99.000	0.000
577	14	CHESTER	115	40	0.952	0.904	PRAIRIEB	115	40	5	0.070	0		0	0	99.000	0.000
579	1	OTIS	230	40	0.950	0.949		0	0	0	0.000	0		0	0	99.000	0.000
580	3	OTIS	230	40	0.950	0.946		0	0	0	0.000	0		0	0	99.000	0.000
589	2	GAFFNEY	115	40	0.984	0.931	GAFFNEY	115	40	1	0.053	0		0	0	99.000	0.000
693	6	PAGOSA	115	73	0.962	0.928		0	0	0	0.000	0		0	0	99.000	0.000
722	1	SPAN F&1	138	65	0.968	0.872	SPAN F&1	138	65	1	0.096	0		0	0	99.000	0.000
829	1	PAGOSA	115	73	0.962	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1172	8	BRUSHTAP	115	73	1.011	0.929	BRUSHTAP	115	73	8	0.082	0		0	0	99.000	0.000
1196	6	FME	115	73	1.001	0.945	FME	115	73	6	0.056	0		0	0	99.000	0.000
1249	0		0	0	99.000	99.000	FTSANDER	115	73	1	0.060	0		0	0	99.000	0.000
1337	0		0	0	99.000	99.000	REDWILLW	115	73	1	0.054	0		0	0	99.000	0.000
1365	4	SANDHILL	115	73	1.012	0.936	SANDHILL	115	73	3	0.076	0		0	0	99.000	0.000
1374	0		0	0	99.000	99.000	FTSANDER	115	73	1	0.060	0		0	0	99.000	0.000
1379	3	GALIEN	115	73	0.987	0.933	GALIEN	115	73	1	0.054	0		0	0	99.000	0.000
1483	1	PAGOSA	115	73	0.962	0.941		0	0	0	0.000	0		0	0	99.000	0.000
1489	3	GARNET M	115	73	0.980	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1497	1	PAGOSA	115	73	0.962	0.945		0	0	0	0.000	0		0	0	99.000	0.000
1502	27	HOVENWEP	115	73	0.979	0.923	CAHONE	115	73	22	0.057	0		0	0	99.000	0.000
1507	21	PAGOSA	115	73	0.962	0.931		0	0	0	0.000	0		0	0	99.000	0.000
1510	1	PAGOSA	115	73	0.962	0.940		0	0	0	0.000	0		0	0	99.000	0.000
1514	1	PAGOSA	115	73	0.962	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1539	1	PAGOSA	115	73	0.962	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1552	0		0	0	99.000	99.000	HARLEM	161	63	1	0.053	0		0	0	99.000	0.000
1566	0		0	0	99.000	99.000	GAR2EAST	500	40	1	0.057	0		0	0	99.000	0.000
1567	0		0	0	99.000	99.000	GAR1EAST	500	40	1	0.057	0		0	0	99.000	0.000

1599	1	PAGOSA	115	73	0.962	0.947			0	0	0	0.000	0		0	0	99.000	0.000
1630	1	PAGOSA	115	73	0.962	0.949			0	0	0	0.000	0		0	0	99.000	0.000
1671	1	PAGOSA	115	73	0.962	0.947			0	0	0	0.000	0		0	0	99.000	0.000
1779	0		0	0	99.000	99.000	WELLS	115	40		3	0.065	0		0	0	99.000	0.000
1791	1	SPAN F&1	138	65	0.968	0.948			0	0	0	0.000	0		0	0	99.000	0.000
1863	22	WARRENLM	115	73	0.996	0.902	ARCHER	115	73		24	0.098	0		0	0	99.000	0.000
1891	4	SIDNEY	115	73	1.014	0.941	SIDNEY	115	73		5	0.073	0		0	0	99.000	0.000
1902	0		0	0	99.000	99.000	CTTNWD N	115	73		3	0.055	0		0	0	99.000	0.000
1917	10	PAGOSA	115	73	0.962	0.912	HESPERUS	115	73		4	0.054	0		0	0	99.000	0.000
1922	2	HAVRE	115	63	0.989	0.914	HAVRE	115	63		2	0.075	0		0	0	99.000	0.000
1930	1	HOVENWEP	115	73	0.979	0.948			0	0	0	0.000	0		0	0	99.000	0.000

BUSES with voltage violations

bus no	---name---	--kv-	area	-base-case- pu vt	BASE CASE VOLT VIOLATION	lowest -cont-case- pu vt	cont with lowest pu vt	contingencies with voltage violations
61825	HINES	138.0	60	1.045		0.984	92: 92	
61826	HINES	115.0	60	1.048		0.985	92: 92	
61835	WJOHN DY	138.0	60	1.038		0.977	92: 92	
40453	GAR2EAST	500.0	40	1.082		1.009	445:138	445 446 1566
40451	GAR1EAST	500.0	40	1.082		1.009	445:139	445 446 1567
62087	CONRAD	115.0	62	1.012		0.954	176:176	
48069	CHESTER	115.0	40	0.952		0.903	570:241	248 396 398 419 466 473 528 561 562 570 574 577 580
48299	OPPORTUN	115.0	40	0.953		0.905	570:241	248 396 398 419 466 473 528 561 562 570 574 577 580
48306	OTIS	230.0	40	0.950		0.904	570:241	248 321 396 398 419 466 473 528 561 562 570 574 577 579 580
40215	CHENEY	115.0	40	0.970		0.945	412:272	412
47013	BRIDGPRT	115.0	40	1.055		0.995	307:307	1779
40589	KALISPEL	115.0	40	1.019		0.962	353:353	
47025	DELIGHT	115.0	40	0.978		0.941	439:411	412 439 589
40439	FOURLKS	115.0	40	0.972		0.947	412:412	
48387	SILVRLAK	115.0	40	0.972		0.946	412:412	
48021	BARKER	115.0	40	0.967		0.919	570:419	528 562 570 574 577
48117	EASTFARM	115.0	40	0.970		0.918	577:419	528 562 570 574 577
48165	IRVIN	115.0	40	0.957		0.908	570:419	528 561 562 570 574 577
48185	LIBTYLK	115.0	40	0.966		0.919	570:419	528 561 562 570 574 577
48311	OTIS	115.0	40	0.968		0.920	570:419	528 562 570 574 577
47051	HANNA	115.0	40	1.030		0.974	456:456	
40905	ROUNDUP	230.0	40	1.029		0.960	514:514	
47033	DOWER RD	115.0	40	0.973		0.913	577:528	562 570 574 577
48111	DOWERRDT	115.0	40	0.974		0.913	577:528	562 570 574 577
47511	MOAB	115.0	40	0.974		0.918	570:528	570 577
48310	OPORTUNE	115.0	40	0.975		0.918	570:528	570 577
48329	POST FLS	115.0	40	0.974		0.913	577:528	562 570 574 577
48319	PLEASANT	115.0	40	0.981		0.917	570:570	
40855	PRAIRIEB	115.0	40	0.980		0.910	577:577	
40449	GAFFNEY	115.0	40	0.984		0.931	589:589	
66395	SPAN F&1	138.0	65	0.968		0.872	722:693	722 1791
79049	MONTROSE	345.0	73	0.985		0.942	693:693	
79077	BAYFIELD	115.0	73	0.979		0.930	1917:693	1507 1917
79086	PAGOSA	115.0	73	0.962		0.912	1917:693	829 1483 1497 1502 1507 1510 1514 1539 1599 1630 1671 1917
79108	HOVENWEP	115.0	73	0.979		0.923	1502:693	1502 1507 1930
79121	SANDCANY	115.0	73	0.982		0.926	1502:693	1502 1507
73023	BIJOUTAP	115.0	73	1.000		0.943	1172:1172	
73031	BRUSHTAP	115.0	73	1.011		0.929	1172:1172	
73305	EFMORGTP	115.0	73	1.001		0.932	1172:1172	1196
73310	FME	115.0	73	1.001		0.931	1172:1172	1196
73311	FMS	115.0	73	1.000		0.933	1172:1172	1196
73377	EXCEL	115.0	73	1.000		0.933	1172:1172	1196
73378	FMN	115.0	73	1.001		0.932	1172:1172	1196
73379	FMWEST	115.0	73	1.000		0.933	1172:1172	1196
73367	FTSANDER	115.0	73	1.020		0.941	1863:1249	1374 1863
73005	ALVIN	115.0	73	0.999		0.941	1365:1365	
73175	SANDHILL	115.0	73	1.012		0.936	1365:1365	
73210	WAUNETA	115.0	73	0.992		0.949	1365:1365	
73304	CRETESWT	115.0	73	0.999		0.941	1365:1365	
73059	FLEMING	115.0	73	0.986		0.938	1379:1379	
73080	HAXTUN	115.0	73	0.985		0.943	1379:1379	
73478	GALIEN	115.0	73	0.987		0.933	1379:1379	
79079	BULLOCK	115.0	73	0.985		0.949	1489:1489	
79085	NORTHMSA	115.0	73	0.985		0.949	1489:1489	
79103	GARNET M	115.0	73	0.980		0.947	1489:1489	
79011	CAHONE	115.0	73	0.985		0.928	1502:1502	1507
79012	CORTEZ	115.0	73	0.990		0.935	1502:1502	1507
79044	LOSTCANY	115.0	73	0.993		0.939	1502:1502	1507
79045	LOSTCANY	230.0	73	0.993		0.936	1502:1502	
79073	BLUEDOOR	115.0	73	0.990		0.935	1502:1502	1507
79074	E.CORTEZ	115.0	73	0.991		0.936	1502:1502	1507
79075	EMPIRETS	115.0	73	0.990		0.935	1502:1502	1507
79080	CASCADEL	115.0	73	0.988		0.940	1502:1502	1917
79088	ROCKWOOD	115.0	73	0.987		0.939	1917:1502	1917
79107	HOVEN NO	115.0	73	0.984		0.928	1502:1502	1507
79110	MAIN CO	115.0	73	0.984		0.928	1502:1502	1507
79111	MANCOSTP	115.0	73	0.990		0.941	1502:1502	
79117	Y.JACK 2	115.0	73	0.984		0.927	1502:1502	1507
79118	Y.JACK W	115.0	73	0.983		0.927	1502:1502	1507
79120	MOQUI C	115.0	73	0.984		0.928	1502:1502	1507
79122	TOWAOC	115.0	73	0.990		0.935	1502:1502	1507
79179	GRT CUT	115.0	73	0.990		0.935	1502:1502	1507
79180	GRCUT TP	115.0	73	0.990		0.935	1502:1502	1507
79257	AMES	115.0	73	0.992		0.942	1502:1502	
79194	BURROBDG	115.0	73	0.990		0.940	1502:1502	
79262	CEMNT CK	115.0	73	0.985		0.929	1502:1502	1507
79256	SILVERTN	115.0	73	0.990		0.939	1502:1502	
79189	SUNSH SM	115.0	73	0.992		0.943	1502:1502	
79188	TELLURID	115.0	73	0.986		0.936	1502:1502	
79191	COYOTE G	115.0	73	0.991		0.946	1507:1507	
79260	ELPASOTP	115.0	73	0.992		0.947	1507:1507	
47099	WELLS	115.0	40	1.062		0.997	1779:1779	
73008	ARCHER	115.0	73	1.009		0.911	1863:1863	
73043	CHEYENNE	115.0	73	0.999		0.908	1863:1863	
73066	GEMCTYTP	115.0	73	1.019		0.940	1863:1863	
73077	HAPPYJCK	115.0	73	0.997		0.906	1863:1863	
73109	LARAMIE	115.0	73	1.012		0.937	1863:1863	
73128	MAY	115.0	73	1.019		0.949	1863:1863	
73139	MYERS	115.0	73	1.008		0.914	1863:1863	
73140	MYERS TP	115.0	73	1.008		0.914	1863:1863	

73146	OASISTAP	115.0	73	1.020	0.949	1863:1863
73152	PINEBLUF	115.0	73	1.004	0.935	1863:1863
73154	POLE CK	115.0	73	1.007	0.925	1863:1863
73161	QUALLS	115.0	73	1.006	0.924	1863:1863
73172	ROCKPRTP	115.0	73	1.006	0.937	1863:1863
73173	ROUNDTOP	115.0	73	1.004	0.946	1863:1863
73178	SENTINEL	115.0	73	1.003	0.945	1863:1863
73183	SKYLINE	115.0	73	0.998	0.903	1863:1863
73187	SPRINGCK	115.0	73	1.020	0.941	1863:1863
73348	CORLETT	115.0	73	0.996	0.903	1863:1863
73375	WARRENLM	115.0	73	0.996	0.902	1863:1863
73480	CROWCRK	115.0	73	1.000	0.907	1863:1863
73504	PONNEQUI	115.0	73	1.003	0.925	1863:1863
73046	DALTON	115.0	73	1.006	0.943	1891:1891
73092	JACINTO	115.0	73	1.006	0.947	1891:1891
73179	SIDNEY	115.0	73	1.014	0.941	1891:1891
73236	GREENWOD	115.0	73	1.003	0.949	1891:1891
79023	DURANGO	115.0	73	0.987	0.943	1917:1917
79071	HESPERUS	115.0	73	0.991	0.937	1917:1917
79076	AM EAST	115.0	73	0.983	0.932	1917:1917
79078	BODO	115.0	73	0.986	0.941	1917:1917
79089	SHENDOAH	115.0	73	0.987	0.947	1917:1917
79099	FLOR.RIV	115.0	73	0.985	0.933	1917:1917
63007	HAVRE	115.0	63	0.989	0.914	1922:1922
63013	RUDYARD	115.0	63	0.997	0.940	1922:1922

MONTANA TRANSMISSION STUDY WAPA UGP JUNE 2002
G1 WITH LINE UPDATES

FILE made from cont. file : [C:\uwk\mts\g1\pflow\hsbs\cHSBS-1.out]
DATE REPORT MADE - Tue May 07 16:29:06 2002

Outage 98 failed to converge
Outage 109 failed to converge
Outage 347 failed to converge
Outage 385 failed to converge
Outage 386 failed to converge
Outage 1635 failed to converge
Outage 1674 failed to converge
Outage 1686 failed to converge
Outage 1687 failed to converge
Outage 1688 failed to converge
Outage 1689 failed to converge
Outage 1774 failed to converge

--------FROM bus--------					---------TO bus---------									base	pu	rating		
#	---name---	-kv-	ar	#	---name---	-kv-	ar	ID	--mw-	-mvar	amps	load	load	[MVA]	Cnt	# freq.		
73187	"SPRINGCK"	115	73	73367	"FTSANDER"	115	73	"1 "	0	13333	66939	0.00	166.67	80.00	1255	1		
48125	"FOURLBPA"	115	40	48132	"HAL&WHIT"	115	40	"1 "	107	133	856	0.45	2.97	57.40	440	2		
48319	"PLEASANT"	115	40	48355	"RATHDRUM"	115	40	"1 "	-153	-42	864	1.03	2.01	85.80	583	1931		
48303	"OROFINO "	115	40	40023	"AHSAHKA "	115	40	"1 "	-219	-2	1109	0.82	1.94	113.70	417	3		
40855	"PRAIRIEB"	115	40	48349	"RAMSEY "	115	40	"1 "	-154	-48	880	0.78	1.93	91.00	576	3		
48329	"POST FLS"	115	40	40855	"PRAIRIEB"	115	40	"1 "	-133	-35	771	0.59	1.79	85.80	576	2		
47511	"MOAB "	115	40	48319	"PLEASANT"	115	40	"1 "	-139	-33	793	0.83	1.74	91.00	583	6		
73088	"HOYT "	115	73	73103	"L.MEADOW"	115	73	"1 "	61	3	320	0.17	1.59	40.00	1178	3		
65280	"CARBON "	138	65	66395	"SPAN F&1"	138	65	"1 "	120	6	487	0.68	1.55	75.10	728	2		
66395	"SPAN F&1"	138	65	66405	"SPAN FRK"	138	65	"1 "	97	-22	486	0.67	1.55	75.00	728	2		
70005	"BRUSHCPP"	115	70	73013	"B.CK PS "	115	73	"1 "	243	42	1201	0.72	1.48	162.00	1628	1		
65145	"BENLOMND"	138	65	66650	"WARREN "	138	65	"1 "	182	30	765	0.79	1.45	126.00	684	3		
65520	"EMMAPARK"	138	65	66590	"UPALCO "	138	65	"1 "	-158	87	810	0.74	1.43	136.00	699	2		
65520	"EMMAPARK"	138	65	66183	"PANTHER "	138	65	"1 "	157	-88	808	0.72	1.42	136.00	699	2		
48025	"BEACON N"	230	40	40090	"BELL SO "	230	40	"5 "	-492	-140	1268	0.79	1.38	366.50	270	4		
65280	"CARBON "	138	65	66183	"PANTHER "	138	65	"1 "	-146	100	786	0.68	1.38	136.00	699	2		
73039	"CARTERLK"	115	73	73058	"FLATIRON"	115	73	"1 "	-108	-18	551	0.89	1.37	80.00	1275	16		
73008	"ARCHER "	115	73	73043	"CHEYENNE"	115	73	"1 "	99	27	526	0.72	1.31	80.00	1157	3		
66085	"NINETY S"	138	65	66660	"WEST JOR"	138	65	"1 "	200	47	848	0.48	1.30	156.10	858	2		
73305	"EFMORGTP"	115	73	73379	"FMWEST "	115	73	"1 "	101	-2	520	0.91	1.29	80.00	1166	11		
66565	"TREASTON"	230	65	66570	"TREASTON"	138	65	"1 "	255	-20	256	0.52	1.29	200.00	1846	2		
70005	"BRUSHCPP"	115	70	73013	"B.CK PS "	115	73	"2 "	243	45	1205	0.67	1.28	187.00	1627	1		
48023	"BEACON N"	115	40	48371	"ROSSPARK"	115	40	"1 "	169	46	883	0.94	1.27	138.20	284	48		
48253	"N LEWIST"	115	40	48075	"CLEARWTR"	115	40	"1 "	142	16	720	0.26	1.26	113.70	465	1		
66480	"SYRACUSE"	138	65	66650	"WARREN "	138	65	"1 "	-151	-1	663	0.61	1.26	126.00	684	3		
48311	"OTIS "	115	40	47511	"MOAB "	115	40	"1 "	-93	-17	532	0.45	1.24	85.80	583	2		
66370	"SMFLD TP"	138	65	66680	"WHEELON "	138	65	"1 "	-142	-5	627	0.41	1.24	120.90	792	3		
73020	"BEAVERCK"	115	73	73464	"ADENA "	115	73	"1 "	108	9	531	0.75	1.24	85.10	1178	6		
48117	"EASTFARM"	115	40	48329	"POST FLS"	115	40	"1 "	-118	-23	684	0.31	1.23	110.90	576	2		
60110	"CALDWELL"	230	60	60105	"CALDWELL"	138	60	"1 "	246	22	247	0.70	1.23	200.00	1665	1		
48029	"BEACON S"	115	40	48271	"NINTHCNT"	115	40	"1 "	108	24	559	0.77	1.22	91.00	257	3		
60110	"CALDWELL"	230	60	60105	"CALDWELL"	138	60	"2 "	241	24	242	0.62	1.21	200.00	1664	1		
65193	"BONANZA "	345	65	65192	"BONANZA "	138	65	"1 "	-455	120	470	0.72	1.20	392.00	1471	2		
48279	"NORTHWES"	115	40	48461	"WEST "	115	40	"1 "	-106	-29	556	0.92	1.19	92.80	449	35		
65192	"BONANZA "	138	65	66278	"RANGELY "	138	65	"1 "	140	11	574	0.32	1.19	115.00	1799	1		
48159	"HUETTER "	115	40	48355	"RATHDRUM"	115	40	"1 "	-119	-40	654	0.74	1.18	110.90	576	6		
73072	"GOREPASS"	138	73	79038	"HAYDEN "	138	73	"1 "	-105	31	469	0.50	1.18	96.00	1642	1		
65560	"FISHCREK"	161	65	65670	"GOSHEN "	161	65	"1 "	-167	47	617	0.95	1.17	148.10	1615	106		
65860	"JFRSNPHA"	161	65	65850	"JEFFERSN"	161	65	"1 "	80	-75	110	0.87	1.17	100.00	418	8		
70265	"LOOKOUT "	115	70	70266	"LOOKOUT "	230	70	"1 "	-152	86	175	0.78	1.17	150.00	1864	1		
48311	"OTIS "	115	40	48117	"EASTFARM"	115	40	"1 "	-111	-19	648	0.26	1.16	110.90	576	2		
65565	"FLAMGORG"	230	65	79026	"FLAMGORG"	138	73	"1 "	-116	9	116	0.46	1.16	100.00	699	1		
65565	"FLAMGORG"	230	65	79026	"FLAMGORG"	138	73	"2 "	-116	9	116	0.46	1.16	100.00	699	1		
70265	"LOOKOUT "	115	70	70266	"LOOKOUT "	230	70	"2 "	-150	85	172	0.76	1.15	150.00	1863	1		
65560	"FISHCREK"	161	65	65690	"GRACE "	161	65	"1 "	163	-49	606	0.92	1.14	148.00	1615	28		
66500	"TAYLORSV"	138	65	66660	"WEST JOR"	138	65	"1 "	-174	-29	744	0.33	1.14	156.10	858	2		
65220	"BRIDGER "	230	65	66315	"ROCKSPGS"	230	65	"1 "	475	52	1176	0.75	1.11	423.90	48	6		
40021	"ADDY 2 "	230	40	40017	"ADDY "	115	40	"1 "	178	34	181	0.56	1.11	163.00	229	1		
66180	"PALISADE"	230	65	66315	"ROCKSPGS"	230	65	"1 "	-468	44	1184	0.71	1.11	423.90	703	5		
73413	"MIDWAYBR"	230	73	73412	"MIDWAYBR"	115	73	"1 "	105	35	111	0.49	1.11	100.00	1457	1		
70108	"CHEROKEN"	115	70	70154	"DERBY 2 "	115	70	"1 "	149	30	744	0.76	1.10	135.00	962	3		
70071	"CABINCRK"	115	70	70072	"CABINCRK"	230	70	"2 "	53	-12	54	0.41	1.10	50.00	987	1		
40145	"BOUNDARY"	230	40	40143	"BOUNDARY"	115	40	"1 "	135	17	136	0.66	1.09	125.00	230	3		
40087	"BELL BPA"	115	40	48449	"WAIKIKIT"	115	40	"1 "	116	34	610	0.84	1.09	111.90	1748	7		
46817	"ROCK IS2"	115	40	41105	"VALHALLA"	115	40	"1 "	326	5	1575	0.48	1.09	288.80	516	1		
48258	"NEWPORTT"	115	40	48043	"BLANCHRD"	115	40	"1 "	124	-4	616	0.73	1.08	113.70	283	4		
40259	"COLUMBIA"	115	40	47071	"PALISADS"	115	40	"1 "	143	5	695	0.82	1.08	127.70	396	2		
70071	"CABINCRK"	115	70	70072	"CABINCRK"	230	70	"1 "	52	-12	53	0.40	1.08	50.00	987	1		
48357	"RATHDRUM"	230	40	48355	"RATHDRUM"	115	40	"1 "	217	122	249	0.49	1.08	230.00	1777	1		
65193	"BONANZA "	345	65	65995	"MONA "	345	65	"1 "	698	53	1168	0.95	1.07	650.00	1508	1847		
48043	"BLANCHRD"	115	40	47505	"HOODOO "	115	40	"1 "	121	-9	611	0.72	1.07	113.70	283	4		
47505	"HOODOO "	115	40	48403	"SPIRITLT"	115	40	"1 "	118	-15	603	0.71	1.07	111.90	283	4		
73075	"GREYBULL"	115	73	73123	"LOVELL "	115	73	"1 "	-101	35	583	0.55	1.07	109.00	1598	1		
40385	"ELLENGTP"	115	40	40387	"ELLENSBG"	115	40	"1 "	96	-13	497	0.82	1.06	93.60	579	1		
65145	"BENLOMND"	138	65	66640	"W OGDEN "	138	65	"1 "	215	43	908	0.79	1.06	205.10	683	3		
70108	"CHEROKEN"	115	70	70153	"DERBY 1 "	115	70	"1 "	143	30	718	0.70	1.06	135.00	963	2		
70471	"WELD PS"	230	70	73212	"WELD LM"	230	73	"1 "	-531	7	1328	0.73	1.06	500.00	1626	3		
73020	"BEAVERCK"	115	73	73031	"BRUSHTAP"	115	73	"1 "	129	17	650	0.80	1.06	122.10	1166	4		
73013	"B.CK PS "	115	73	73014	"B.CK PS "	230	73	"1 "	232	51	237	0.25	1.06	224.00	1168	1		
65140	"BENLOMND"	230	65	65145	"BENLOMND"	138	65	"1 "	282	6	282	0.72	1.06	267.00	1794	2		
40088	"BELL MI "	230	40	40087	"BELL BPA"	115	40	"1 "	258	35	260	0.87	1.05	249.00	1749	13		
47027	"DIAM LAK"	115	40	40907	"SACHEEN "	115	40	"1 "	-140	15	694	0.33	1.05	131.50	283	1		
47071	"PALISADS"	115	40	46075	"QUINCY T"	115	40	"1 "	139	3	675	0.79	1.05	127.70	396	2		
40023	"AHSAHKA "	115	40	40367	"DWORSHAK"	115	40	"1 "	-224	-13	1122	0.45	1.05	213.10	417	1		
48403	"SPIRITLT"	115	40	48017	"ATHOLTAP"	115	40	"1 "	115	-20	592	0.68	1.04	113.70	283	1		
46809	"MCKENZIE"	230	40	46831	"ROCKYRH1"	230	40	"1 "	-503	-17	1238	0.77	1.04	474.10	375	3		
73211	"WELD LM"	115	73	73212	"WELD LM"	230	73	"1 "	-155	23	157	0.39	1.04	150.00	1624	1		
70395	"SMOKYHIL"	115	70	70396	"SMOKYHIL"	230	70	"1 "	-156	11	157	0.67	1.04	150.00	1868	1		
60020	"AMFLS "	138	60	60070	"BRADY "	138	60	"1 "	-247	-49	1016	0.77	1.03	236.60	23	1		
60085	"BRIDGER "	345	60	60060	"BORAH "	345	60	"1 "	928	246	1531	0.78	1.03	892.20	49	2		
48258	"NEWPORTT"	115	40	47086	"PINE ST "	115	40	"1 "	-125	3	624	0.70	1.03	120.10	283	2		
48155	"HERN "	115	40	48159	"HUETTER "	115	40	"1 "	-104	-34	573	0.60	1.03	110.90	576	2		
40259	"COLUMBIA"	115	40	40579	"JENKINS "	115	40	"1 "	111	13	547	0.81	1.03	105.60	579	1		

65215	"BRDGR PP"	230	65	65555	"FIREHOLE"	230	65	"1 "	-432	35	1094	0.56	1.03	424.00	886	2
73103	"L.MEADOW"	115	73	73213	"WIGGINS "	115	73	"1 "	58	1	307	0.07	1.03	59.60	1178	1
73166	"REDWILLW"	115	73	73208	"WAGES "	115	73	"1 "	52	17	282	0.50	1.03	55.00	1371	1
79013	"CRAIG "	230	73	79059	"RIFLE WA"	230	73	"1 "	337	40	836	0.58	1.03	324.00	1647	1
41347	"MIDWAYB2"	230	40	41111	"VANTAGE "	230	40	"1 "	-386	1	965	0.68	1.02	378.50	461	1
48349	"RAMSEY "	115	40	48155	"HERN "	115	40	"1 "	-102	-33	567	0.59	1.02	110.90	576	1
40385	"ELLENGTP"	115	40	40579	"JENKINS "	115	40	"1 "	-105	10	543	0.80	1.02	105.60	579	1
46805	"CHELAN "	115	40	48149	"HEADWORK"	115	40	"1 "	-88	32	462	0.91	1.02	91.00	642	1
66180	"PALISADE"	230	65	66266	"RAVEN "	230	65	"1 "	468	-44	1184	0.66	1.02	461.00	703	3
65280	"CARBON "	138	65	66405	"SPAN FRK"	138	65	"2 "	199	-16	884	0.70	1.02	208.00	699	1
65690	"GRACE "	161	65	65695	"GRACE "	138	65	"1 "	159	-58	170	0.82	1.02	168.00	1615	6
60150	"HELLSCYN"	230	60	60095	"BROWNLEE"	230	60	"1 "	495	-4	1207	0.81	1.01	478.00	92	1
73008	"ARCHER "	115	73	73183	"SKYLINE "	115	73	"1 "	73	28	405	0.57	1.01	80.00	1274	1
62004	"ANACOND "	230	62	62005	"ANACOND "	161	62	"2 "	190	69	202	0.58	1.01	200.00	1698	1
62004	"ANACOND "	230	62	62005	"ANACOND "	161	62	"1 "	190	69	202	0.58	1.01	200.00	1699	1
48131	"GARDENSP"	115	40	40525	"HAYFORD "	115	40	"1 "	55	-1	288	0.97	1.00	57.40	278	1932
60275	"OXBOW "	230	60	60095	"BROWNLEE"	230	60	"1 "	488	-58	1196	0.82	1.00	478.00	62	2
40259	"COLUMBIA"	115	40	46033	"GB55 "	115	40	"1 "	131	-18	640	0.57	1.00	127.70	241	1
40459	"GARRISON"	500	40	41057	"TAFT "	500	40	"2 "	920	-314	1088	0.59	1.00	944.00	451	1
40459	"GARRISON"	500	40	41057	"TAFT "	500	40	"1 "	920	-314	1088	0.59	1.00	944.00	452	1
73179	"SIDNEY "	115	73	73180	"SIDNEY "	230	73	"1 "	-164	-17	165	0.74	1.00	167.00	1344	1
70463	"WATERTON"	115	70	70464	"WATERTON"	230	70	"2 "	-96	-18	98	0.69	1.00	100.00	1870	1
60085	"BRIDGER "	345	60	60190	"KINPORT "	345	60	"1 "	901	238	1485	0.68	0.99	892.20	1608	2
65175	"BLUE RIM"	230	65	65215	"BRDGR PP"	230	65	"1 "	-416	50	1057	0.52	0.99	423.90	886	2
65175	"BLUE RIM"	230	65	66325	"S. TRONA"	230	65	"1 "	416	-22	1051	0.51	0.99	423.90	886	2
73023	"BIJOUTAP"	115	73	73379	"FMWEST "	115	73	"1 "	-75	14	397	0.61	0.99	80.00	1166	2
70463	"WATERTON"	115	70	70464	"WATERTON"	230	70	"1 "	-95	-18	97	0.68	0.99	100.00	1871	1
48017	"ATHOLTAP"	115	40	40953	"SCARCELO"	115	40	"1 "	107	-23	557	0.62	0.98	113.70	283	1
46807	"MCKENZIE"	115	40	41105	"VALHALLA"	115	40	"1 "	363	-7	1758	0.60	0.98	356.50	596	1
46001	"ANC LK T"	230	40	40261	"COLUMBIA"	230	40	"1 "	-413	31	1022	0.69	0.98	415.50	610	1
65930	"MCCELAND"	138	65	66550	"THIRTY S"	138	65	"1 "	-207	10	854	0.59	0.98	208.00	750	1
73031	"BRUSHTAP"	115	73	73305	"EFMORGTP"	115	73	"1 "	118	9	598	0.72	0.98	121.70	1166	1
79007	"BLUEMESA"	115	73	79020	"CURECANT"	115	73	"1 "	77	-14	392	0.51	0.98	80.00	1474	1
60085	"BRIDGER "	345	60	65665	"GOSHEN "	345	65	"1 "	887	196	1449	0.67	0.97	892.20	49	1
60220	"MCCALL "	138	60	60370	"WEISER "	138	60	"1 "	29	-11	132	0.19	0.97	32.30	92	1
40259	"COLUMBIA"	115	40	41105	"VALHALLA"	115	40	"2 "	-212	27	1037	0.57	0.97	213.10	369	1
40259	"COLUMBIA"	115	40	41105	"VALHALLA"	115	40	"1 "	-212	27	1034	0.56	0.97	213.10	370	1
65085	"ASHLEY "	138	65	79067	"VERNAL "	138	73	"1 "	-130	7	553	0.59	0.97	136.00	697	1
66035	"NAT SM T"	138	65	66085	"NINETY S"	138	65	"1 "	-204	-16	845	0.50	0.97	208.00	831	1
65570	"FRANKLIN"	138	65	65725	"GRCYN TP"	138	65	"1 "	133	8	550	0.58	0.97	136.00	912	1
65725	"GRCYN TP"	138	65	65735	"GREENCYN"	138	65	"1 "	129	-2	551	0.58	0.97	136.00	912	1
70192	"FTLUPTON"	230	70	70311	"PAWNEE "	230	70	"1 "	-384	73	1004	0.66	0.97	413.50	1066	2
79007	"BLUEMESA"	115	73	79090	"SKITO "	115	73	"1 "	77	-9	389	0.49	0.97	80.00	1472	1
48165	"IRVIN "	115	40	48299	"OPPORTUN"	115	40	"1 "	49	16	275	0.34	0.96	57.40	533	2
79067	"VERNAL "	138	73	65192	"BONANZA "	138	65	"1 "	-182	-4	770	0.26	0.96	192.00	699	1
70265	"LOOKOUT "	115	70	70224	"HOGBACK "	115	70	"1 "	185	12	930	0.65	0.96	192.00	1034	1
60291	"PINGREE "	138	60	60125	"DON "	138	60	"1 "	-130	-32	567	0.26	0.96	141.00	1606	1
48031	"BEACON S"	230	40	48029	"BEACON S"	115	40	"1 "	253	108	275	0.64	0.96	287.00	1748	1
48025	"BEACON N"	230	40	48023	"BEACON N"	115	40	"1 "	253	108	275	0.64	0.96	287.00	1749	1
62054	"BROADV&1"	500	62	62046	"BROADVU "	500	62	"1 "	1734	-171	1903	0.50	0.95	1732.00	150	1
65145	"BENLOMND"	138	65	65505	"EL MONTE"	138	65	"2 "	189	55	815	0.46	0.95	205.10	680	1
65145	"BENLOMND"	138	65	65505	"EL MONTE"	138	65	"1 "	189	55	815	0.46	0.95	205.10	681	1
73009	"ARCHER "	230	73	73008	"ARCHER "	115	73	"1 "	149	37	154	0.74	0.95	167.00	1313	1

	low voltage violations						delta voltage violations						high voltage violations					
CNT	freq	---name---	-kv-	ar	-base-case- pu	vt	-cont-case- pu	vt	---name---	-kv-	ar	freq	delta V	freq	---name---	-kv-	ar	-base-case- pu	vt	-cont-case- pu	vt
25	0		0	0	99.000		99.000		PLST VLY	138	60	1	0.055	0		0	0	99.000		0.000	
49	1	BIGGRASS	161	65	0.961		0.948			0	0	0	0.000	0		0	0	99.000		0.000	
91	1	MCCALL	138	60	0.995		0.946			0	0	0	0.000	0		0	0	99.000		0.000	
100	0		0	0	99.000		99.000		QUARTZ	138	60	6	0.072	0		0	0	99.000		0.000	
108	0		0	0	99.000		99.000		WEISER	138	60	2	0.065	0		0	0	99.000		0.000	
111	1	WOOD RVR	138	60	1.007		0.932		WOOD RVR	138	60	1	0.075	0		0	0	99.000		0.000	
119	1	HINES	138	60	1.022		0.947		HINES	115	60	2	0.078	0		0	0	99.000		0.000	
122	0		0	0	99.000		99.000		ONTARIO	138	60	4	0.054	0		0	0	99.000		0.000	
129	1	BIGGRASS	161	65	0.961		0.937			0	0	0	0.000	0		0	0	99.000		0.000	
134	2	ENNIS MT	161	62	0.975		0.945			0	0	0	0.000	0		0	0	99.000		0.000	
135	1	TAFTAUTO	115	62	0.980		0.933			0	0	0	0.000	0		0	0	99.000		0.000	
143	0		0	0	99.000		99.000		SHELBY	230	62	1	0.052	0		0	0	99.000		0.000	
144	5	ENNIS MT	161	62	0.975		0.944			0	0	0	0.000	0		0	0	99.000		0.000	
145	5	ENNIS MT	161	62	0.975		0.944			0	0	0	0.000	0		0	0	99.000		0.000	
163	2	CUTBANK	115	62	0.998		0.945		BOLE	230	62	10	0.056	0		0	0	99.000		0.000	
182	2	CONRAD	115	62	1.015		0.937		CONRAD	115	62	2	0.078	0		0	0	99.000		0.000	
185	11	EGALTN A	161	62	0.987		0.921		CLYDE P	161	62	6	0.074	0		0	0	99.000		0.000	
230	1	LIBTYLK	115	40	0.954		0.949			0	0	0	0.000	0		0	0	99.000		0.000	
231	0		0	0	99.000		99.000		AHSAHKA	115	40	1	0.063	0		0	0	99.000		0.000	
239	3	BARKER	115	40	0.954		0.947			0	0	0	0.000	0		0	0	99.000		0.000	
247	4	BARKER	115	40	0.954		0.947			0	0	0	0.000	0		0	0	99.000		0.000	
254	4	BARKER	115	40	0.954		0.947			0	0	0	0.000	0		0	0	99.000		0.000	
263	1	LIBTYLK	115	40	0.954		0.949			0	0	0	0.000	0		0	0	99.000		0.000	
270	2	BARKER	115	40	0.954		0.949			0	0	0	0.000	0		0	0	99.000		0.000	
271	31	LIBTYLK	115	40	0.954		0.872		CHESTER	115	40	36	0.083	0		0	0	99.000		0.000	
278	12	LIBTYLK	115	40	0.954		0.932			0	0	0	0.000	0		0	0	99.000		0.000	
283	3	BARKER	115	40	0.954		0.948			0	0	0	0.000	0		0	0	99.000		0.000	
301	3	LIBTYLK	115	40	0.954		0.947			0	0	0	0.000	0		0	0	99.000		0.000	
309	0		0	0	99.000		99.000		BREWSTER	115	40	2	0.057	0		0	0	99.000		0.000	
312	0		0	0	99.000		99.000		BRIDGBAR	115	40	3	0.063	0		0	0	99.000		0.000	
313	0		0	0	99.000		99.000		BRIDGPRT	115	40	8	0.085	0		0	0	99.000		0.000	
323	26	BARKER	115	40	0.954		0.904		LAKEVIEW	230	40	8	0.065	0		0	0	99.000		0.000	
338	2	OROVILLE	115	40	1.003		0.940		E OMAK	230	40	7	0.071	0		0	0	99.000		0.000	
383	0		0	0	99.000		99.000		WAGNERLK	115	40	2	0.058	0		0	0	99.000		0.000	
384	0		0	0	99.000		99.000		WAGNERLK	115	40	2	0.058	0		0	0	99.000		0.000	
402	4	BARKER	115	40	0.954		0.947			0	0	0	0.000	0		0	0	99.000		0.000	
404	5	BARKER	115	40	0.954		0.946			0	0	0	0.000	0		0	0	99.000		0.000	
417	10	PTRSNFLT	230	62	0.970		0.917		PTRSNFLT	230	62	1	0.053	0		0	0	99.000		0.000	
418	18	PTRSNFLT	230	62	0.970		0.908		PTRSNFLT	230	62	2	0.062	0		0	0	99.000		0.000	
425	5	BARKER	115	40	0.954		0.934			0	0	0	0.000	0		0	0	99.000		0.000	
445	2	DELIGHT	115	40	0.965		0.895		DELIGHT	115	40	2	0.070	0		0	0	99.000		0.000	
446	3	ENNIS MT	161	62	0.975		0.948			0	0	0	0.000	0		0	0	99.000		0.000	
447	3	ENNIS MT	161	62	0.975		0.948			0	0	0	0.000	0		0	0	99.000		0.000	
451	11	PTRSNFLT	230	62	0.970		0.933		GAR1EAST	500	40	2	0.063	0		0	0	99.000		0.000	
452	11	PTRSNFLT	230	62	0.970		0.933		GAR1EAST	500	40	2	0.063	0		0	0	99.000		0.000	
462	0		0	0	99.000		99.000		HANNA	115	40	3	0.072	0		0	0	99.000		0.000	
469	3	PTRSNFLT	230	62	0.970		0.941			0	0	0	0.000	0		0	0	99.000		0.000	
472	7	BARKER	115	40	0.954		0.946			0	0	0	0.000	0		0	0	99.000		0.000	
478	0		0	0	99.000		99.000		HOT SPR	500	40	1	0.052	0		0	0	99.000		0.000	
479	8	BARKER	115	40	0.954		0.943			0	0	0	0.000	0		0	0	99.000		0.000	

491	27	LIBTYLK	115	40	0.954	0.900	CHESTER	115	40	28	0.054	0	0	0	99.000	0.000
500	1	DELIGHT	115	40	0.965	0.945		0	0	0	0.000	0	0	0	99.000	0.000
513	2	DELIGHT	115	40	0.965	0.944		0	0	0	0.000	0	0	0	99.000	0.000
520	2	ROUNDUP	230	40	1.011	0.888	ROUNDUP	230	40	3	0.123	0	0	0	99.000	0.000
533	2	BARKER	115	40	0.954	0.949		0	0	0	0.000	0	0	0	99.000	0.000
534	9	MOAB	115	40	0.958	0.889	MOAB	115	40	10	0.069	0	0	0	99.000	0.000
542	3	BARKER	115	40	0.954	0.947		0	0	0	0.000	0	0	0	99.000	0.000
562	2	BARKER	115	40	0.954	0.949		0	0	0	0.000	0	0	0	99.000	0.000
567	4	BARKER	115	40	0.954	0.940		0	0	0	0.000	0	0	0	99.000	0.000
568	4	BARKER	115	40	0.954	0.946		0	0	0	0.000	0	0	0	99.000	0.000
576	10	PLEASANT	115	40	0.966	0.866	PLEASANT	115	40	14	0.100	0	0	0	99.000	0.000
580	9	DOWER RD	115	40	0.959	0.911		0	0	0	0.000	0	0	0	99.000	0.000
583	10	PRAIRIEB	115	40	0.966	0.877	PRAIRIEB	115	40	14	0.089	0	0	0	99.000	0.000
586	5	BARKER	115	40	0.954	0.946		0	0	0	0.000	0	0	0	99.000	0.000
595	3	GAFFNEY	115	40	0.981	0.876	GAFFNEY	115	40	3	0.105	0	0	0	99.000	0.000
651	1	BIGGRASS	161	65	0.961	0.946		0	0	0	0.000	0	0	0	99.000	0.000
661	5	AEC IPC	138	65	0.979	0.936		0	0	0	0.000	0	0	0	99.000	0.000
684	4	W OGDEN	138	65	0.995	0.931	W OGDEN	138	65	2	0.064	0	0	0	99.000	0.000
699	10	SPAN F&1	138	65	0.968	0.880	EMMAPARK	138	65	12	0.094	0	0	0	99.000	0.000
728	1	SPAN F&1	138	65	0.968	0.857	SPAN F&1	138	65	1	0.111	0	0	0	99.000	0.000
771	3	DIMP DEL	138	65	1.011	0.940	DIMP DEL	138	65	3	0.071	0	0	0	99.000	0.000
792	6	FRANKLIN	138	65	1.016	0.928	FRANKLIN	138	65	4	0.088	0	0	0	99.000	0.000
793	2	BGEORGE	115	73	0.982	0.946		0	0	0	0.000	0	0	0	99.000	0.000
794	8	BGEORGE	115	73	0.982	0.933	FRANNIE	230	65	8	0.061	0	0	0	99.000	0.000
799	1	BGEORGE	115	73	0.982	0.949		0	0	0	0.000	0	0	0	99.000	0.000
808	1	BIGGRASS	161	65	0.961	0.940		0	0	0	0.000	0	0	0	99.000	0.000
819	1	LOGAN	138	65	0.992	0.949		0	0	0	0.000	0	0	0	99.000	0.000
889	0		0	0	99.000	99.000	ETNA	115	65	2	0.052	0	0	0	99.000	0.000
907	1	RIVRDALE	138	65	0.988	0.948		0	0	0	0.000	0	0	0	99.000	0.000
935	2	ENGLE3TP	115	70	1.002	0.941	ENGLE3TP	115	70	2	0.061	0	0	0	99.000	0.000
938	2	TOLGATE	230	70	0.953	0.948		0	0	0	0.000	0	0	0	99.000	0.000
939	1	BARRLAKE	230	70	0.966	0.948		0	0	0	0.000	0	0	0	99.000	0.000
940	2	SKYRANCH	230	70	0.963	0.948		0	0	0	0.000	0	0	0	99.000	0.000
962	0		0	0	99.000	99.000	DERBY 1	115	70	1	0.054	0	0	0	99.000	0.000
963	0		0	0	99.000	99.000	DERBY 2	115	70	1	0.057	0	0	0	99.000	0.000
980	2	MARCY	230	70	0.961	0.935		0	0	0	0.000	0	0	0	99.000	0.000
981	2	SURREYRG	230	70	0.966	0.940		0	0	0	0.000	0	0	0	99.000	0.000
982	3	JEWELL2	230	70	0.953	0.948		0	0	0	0.000	0	0	0	99.000	0.000
990	13	ELATI1	230	70	0.956	0.938		0	0	0	0.000	0	0	0	99.000	0.000
991	6	ELATI2	230	70	0.956	0.944		0	0	0	0.000	0	0	0	99.000	0.000
1007	2	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0	0	0	99.000	0.000
1008	3	JEWELL2	230	70	0.953	0.948		0	0	0	0.000	0	0	0	99.000	0.000
1009	5	RIVERDAL	230	70	0.958	0.947		0	0	0	0.000	0	0	0	99.000	0.000
1010	12	WASHINGT	230	70	0.960	0.942		0	0	0	0.000	0	0	0	99.000	0.000
1015	5	GLENN PS	230	70	0.958	0.947		0	0	0	0.000	0	0	0	99.000	0.000
1024	2	CLARK	230	70	0.960	0.948		0	0	0	0.000	0	0	0	99.000	0.000
1026	3	SULLIVN	230	70	0.956	0.942		0	0	0	0.000	0	0	0	99.000	0.000
1031	2	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0	0	0	99.000	0.000
1032	2	JEWELL2	230	70	0.953	0.947		0	0	0	0.000	0	0	0	99.000	0.000
1041	1	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0	0	0	99.000	0.000
1048	2	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0	0	0	99.000	0.000
1049	2	CHATFLD	230	70	0.963	0.944		0	0	0	0.000	0	0	0	99.000	0.000
1050	1	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0	0	0	99.000	0.000
1052	1	RIDGE	230	70	0.957	0.945		0	0	0	0.000	0	0	0	99.000	0.000
1053	9	JEWELL2	230	70	0.953	0.947		0	0	0	0.000	0	0	0	99.000	0.000
1060	8	MONROEPS	230	70	0.954	0.942		0	0	0	0.000	0	0	0	99.000	0.000
1061	4	JEWELL2	230	70	0.953	0.945		0	0	0	0.000	0	0	0	99.000	0.000
1065	20	JEWELL2	230	70	0.953	0.944		0	0	0	0.000	0	0	0	99.000	0.000
1066	29	JEWELL2	230	70	0.953	0.943		0	0	0	0.000	0	0	0	99.000	0.000
1074	25	JEWELL2	230	70	0.953	0.943		0	0	0	0.000	0	0	0	99.000	0.000
1094	3	BUCKLEY2	230	70	0.956	0.946		0	0	0	0.000	0	0	0	99.000	0.000
1103	6	JEWELL2	230	70	0.953	0.947		0	0	0	0.000	0	0	0	99.000	0.000
1106	12	GUNBARRE	230	70	0.972	0.943		0	0	0	0.000	0	0	0	99.000	0.000
1110	1	SULLIVN	230	70	0.956	0.949		0	0	0	0.000	0	0	0	99.000	0.000
1121	3	JEWELL2	230	70	0.953	0.948		0	0	0	0.000	0	0	0	99.000	0.000
1128	6	JEWELL2	230	70	0.953	0.948		0	0	0	0.000	0	0	0	99.000	0.000
1132	1	MONACO	230	70	0.959	0.949		0	0	0	0.000	0	0	0	99.000	0.000
1147	7	ALVIN	115	73	0.976	0.920	ALVIN	115	73	2	0.056	0	0	0	99.000	0.000
1148	3	FRENCHCK	115	73	0.960	0.940		0	0	0	0.000	0	0	0	99.000	0.000
1153	4	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0	0	0	99.000	0.000
1156	4	SKYLINE	115	73	0.959	0.925		0	0	0	0.000	0	0	0	99.000	0.000
1157	5	CORLETT	115	73	0.954	0.943		0	0	0	0.000	0	0	0	99.000	0.000
1159	7	CORLETT	115	73	0.954	0.936		0	0	0	0.000	0	0	0	99.000	0.000
1160	4	CORLETT	115	73	0.954	0.945		0	0	0	0.000	0	0	0	99.000	0.000
1166	33	CORLETT	115	73	0.954	0.914		0	0	0	0.000	0	0	0	99.000	0.000
1167	2	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0	0	0	99.000	0.000
1178	14	BRUSHTAP	115	73	1.010	0.878	BRUSHTAP	115	73	13	0.132	0	0	0	99.000	0.000
1180	7	GALIEN	115	73	0.967	0.919	MESSEX	115	73	2	0.080	0	0	0	99.000	0.000
1186	9	CORLETT	115	73	0.954	0.943		0	0	0	0.000	0	0	0	99.000	0.000
1187	3	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0	0	0	99.000	0.000
1188	9	LIBERTY	115	73	0.983	0.908	BONNY CK	115	73	7	0.079	0	0	0	99.000	0.000
1189	7	LIBERTY	115	73	0.983	0.918	HELL CK	115	73	6	0.065	0	0	0	99.000	0.000
1202	10	FME	115	73	0.993	0.904	EFMORGTP	115	73	9	0.089	0	0	0	99.000	0.000
1211	2	CARTERMT	115	73	0.993	0.929	CARTERMT	115	73	2	0.064	0	0	0	99.000	0.000
1214	3	CORLETT	115	73	0.954	0.936		0	0	0	0.000	0	0	0	99.000	0.000
1217	4	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0	0	0	99.000	0.000
1218	12	COBBLAKE	115	70	0.995	0.919	COBBLAKE	115	70	4	0.076	0	0	0	99.000	0.000
1220	3	DALTON	115	73	0.999	0.937	DALTON	115	73	2	0.062	0	0	0	99.000	0.000
1244	2	HAXTUN	115	73	0.961	0.938		0	0	0	0.000	0	0	0	99.000	0.000
1245	3	FLEMING	115	73	0.964	0.936		0	0	0	0.000	0	0	0	99.000	0.000
1251	3	FRENCHCK	115	73	0.960	0.923		0	0	0	0.000	0	0	0	99.000	0.000
1253	3	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0	0	0	99.000	0.000
1254	3	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0	0	0	99.000	0.000
1274	3	CORLETT	115	73	0.954	0.924		0	0	0	0.000	0	0	0	99.000	0.000
1295	7	KIMBALL	115	73	0.983	0.939		0	0	0	0.000	0	0	0	99.000	0.000
1296	11	JACINTO	115	73	0.992	0.908	JACINTO	115	73	5	0.084	0	0	0	99.000	0.000
1312	1	CORLETT	115	73	0.954	0.949		0	0	0	0.000	0	0	0	99.000	0.000
1313	2	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0	0	0	99.000	0.000
1315	2	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0	0	0	99.000	0.000
1316	4	LAPORTE	230	73	1.009	0.943	LAPORTE	230	73	1	0.066	0	0	0	99.000	0.000
1318	3	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0	0	0	99.000	0.000
1319	4	LARAMIE	115	73	0.967	0.943		0	0	0	0.000	0	0	0	99.000	0.000
1337	6	GALIEN	115	73	0.967	0.919	STERLING	115	73	1	0.052	0	0	0	99.000	0.000
1338	4	CORLETT	115	73	0.954	0.943		0	0	0	0.000	0	0	0	99.000	0.000
1340	1	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0	0	0	99.000	0.000
1343	6	REDWILLW	115	73	0.995	0.916	REDWILLW	115	73	1	0.079	0	0	0	99.000	0.000
1345	4	FRENCHCK	115	73	0.960	0.942		0	0	0	0.000	0	0	0	99.000	0.000
1346	3	FRENCHCK	115	73	0.960	0.942		0	0	0	0.000	0	0	0	99.000	0.000
1348	4	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0	0	0	99.000	0.000
1351	4	HAXTUN	115	73	0.961	0.943		0	0	0	0.000	0	0	0	99.000	0.000

1352	5	FLEMING	115	73	0.964	0.942		0	0	0	0.000	0		0	0	99.000	0.000
1357	16	RICHARDS	115	73	0.997	0.911	RICHARDS	115	73	7	0.086	0		0	0	99.000	0.000
1365	4	WAGES	115	73	0.971	0.933		0	0	0	0.000	0		0	0	99.000	0.000
1367	3	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1368	0		0	0	99.000	99.000	WINDRIVR	115	73	2	0.061	0		0	0	99.000	0.000
1369	4	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1371	9	SANDHILL	115	73	0.993	0.885	SANDHILL	115	73	5	0.108	0		0	0	99.000	0.000
1376	2	WARRENLM	115	73	0.955	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1382	1	TORRNGTN	115	73	0.989	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1385	8	GALIEN	115	73	0.967	0.871	GALIEN	115	73	4	0.096	0		0	0	99.000	0.000
1401	4	VERNONLM	115	73	0.979	0.944	WRAY TAP	115	73	2	0.057	0		0	0	99.000	0.000
1410	4	FMS	115	73	0.992	0.937	FMS	115	73	3	0.055	0		0	0	99.000	0.000
1471	1	PAGOSA	115	73	0.964	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1489	1	PAGOSA	115	73	0.964	0.939		0	0	0	0.000	0		0	0	99.000	0.000
1502	0		0	0	99.000	99.000	TOWAOC	115	73	1	0.051	0		0	0	99.000	0.000
1508	1	PAGOSA	115	73	0.964	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1513	1	PAGOSA	115	73	0.964	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1514	1	PAGOSA	115	73	0.964	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1516	4	PAGOSA	115	73	0.964	0.923	FLOR.RIV	115	73	2	0.060	0		0	0	99.000	0.000
1520	1	PAGOSA	115	73	0.964	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1572	2	ENNIS MT	161	62	0.975	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1573	2	ENNIS MT	161	62	0.975	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1575	1	BIGGRASS	161	65	0.961	0.940		0	0	0	0.000	0		0	0	99.000	0.000
1598	7	BGEORGE	115	73	0.982	0.902	GREYBULL	115	73	9	0.081	0		0	0	99.000	0.000
1602	1	PAGOSA	115	73	0.964	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1605	0		0	0	99.000	99.000	MIDPOINT	500	60	1	0.062	0		0	0	99.000	0.000
1606	0		0	0	99.000	99.000	BLACKFT	161	60	1	0.053	0		0	0	99.000	0.000
1608	5	BIGGRASS	161	65	0.961	0.921		0	0	0	0.000	0		0	0	99.000	0.000
1611	0		0	0	99.000	99.000	HINES	115	60	2	0.064	0		0	0	99.000	0.000
1631	3	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1633	2	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1682	2	MCCALL	138	60	0.995	0.934	MCCALL	138	60	2	0.061	0		0	0	99.000	0.000
1683	0		0	0	99.000	99.000	QUARTZ	138	60	5	0.072	0		0	0	99.000	0.000
1694	0		0	0	99.000	99.000	HINES	138	60	1	0.058	0		0	0	99.000	0.000
1750	12	BARKER	115	40	0.954	0.933		0	0	0	0.000	0		0	0	99.000	0.000
1767	2	OROVILLE	115	40	1.003	0.940	OROVILLE	115	40	6	0.063	0		0	0	99.000	0.000
1768	10	JACKRABT	161	62	0.982	0.941		0	0	0	0.000	0		0	0	99.000	0.000
1769	10	DELIGHT	115	40	0.965	0.928	HATWAI	230	40	6	0.073	0		0	0	99.000	0.000
1777	15	BARKER	115	40	0.954	0.924		0	0	0	0.000	0		0	0	99.000	0.000
1778	9	BARKER	115	40	0.954	0.937		0	0	0	0.000	0		0	0	99.000	0.000
1787	0		0	0	99.000	99.000	WELLS	115	40	9	0.092	0		0	0	99.000	0.000
1799	1	SPAN F&1	138	65	0.968	0.931		0	0	0	0.000	0		0	0	99.000	0.000
1835	1	PLATTE	115	65	1.010	0.932	PLATTE	115	65	1	0.078	0		0	0	99.000	0.000
1875	33	CORLETT	115	73	0.954	0.778	ARCHER	115	73	33	0.182	0		0	0	99.000	0.000
1896	3	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1900	9	WAGES	115	73	0.971	0.936	N.YUMA	115	73	2	0.057	0		0	0	99.000	0.000
1903	24	DALTON	115	73	0.999	0.911	SIDNEY	115	73	10	0.099	0		0	0	99.000	0.000
1909	2	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1911	3	FRENCHCK	115	73	0.960	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1914	6	BRIARGAT	115	73	0.990	0.911	CTTNWD N	115	73	5	0.080	0		0	0	99.000	0.000
1929	16	PAGOSA	115	73	0.964	0.870	HESPERUS	115	73	18	0.096	0		0	0	99.000	0.000
1936	2	HAMLTNMA	161	62	0.989	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1939	0		0	0	99.000	99.000	RIVERTON	115	73	3	0.062	0		0	0	99.000	0.000

BUSES with voltage violations

bus no	---name---	--kv-	area	-base- -case- pu vt	BASE CASE VOLT VIOLATION	lowest -cont- -case- pu vt	cont with lowest pu vt	contingencies with voltage violations
48069	CHESTER	115.0	40	0.945	***	0.857	576:	all
48165	IRVIN	115.0	40	0.949	***	0.863	576:	all
48310	OPORTUNE	115.0	40	0.949	***	0.861	576:	all
48299	OPPORTUN	115.0	40	0.947	***	0.859	576:	all
48306	OTIS	230.0	40	0.938	***	0.858	271:	all
60295	PLST VLY	138.0	60	1.025		0.970	25:	25
65155	BIGGRASS	161.0	65	0.961		0.919	418:	49 129 417 418 451 452 469 651 808 1575 1608
60220	MCCALL	138.0	60	0.995		0.934	1682:	91 1682
60305	QUARTZ	138.0	60	1.026		0.954	100:	100 1683
60306	QUARTZ	230.0	60	1.024		0.954	100:	100
61835	WJOHN DY	138.0	60	1.014		0.955	100:	100 1683
61055	NELSN TP	138.0	60	1.023		0.968	100:	100 1683
60370	WEISER	138.0	60	1.024		0.959	108:	108
60371	WEISR TP	138.0	60	1.026		0.961	108:	108
60375	WOOD RVR	138.0	60	1.007		0.932	111:	111
61825	HINES	138.0	60	1.022		0.947	119:	119 1611 1694
61826	HINES	115.0	60	1.028		0.950	119:	119 1611
62065	ENNIS MT	161.0	62	0.975		0.934	185:	134 144 145 185 417 418 446 447 451 452 1572 1573 1768
62158	SHERDNMT	161.0	62	0.973		0.932	418:	134 144 145 185 417 418 446 447 451 452 1572 1573 1608 1768
62006	TAFTAUTO	115.0	62	0.980		0.933	135:	135
62064	BRADLEYC	161.0	62	0.978		0.932	185:	144 145 185 418 451 452 1768
62084	DILLON S	161.0	62	0.970		0.922	418:	144 145 185 417 418 446 447 451 452 469 1608
62256	JACKRABT	161.0	62	0.982		0.921	185:	144 145 185 1768
62031	CUTBANK	115.0	62	0.998		0.945	163:	163
62034	BOLE	230.0	62	1.019		0.963	163:	163
62088	CTBPUMP	115.0	62	0.999		0.945	163:	163
62087	CONRAD	115.0	62	1.015		0.937	182:	182
62178	VAL-WILL	115.0	62	1.010		0.941	182:	182
62076	TRIDENT	161.0	62	0.985		0.944	1768:	185 1768
62108	CLYDE P	161.0	62	1.000		0.926	185:	185
62249	EGALTN A	161.0	62	0.987		0.921	185:	185 1768
62250	BGTMBERA	161.0	62	0.994		0.936	185:	185
62257	EMIGT AT	161.0	62	1.004		0.930	185:	185
62258	EGALTN B	161.0	62	0.987		0.921	185:	185 1768
48185	LIBTYLK	115.0	40	0.954		0.872	271:	230 239 247 254 263 270 271 278 283 301 323 402 404 417 418 425 451 452 472 479 491 533 534 542 562 567 568 576 580 583 586 1750 1769 1777 1778
40023	AHSAHKA	115.0	40	1.028		0.965	231:	231
48021	BARKER	115.0	40	0.954		0.872	576:	239 247 254 270 271 278 283 301 323 402 404 417 418 425 451 452 472 479 491 533 534 542 562 567 568 576 580 583 586 1750 1769 1777 1778
48311	OTIS	115.0	40	0.955		0.874	271:	239 247 254 271 278 283 301 323 402 404 418 425 451 452 472 479 491 534 542 567 568 576 580 583 586 1750 1769 1777 1778
48117	EASTFARM	115.0	40	0.956		0.875	271:	247 254 271 278 323 402 404 418 425 472 479 491 534 568 576 580 583 586 1750 1777 1778
48011	APPLETAP	115.0	40	0.976		0.899	271:	271 323 491 1777
48013	APPLEWAY	115.0	40	0.976		0.899	271:	271 323 491 1777
40067	ATHOL	115.0	40	0.992		0.934	271:	271
48017	ATHOLTAP	115.0	40	0.995		0.937	271:	271

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48019   AVONDALE  115.0   40  0.987          0.912   271:271 323 491
48045   BLUECRK   115.0   40  0.973          0.896   271:271 323 491 1777
48067   CDA       115.0   40  0.974          0.897   271:271 323 491 1777
48093   DALTON A  115.0   40  0.978          0.901   271:271 323 491
48095   DALTON2T  115.0   40  0.981          0.905   271:271 323 491
48097   DALTONT   115.0   40  0.978          0.901   271:271 323 491
47033   DOWER RD  115.0   40  0.959          0.879   271:271 278 323 404 418 472 479 491 534 576 580 583 586 1750 1777
                                                       1778
48111   DOWERRDT  115.0   40  0.959          0.879   271:271 278 323 418 472 479 491 534 576 580 583 1750 1777 1778
48155   HERN      115.0   40  0.979          0.902   271:271 323 491
48159   HUETTER   115.0   40  0.981          0.904   271:271 323 491
47511   MOAB      115.0   40  0.958          0.868   576:271 278 323 418 425 479 491 534 567 576 580 583 1750 1777 1778
48319   PLEASANT  115.0   40  0.966          0.866   576:271 278 323 491 576 580 583 1750 1777 1778
48329   POST FLS  115.0   40  0.959          0.879   271:271 278 323 418 472 479 491 534 576 580 583 1750 1777 1778
40855   PRAIRIEB  115.0   40  0.966          0.877   583:271 278 323 491 534 576 583 1750 1777
48349   RAMSEY    115.0   40  0.976          0.898   271:271 323 491 1777
48351   RATHBUS1  115.0   40  0.994          0.919   271:271 323 491
48353   RATHBUS2  115.0   40  0.994          0.919   271:271 323 491
48356   RATHDRME  115.0   40  0.994          0.919   271:271 323 491
48355   RATHDRUM  115.0   40  0.994          0.919   271:271 323 491
48357   RATHDRUM  230.0   40  0.993          0.919   271:271 323 491
40953   SCARCELO  115.0   40  0.994          0.927   271:271 491
48401   SPIRITLK  115.0   40  0.996          0.941   271:271
48403   SPIRITLT  115.0   40  0.996          0.941   271:271
40215   CHENEY    115.0   40  0.973          0.948   278:278 1750
48387   SILVRLAK  115.0   40  0.973          0.948   278:278 1750
40147   BREWSTER  115.0   40  1.045          0.972   313:309 312 313 1787
47129   BRIDGBAR  115.0   40  1.047          0.971   313:312 313 1787
47013   BRIDGPRT  115.0   40  1.054          0.969   313:313 1787
40801   OPHIR T   115.0   40  1.039          0.983   313:313 1787
47209   PATEROS   115.0   40  1.036          0.971   313:313 1787
47251   TWISP     115.0   40  1.032          0.973   313:313 1787
41157   WINTHR T  115.0   40  1.032          0.973   313:313 1787
41159   WINTHROP  115.0   40  1.029          0.970   313:313 1787
48179   LAKEVIEW  230.0   40  1.015          0.950   323:323
40371   E OMAK    115.0   40  1.035          0.975   338:338 1767
40373   E OMAK    230.0   40  1.033          0.962   338:338
40389   ELLISFRD  115.0   40  1.011          0.949   338:338 1767
40799   OMAK      115.0   40  1.035          0.974   338:338 1767
40807   OROVILLE  115.0   40  1.003          0.940   338:338 1767
41085   TONASKET  115.0   40  1.029          0.968   338:338 1767
41151   WHITESTN  115.0   40  1.014          0.952   338:338 1767
41125   WAGNERLK  115.0   40  1.014          0.956   383:383 384
41127   WAGNERLT  115.0   40  1.024          0.967   384:383 384
62030   PTRSNFLT  230.0   62  0.970          0.908   418:417 418 451 452 469 1608
47025   DELIGHT   115.0   40  0.965          0.892   595:417 418 445 500 513 595 1769
47073   RALSTONB  115.0   40  0.971          0.912   595:417 418 445 513 595 1769
65025   AMPS      230.0   65  0.981          0.929   418:417 418
65860   JFRSNPHA  161.0   65  0.979          0.944  1608:418 1608
62014   BUTTEMHD  161.0   62  0.983          0.947  1768:451 452 1768
62077   BUTTE MT  161.0   62  0.982          0.946  1768:451 452 1768
40451   GAR1EAST  500.0   40  1.094          1.031   451:451 452
40453   GAR2EAST  500.0   40  1.094          1.031   451:451 452
47051   HANNA     115.0   40  1.032          0.960   462:462
60192   LADD      230.0   60  1.017          0.950   520:520
40621   LAGRANDE  230.0   40  1.007          0.926   520:520
40905   ROUNDUP   230.0   40  1.011          0.888   520:520
40449   GAFFNEY   115.0   40  0.981          0.876   595:595
65010   AEC IPC   138.0   65  0.979          0.936   661:661
65015   AEC SCOV  138.0   65  0.979          0.936   661:661
65065   ANTLOP 1  138.0   65  0.979          0.937   661:661
65070   ANTLOP 2  138.0   65  0.979          0.937   661:661
65080   ANTLOPE   161.0   65  0.981          0.939   661:661
65040   ANGEL     138.0   65  0.986          0.947   684:684
65340   CLINTON   138.0   65  0.990          0.943   684:684
66310   RIVRDALE  138.0   65  0.988          0.933   684:684 907
66640   W OGDEN   138.0   65  0.995          0.931   684:684
65280   CARBON    138.0   65  1.030          0.944   699:699
65457   DG UPLCO  138.0   65  1.007          0.940   699:699
65520   EMMAPARK  138.0   65  1.025          0.931   699:699
65755   HELPER    138.0   65  1.028          0.942   699:699
65760   HELPER T  138.0   65  1.030          0.946   699:699
66015   MOUND SW  138.0   65  1.033          0.974   699:699
66183   PANTHER   138.0   65  1.029          0.942   699:699
66395   SPAN F&1  138.0   65  0.968          0.857   728:699 728 1799
66415   SPHINX T  138.0   65  1.035          0.976   699:699
66590   UPALCO    138.0   65  1.007          0.940   699:699
66707   WILLOW C  138.0   65  1.029          0.942   699:699
79086   PAGOSA    115.0   73  0.964          0.870  1929:699 1471 1489 1508 1513 1514 1516 1520 1602 1929
65454   DIMP DEL  138.0   65  1.011          0.940   771:771
65475   DUMAS     138.0   65  1.012          0.941   771:771
66391   SOUTH MT  138.0   65  1.009          0.946   771:771
65570   FRANKLIN  138.0   65  1.016          0.928   792:792
65725   GRCYN TP  138.0   65  0.999          0.934   792:792
65735   GREENCYN  138.0   65  0.992          0.936   792:792
65900   LOGAN     138.0   65  0.992          0.935   792:792 819
66370   SMFLD TP  138.0   65  0.991          0.947   792:792
66375   SMITHFLD  138.0   65  0.991          0.947   792:792
73022   BGEORGE   115.0   73  0.982          0.902  1598:793 794 799 1598
73534   MEETSETP  115.0   73  0.988          0.911  1598:793 794 1211 1598
65575   FRANNIE   230.0   65  1.001          0.940   794:794
65620   GARLAND   230.0   65  0.999          0.941   794:794
66145   OREBASIN  230.0   65  0.996          0.946   794:794
73041   CARTERMT  115.0   73  0.993          0.924  1598:794 1211 1598
73075   GREYBULL  115.0   73  0.999          0.918  1598:794 1598
73340   NAHNEJEN  115.0   73  0.997          0.916  1598:794 1598
70165   ENGLE3TP  115.0   70  1.002          0.941   935:935
70168   ENGLEWD3  115.0   70  1.002          0.941   935:935
70239   JEWELL2   230.0   70  0.953          0.939   990:938 982 990 991 1007 1008 1009 1010 1015 1031 1032 1041 1048 1050
1053
                                                       1060 1061 1065 1066 1074 1094 1103 1106 1121 1128 1166 1633 1914
70491   TOLGATE   230.0   70  0.953          0.941   990:938 982 990 991 1007 1008 1009 1010 1015 1031 1032 1048 1053 1060
1061
                                                       1065 1066 1074 1094 1103 1106 1121 1128 1166 1633
70047   BARRLAKE  230.0   70  0.966          0.948   939:939
70392   SKYRANCH  230.0   70  0.963          0.948   940:940
70432   TOWER     230.0   70  0.960          0.949   940:940 1065 1066 1074
70154   DERBY 2   115.0   70  1.015          0.958   963:963
70278   MARCY     230.0   70  0.961          0.935   980:980 1066
70464   WATERTON  230.0   70  0.959          0.939   980:980 1049 1066 1074
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            70284   SURREYRG  230.0   70  0.966           0.940   981:981
            70551   MURPHY    230.0   70  0.963           0.948   981:981
            70260   LEETSDAL  230.0   70  0.954           0.939   990:982 990 991 1009 1010 1015 1053 1060 1061 1065 1066 1074 1103 1106
1121
                                                                   1128 1166
            70046   BUCKLEY2  230.0   70  0.956           0.944   990:990 991 1010 1060 1061 1065 1066 1074 1094 1103 1106 1166
            70067   BUCKLEY1  230.0   70  0.958           0.947  1065:990 1065 1066 1074 1166
            70163   ELATI1    230.0   70  0.956           0.938   990:990 1010 1053 1065 1066 1074 1106 1128
            70170   ELATI2    230.0   70  0.956           0.938   990:990 991 1010 1053 1065 1066 1074 1106 1128
            70530   MONACO    230.0   70  0.959           0.947   990:990 1065 1066 1074 1132
            70283   MEADOWHL  230.0   70  0.959           0.947  1066:990 1065 1066 1074
            70291   MONROEPS  230.0   70  0.954           0.939   990:990 991 1009 1010 1015 1053 1060 1065 1066 1074 1103 1106 1128 1166
            70417   SULLIVN   230.0   70  0.956           0.942  1026:990 1026 1060 1065 1066 1074 1103 1110 1166
            70428   TECH CTR  230.0   70  0.957           0.942  1026:990 1026 1060 1065 1066 1074 1166
            70512   JEWELL1   230.0   70  0.957           0.945  1026:990 1026 1060 1065 1066 1074 1166
            73348   CORLETT   115.0   73  0.954           0.778  1875:1008 1065 1066 1074 1153 1156 1157 1159 1160 1166 1167 1186 1187
1214 1217
                                                                   1218 1253 1254 1274 1295 1296 1312 1313 1315 1316 1318 1319 1338
1340 1348
                                                                   1357 1367 1369 1376 1631 1875 1896 1903 1909
            70362   RIVERDAL  230.0   70  0.958           0.947  1009:1009 1066 1074
            70107   CHEROKEE  230.0   70  0.956           0.947  1066:1010 1065 1066 1074 1106
            70149   DENVTM    230.0   70  0.957           0.947  1066:1010 1053 1065 1066 1074
            70200   GLENN PS  230.0   70  0.958           0.943  1010:1010 1015 1066 1074
            70324   LACOMBE   230.0   70  0.956           0.947  1066:1010 1053 1065 1066 1074 1106
            70461   WASHINGT  230.0   70  0.960           0.942  1010:1010
            70112   CLARK     230.0   70  0.960           0.948  1024:1024 1066 1074
            70241   JORDAN    230.0   70  0.960           0.948  1024:1024 1066 1074
            70100   CHATFLD   230.0   70  0.963           0.944  1049:1049
            70355   RIDGE     230.0   70  0.957           0.945  1052:1052 1066 1074
            70480   WESTPS    230.0   70  0.967           0.947  1053:1053
            70343   QUINCY    230.0   70  0.961           0.947  1065:1065 1066
            70396   SMOKYHIL  230.0   70  0.960           0.949  1065:1065 1066
            70212   GREENWD   230.0   70  0.961           0.949  1066:1066
            73375   WARRENLM  115.0   73  0.955           0.778  1875:1066 1074 1153 1156 1157 1159 1160 1166 1167 1186 1187 1214 1217
1218 1253
                                                                   1254 1274 1295 1296 1313 1315 1316 1318 1319 1338 1348 1357 1367
1369 1376
                                                                   1631 1875 1896 1903 1909
            70213   GUNBARRE  230.0   70  0.972           0.943  1106:1106
            70261   LEGGETT   230.0   70  0.970           0.945  1106:1106
            70297   NIWOT     230.0   70  0.972           0.943  1106:1106
            73005   ALVIN     115.0   73  0.976           0.893  1371:1147 1371 1385
            73059   FLEMING   115.0   73  0.964           0.878  1385:1147 1180 1245 1251 1337 1343 1351 1352 1371 1385 1903
            73063   FRENCHCK  115.0   73  0.960           0.900  1385:1147 1148 1166 1180 1188 1189 1244 1245 1251 1337 1343 1345 1346
1351 1352
                                                                   1365 1371 1385 1900 1903 1911
            73080   HAXTUN    115.0   73  0.961           0.885  1385:1147 1148 1166 1180 1188 1244 1245 1251 1337 1343 1345 1346 1351
1352 1365
                                                                   1371 1385 1900 1903 1911
            73208   WAGES     115.0   73  0.971           0.923  1343:1147 1343 1345 1365 1371 1385 1900
            73210   WAUNETA   115.0   73  0.968           0.905  1371:1147 1148 1180 1337 1343 1345 1346 1365 1371 1385 1900 1903 1911
            73304   CRETESWT  115.0   73  0.976           0.893  1371:1147 1371 1385
            73043   CHEYENNE  115.0   73  0.960           0.788  1875:1153 1157 1159 1166 1186 1217 1218 1296 1348 1357 1369 1875 1903
            73077   HAPPYJCK  115.0   73  0.957           0.783  1875:1153 1156 1157 1159 1160 1166 1186 1187 1214 1217 1218 1253 1254
1296 1316
                                                                   1318 1319 1338 1348 1357 1367 1369 1631 1875 1896 1903
            73183   SKYLINE   115.0   73  0.959           0.780  1875:1156 1159 1160 1166 1186 1218 1274 1296 1338 1357 1875 1903
            73480   CROWCRK   115.0   73  0.962           0.787  1875:1157 1159 1166 1218 1357 1875 1903
            73109   LARAMIE   115.0   73  0.967           0.819  1875:1159 1166 1319 1357 1875
            73008   ARCHER    115.0   73  0.976           0.794  1875:1166 1875
            73066   GEMCTYTP  115.0   73  0.973           0.817  1875:1166 1875
            73128   MAY       115.0   73  0.975           0.835  1875:1166 1875
            73139   MYERS     115.0   73  0.976           0.802  1875:1166 1875
            73140   MYERS TP  115.0   73  0.976           0.802  1875:1166 1875
            73146   OASISTAP  115.0   73  0.976           0.836  1875:1166 1875
            73152   PINEBLUF  115.0   73  0.977           0.845  1875:1166 1295 1296 1875 1903
            73154   POLE CK   115.0   73  0.977           0.823  1875:1166 1875
            73161   QUALLS    115.0   73  0.976           0.821  1875:1166 1875
            73172   ROCKPRTP  115.0   73  0.971           0.840  1875:1166 1186 1218 1357 1875
            73173   ROUNDTOP  115.0   73  0.981           0.871  1875:1166 1875
            73178   SENTINEL  115.0   73  0.979           0.868  1875:1166 1875
            73187   SPRINGCK  115.0   73  0.973           0.817  1875:1166 1875
            73367   FTSANDER  115.0   73  0.973           0.817  1875:1166 1875
            73504   PONNEQUI  115.0   73  0.966           0.819  1875:1166 1186 1218 1357 1875
            73023   BIJOUTAP  115.0   73  0.991           0.898  1178:1178 1202 1410
            73031   BRUSHTAP  115.0   73  1.010           0.878  1178:1178
            73097   KIOWA CK  115.0   73  0.991           0.920  1178:1178 1202
            73103   L.MEADOW  115.0   73  0.992           0.943  1178:1178
            73117   LOST CK   115.0   73  0.999           0.949  1178:1178
            73147   ORCHARD   115.0   73  0.991           0.920  1178:1178 1202
            73213   WIGGINS   115.0   73  0.991           0.930  1178:1178 1202
            73305   EFMORGTP  115.0   73  0.994           0.882  1178:1178 1202
            73310   FME       115.0   73  0.993           0.881  1178:1178 1202
            73311   FMS       115.0   73  0.992           0.883  1178:1178 1202 1410
            73370   LOSTCKTP  115.0   73  0.999           0.949  1178:1178
            73377   EXCEL     115.0   73  0.992           0.883  1178:1178 1202 1410
            73378   FMN       115.0   73  0.994           0.882  1178:1178 1202
            73379   FMWEST    115.0   73  0.992           0.883  1178:1178 1202 1410
            73136   MESSEX    115.0   73  1.001           0.921  1180:1180
            73191   STERLING  115.0   73  0.974           0.921  1180:1180 1337 1352 1903
            73478   GALIEN    115.0   73  0.967           0.871  1385:1180 1337 1351 1352 1371 1385 1903
            73024   BLKHLWTP  115.0   73  0.992           0.914  1357:1186 1218 1357 1875
            73145   NUNN      115.0   73  0.981           0.889  1875:1186 1218 1357 1875
            73025   BONNY CK  115.0   73  1.005           0.926  1188:1188
            73083   HELL CK   115.0   73  0.986           0.911  1188:1188 1189
            73084   HELL TAP  115.0   73  0.986           0.911  1188:1188 1189
            73091   IDALIA    115.0   73  0.998           0.939  1188:1188 1189
            73110   LIBERTY   115.0   73  0.983           0.908  1188:1188 1189
            73174   SAGEBRSH  115.0   73  0.984           0.909  1188:1188 1189
            73185   SO. FORK  115.0   73  1.000           0.927  1188:1188 1189
            70116   COBBLAKE  115.0   70  0.995           0.912  1357:1218 1357
            73044   COBBLKTP  115.0   73  0.995           0.912  1357:1218 1357
            73029   BRIDGEPT  115.0   73  0.992           0.926  1903:1220 1903
            73046   DALTON    115.0   73  0.999           0.911  1903:1220 1903
            73236   GREENWOD  115.0   73  0.994           0.918  1903:1220 1903
            73037   BUSHNELL  115.0   73  0.981           0.878  1875:1295 1296 1875 1903
            73038   BUSHNLTP  115.0   73  0.981           0.878  1875:1295 1296 1875 1903
            73096   KIMBALL   115.0   73  0.983           0.895  1875:1295 1296 1875 1903
            73355   KIMBALLC  115.0   73  0.983           0.895  1875:1295 1296 1875 1903
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73092	JACINTO	115.0	73	0.992	0.908	1296:1296 1875 1903
73106	LAPORTE	230.0	73	1.009	0.943	1316:1316
73166	REDWILLW	115.0	73	0.995	0.916	1343:1343 1900
73169	RICHARDS	115.0	73	0.997	0.911	1357:1357
73200	TIMNATH	115.0	73	0.996	0.913	1357:1357
73201	TIMNTHTP	115.0	73	0.996	0.912	1357:1357
73216	WINDRIVR	115.0	73	1.019	0.958	1368:1368 1939
73217	WINDRIVT	115.0	73	1.019	0.958	1368:1368 1939
73175	SANDHILL	115.0	73	0.993	0.885	1371:1371
73202	TORRNGTN	115.0	73	0.989	0.944	1382:1382
73225	WRAY TAP	115.0	73	1.003	0.946	1401:1401
73331	WRAYWAPA	115.0	73	1.003	0.946	1401:1401
73371	BETHELLM	115.0	73	0.984	0.949	1401:1401
73374	VERNONLM	115.0	73	0.979	0.944	1401:1401 1900
79076	AM EAST	115.0	73	0.988	0.894	1929:1516 1929
79077	BAYFIELD	115.0	73	0.987	0.897	1929:1516 1929
79099	FLOR.RIV	115.0	73	0.990	0.895	1929:1516 1929
66720	WORLAND	115.0	65	1.017	0.958	1598:1598
73019	BASIN	115.0	73	1.009	0.934	1598:1598
73123	LOVELL	115.0	73	0.999	0.928	1598:1598
73222	WORLANTP	115.0	73	1.015	0.953	1598:1598
60240	MIDPOINT	500.0	60	1.069	1.007	1605:1605
60270	OXBOW	138.0	60	0.991	0.934	1682:1682
62159	GLDNSNLT	161.0	62	0.983	0.944	1768:1768
47501	ARMSTRNG	115.0	40	1.002	0.944	1769:1769
40149	BRINKENS	115.0	40	0.996	0.939	1769:1769
47503	CHAMBERS	115.0	40	1.001	0.946	1769:1769
40239	CLARKSTN	115.0	40	1.005	0.949	1769:1769
48075	CLEARWTR	115.0	40	1.004	0.947	1769:1769
40519	HATWAI	230.0	40	1.041	0.968	1769:1769
47099	WELLS	115.0	40	1.063	0.971	1787:1787
66245	PLATTE	115.0	65	1.010	0.932	1835:1835
73104	LAGRANGE	115.0	73	0.991	0.925	1875:1875
73134	MED BOW	115.0	73	0.988	0.893	1875:1875
73361	MEDBOWHS	115.0	73	0.988	0.893	1875:1875
73362	MEDBOWTP	115.0	73	0.988	0.893	1875:1875
73047	DEERINGL	115.0	73	0.991	0.946	1900:1900
73142	N.YUMA	115.0	73	1.000	0.943	1900:1900
73230	YUMA	115.0	73	0.989	0.944	1900:1900
73131	MCGREW	115.0	73	0.992	0.946	1903:1903
73150	PEETZ	115.0	73	0.994	0.920	1903:1903
73179	SIDNEY	115.0	73	1.010	0.911	1903:1903
73389	BRIARGAT	115.0	73	0.990	0.911	1914:1914
73391	CTTNWD N	115.0	73	0.991	0.911	1914:1914
73400	EMIL AND	115.0	73	0.987	0.937	1914:1914
73410	KETTLECK	115.0	73	0.989	0.912	1914:1914
73414	MONUMENT	115.0	73	0.987	0.935	1914:1914
79023	DURANGO	115.0	73	0.997	0.916	1929:1929
79071	HESPERUS	115.0	73	1.003	0.907	1929:1929
79078	BODO	115.0	73	0.996	0.913	1929:1929
79080	CASCADEL	115.0	73	0.997	0.920	1929:1929
79088	ROCKWOOD	115.0	73	0.998	0.914	1929:1929
79089	SHENDOAH	115.0	73	0.999	0.925	1929:1929
79111	MANCOSTP	115.0	73	1.007	0.951	1929:1929
79191	COYOTE G	115.0	73	1.001	0.949	1929:1929
79257	AMES	115.0	73	0.999	0.943	1929:1929
79194	BURROBDG	115.0	73	0.999	0.936	1929:1929
79256	SILVERTN	115.0	73	0.998	0.932	1929:1929
79189	SUNSH SM	115.0	73	0.999	0.945	1929:1929
79188	TELLURID	115.0	73	0.990	0.935	1929:1929
62311	HAMLTNMA	161.0	62	0.989	0.943	1936:1936
62312	HAMLTNMB	161.0	62	0.989	0.943	1936:1936
73170	RIVERTON	115.0	73	1.022	0.960	1939:1939

MONTANA TRANSMISSION STUDY WAPA UGP JUNE 2002
G1 WITH LINE UPDATES

FILE made from cont. file : [C:\uwk\mts\g1\pflow\hsbs\cHSBS-2.out]
DATE REPORT MADE - Tue May 07 16:29:57 2002

Outage 98 failed to converge
Outage 109 failed to converge
Outage 347 failed to converge
Outage 385 failed to converge
Outage 386 failed to converge
Outage 1635 failed to converge
Outage 1674 failed to converge
Outage 1686 failed to converge
Outage 1687 failed to converge
Outage 1688 failed to converge
Outage 1689 failed to converge
Outage 1774 failed to converge

--------FROM bus--------					---------TO bus---------									base	pu	rating		
#	---name---	-kv-	ar	#	---name---	-kv-	ar	ID	--mw-	-mvar	amps	load	load	[MVA]	Cnt	# freq.
48125	"FOURLBPA"	115	40	48132	"HAL&WHIT"	115	40	"1 "	107	133	856	0.45	2.97	57.40	440	2
48319	"PLEASANT"	115	40	48355	"RATHDRUM"	115	40	"1 "	-153	-42	864	1.03	2.01	85.80	583	1931
48303	"OROFINO "	115	40	40023	"AHSAHKA "	115	40	"1 "	-219	-2	1109	0.82	1.94	113.70	417	3
40855	"PRAIRIEB"	115	40	48349	"RAMSEY "	115	40	"1 "	-154	-48	880	0.78	1.93	91.00	576	3
48329	"POST FLS"	115	40	40855	"PRAIRIEB"	115	40	"1 "	-133	-35	771	0.59	1.79	85.80	576	2
47511	"MOAB "	115	40	48319	"PLEASANT"	115	40	"1 "	-139	-33	793	0.83	1.74	91.00	583	6
70005	"BRUSHCPP"	115	70	73013	"B.CK PS "	115	73	"1 "	243	42	1201	0.72	1.48	162.00	1628	1
48025	"BEACON N"	230	40	40090	"BELL SO "	230	40	"5 "	-492	-140	1268	0.79	1.38	366.50	270	4
66565	"TREASTON"	230	65	66570	"TREASTON"	138	65	"1 "	255	-20	256	0.52	1.29	200.00	1846	2
70005	"BRUSHCPP"	115	70	73013	"B.CK PS "	115	73	"2 "	243	45	1205	0.67	1.28	187.00	1627	1
48023	"BEACON N"	115	40	48371	"ROSSPARK"	115	40	"1 "	169	46	883	0.94	1.27	138.20	284	48
48253	"N LEWIST"	115	40	48075	"CLEARWTR"	115	40	"1 "	142	16	720	0.26	1.26	113.70	465	1
48311	"OTIS "	115	40	47511	"MOAB "	115	40	"1 "	-93	-17	532	0.45	1.24	85.80	583	2
48117	"EASTFARM"	115	40	48329	"POST FLS"	115	40	"1 "	-118	-23	684	0.31	1.23	110.90	576	2
48029	"BEACON S"	115	40	48271	"NINTHCNT"	115	40	"1 "	108	24	559	0.77	1.22	91.00	257	3
65145	"BENLOMND"	138	65	66650	"WARREN "	138	65	"1 "	182	30	765	0.66	1.21	151.00	684	3
65520	"EMMAPARK"	138	65	66590	"UPALCO "	138	65	"1 "	-158	87	810	0.61	1.20	163.00	699	2
65193	"BONANZA "	345	65	65192	"BONANZA "	138	65	"1 "	-455	120	470	0.72	1.20	392.00	1471	2
48279	"NORTHWES"	115	40	48461	"WEST "	115	40	"1 "	-106	-29	556	0.92	1.19	92.80	449	35
65520	"EMMAPARK"	138	65	66183	"PANTHER "	138	65	"1 "	157	-88	808	0.60	1.19	163.00	699	1
48159	"HUETTER "	115	40	48355	"RATHDRUM"	115	40	"1 "	-119	-40	654	0.74	1.18	110.90	576	6
65860	"JFRSNPHA"	161	65	65850	"JEFFERSN"	161	65	"1 "	80	-75	110	0.87	1.17	100.00	418	8
70265	"LOOKOUT "	115	70	70266	"LOOKOUT "	230	70	"1 "	-152	86	175	0.78	1.17	150.00	1864	1
48311	"OTIS "	115	40	48117	"EASTFARM"	115	40	"1 "	-111	-19	648	0.26	1.16	110.90	576	2
65280	"CARBON "	138	65	66183	"PANTHER "	138	65	"1 "	-146	100	786	0.57	1.15	163.00	699	1
70265	"LOOKOUT "	115	70	70266	"LOOKOUT "	230	70	"2 "	-150	85	172	0.76	1.15	150.00	1863	1
60110	"CALDWELL"	230	60	60105	"CALDWELL"	138	60	"1 "	246	22	247	0.64	1.12	220.00	1665	1
70108	"CHEROKEN"	115	70	70154	"DERBY 2 "	115	70	"1 "	149	30	744	0.76	1.10	135.00	962	3
70071	"CABINCRK"	115	70	70072	"CABINCRK"	230	70	"2 "	53	-12	54	0.41	1.10	50.00	987	1
60110	"CALDWELL"	230	60	60105	"CALDWELL"	138	60	"2 "	241	24	242	0.56	1.10	220.00	1664	1
40145	"BOUNDARY"	230	40	40143	"BOUNDARY"	115	40	"1 "	135	17	136	0.66	1.09	125.00	230	3
40087	"BELL BPA"	115	40	48449	"WAIKIKIT"	115	40	"1 "	116	34	610	0.84	1.09	111.90	1748	7
46817	"ROCK IS2"	115	40	41105	"VALHALLA"	115	40	"1 "	326	5	1575	0.48	1.09	288.80	516	1
48258	"NEWPORTT"	115	40	48043	"BLANCHRD"	115	40	"1 "	124	-4	616	0.73	1.08	113.70	283	4
40259	"COLUMBIA"	115	40	47071	"PALISADS"	115	40	"1 "	143	5	695	0.82	1.08	127.70	396	2
66085	"NINETY S"	138	65	66660	"WEST JOR"	138	65	"1 "	200	47	848	0.40	1.08	188.00	858	2
70071	"CABINCRK"	115	70	70072	"CABINCRK"	230	70	"1 "	52	-12	53	0.40	1.08	50.00	987	1
48357	"RATHDRUM"	230	40	48355	"RATHDRUM"	115	40	"1 "	217	122	249	0.49	1.08	230.00	1777	1
48043	"BLANCHRD"	115	40	47505	"HOODOO "	115	40	"1 "	121	-9	611	0.72	1.07	113.70	283	4
47505	"HOODOO "	115	40	48403	"SPIRITLT"	115	40	"1 "	118	-15	603	0.71	1.07	111.90	283	4
40385	"ELLENGTP"	115	40	40387	"ELLENSBG"	115	40	"1 "	96	-13	497	0.82	1.06	93.60	579	1
70108	"CHEROKEN"	115	70	70153	"DERBY 1 "	115	70	"1 "	143	30	718	0.70	1.06	135.00	963	2
70471	"WELD PS"	230	70	73212	"WELD LM"	230	73	"1 "	-531	7	1328	0.73	1.06	500.00	1626	3
65140	"BENLOMND"	230	65	65145	"BENLOMND"	138	65	"1 "	282	6	282	0.72	1.06	267.00	1794	2
47027	"DIAM LAK"	115	40	40907	"SACHEEN "	115	40	"1 "	-140	15	694	0.33	1.05	131.50	283	1
47071	"PALISADS"	115	40	46075	"QUINCY T"	115	40	"1 "	139	3	675	0.79	1.05	127.70	396	2
40023	"AHSAHKA "	115	40	40367	"DWORSHAK"	115	40	"1 "	-224	-13	1122	0.45	1.05	213.10	417	1
66480	"SYRACUSE"	138	65	66650	"WARREN "	138	65	"1 "	-151	-1	663	0.51	1.05	151.00	684	2
48403	"SPIRITLT"	115	40	48017	"ATHOLTAP"	115	40	"1 "	115	-20	592	0.68	1.04	113.70	283	1
46809	"MCKENZIE"	230	40	46831	"ROCKYRH1"	230	40	"1 "	-503	-17	1238	0.77	1.04	474.10	375	3
70395	"SMOKYHIL"	115	70	70396	"SMOKYHIL"	230	70	"1 "	-156	11	157	0.67	1.04	150.00	1868	1
48258	"NEWPORTT"	115	40	47086	"PINE ST "	115	40	"1 "	-125	3	624	0.70	1.03	120.10	283	2
48155	"HERN "	115	40	48159	"HUETTER "	115	40	"1 "	-104	-34	573	0.60	1.03	110.90	576	2
40259	"COLUMBIA"	115	40	40579	"JENKINS "	115	40	"1 "	111	13	547	0.81	1.03	105.60	579	1
65280	"CARBON "	138	65	66395	"SPAN F&1"	138	65	"1 "	120	6	487	0.45	1.03	113.00	728	1
66395	"SPAN F&1"	138	65	66405	"SPAN FRK"	138	65	"1 "	97	-22	486	0.45	1.03	113.00	728	1
66370	"SMFLD TP"	138	65	66680	"WHEELON "	138	65	"1 "	-142	-5	627	0.34	1.03	146.00	792	1
41347	"MIDWAYB2"	230	40	41111	"VANTAGE "	230	40	"1 "	-386	1	965	0.68	1.02	378.50	461	1
48349	"RAMSEY "	115	40	48155	"HERN "	115	40	"1 "	-102	-33	567	0.59	1.02	110.90	576	1
40385	"ELLENGTP"	115	40	40579	"JENKINS "	115	40	"1 "	-105	10	543	0.80	1.02	105.60	579	1
46805	"CHELAN "	115	40	48149	"HEADWORK"	115	40	"1 "	-88	32	462	0.91	1.02	91.00	642	1
65690	"GRACE "	161	65	65695	"GRACE "	138	65	"1 "	159	-58	170	0.82	1.02	168.00	1615	6
48131	"GARDENSP"	115	40	40525	"HAYFORD "	115	40	"1 "	55	-1	288	0.97	1.00	57.40	278	1932
40259	"COLUMBIA"	115	40	46033	"GB55 "	115	40	"1 "	131	-18	640	0.57	1.00	127.70	241	1
40459	"GARRISON"	500	40	41057	"TAFT "	500	40	"2 "	920	-314	1088	0.59	1.00	944.00	451	1
40459	"GARRISON"	500	40	41057	"TAFT "	500	40	"1 "	920	-314	1088	0.59	1.00	944.00	452	1
70463	"WATERTON"	115	70	70464	"WATERTON"	230	70	"2 "	-96	-18	98	0.69	1.00	100.00	1870	1
70463	"WATERTON"	115	70	70464	"WATERTON"	230	70	"1 "	-95	-18	97	0.68	0.99	100.00	1871	1
48017	"ATHOLTAP"	115	40	40953	"SCARCELO"	115	40	"1 "	107	-23	557	0.62	0.98	113.70	283	1
46807	"MCKENZIE"	115	40	41105	"VALHALLA"	115	40	"1 "	363	-7	1758	0.60	0.98	356.50	596	1
46001	"ANC LK T"	230	40	40261	"COLUMBIA"	230	40	"1 "	-413	31	1022	0.69	0.98	415.50	610	1
65560	"FISHCREK"	161	65	65670	"GOSHEN "	161	65	"1 "	-167	47	617	0.80	0.98	176.00	1615	3
40259	"COLUMBIA"	115	40	41105	"VALHALLA"	115	40	"2 "	-212	27	1037	0.57	0.97	213.10	369	1
40259	"COLUMBIA"	115	40	41105	"VALHALLA"	115	40	"1 "	-212	27	1034	0.56	0.97	213.10	370	1
70192	"FTLUPTON"	230	70	70311	"PAWNEE "	230	70	"1 "	-384	73	1004	0.66	0.97	413.50	1066	2
48165	"IRVIN "	115	40	48299	"OPPORTUN"	115	40	"1 "	49	16	275	0.34	0.96	57.40	533	2
70265	"LOOKOUT "	115	70	70224	"HOGBACK "	115	70	"1 "	185	12	930	0.65	0.96	192.00	1034	1
65560	"FISHCREK"	161	65	65690	"GRACE "	161	65	"1 "	163	-49	606	0.77	0.96	176.00	1615	1
48031	"BEACON S"	230	40	48029	"BEACON S"	115	40	"1 "	253	108	275	0.64	0.96	287.00	1748	1
48025	"BEACON N"	230	40	48023	"BEACON N"	115	40	"1 "	253	108	275	0.64	0.96	287.00	1749	1

low voltage violations delta voltage violations high voltage violations

CNT	freq	---name---	-kv-	ar	-base- -case- pu vt	-cont- -case- pu vt	---name---	-kv-	ar	freq	delta V	freq	---name---	-kv-	ar	-base- -case- pu vt	-cont- -case- pu vt
25	0		0	0	99.000	99.000	PLST VLY	138	60	1	0.055	0		0	0	99.000	0.000
49	1	BIGGRASS	161	65	0.961	0.948		0	0	0	0.000	0		0	0	99.000	0.000
91	1	MCCALL	138	60	0.995	0.946		0	0	0	0.000	0		0	0	99.000	0.000
100	0		0	0	99.000	99.000	QUARTZ	138	60	6	0.072	0		0	0	99.000	0.000
108	0		0	0	99.000	99.000	WEISER	138	60	2	0.065	0		0	0	99.000	0.000
111	1	WOOD RVR	138	60	1.007	0.932	WOOD RVR	138	60	1	0.075	0		0	0	99.000	0.000
119	1	HINES	138	60	1.022	0.947	HINES	115	60	2	0.078	0		0	0	99.000	0.000
122	0		0	0	99.000	99.000	ONTARIO	138	60	4	0.054	0		0	0	99.000	0.000
129	1	BIGGRASS	161	65	0.961	0.937		0	0	0	0.000	0		0	0	99.000	0.000
134	2	ENNIS MT	161	62	0.975	0.945		0	0	0	0.000	0		0	0	99.000	0.000
135	1	TAFTAUTO	115	62	0.980	0.933		0	0	0	0.000	0		0	0	99.000	0.000
143	0		0	0	99.000	99.000	SHELBY	230	62	1	0.052	0		0	0	99.000	0.000
144	5	ENNIS MT	161	62	0.975	0.944		0	0	0	0.000	0		0	0	99.000	0.000
145	5	ENNIS MT	161	62	0.975	0.944		0	0	0	0.000	0		0	0	99.000	0.000
163	2	CUTBANK	115	62	0.998	0.945	BOLE	230	62	10	0.056	0		0	0	99.000	0.000
182	2	CONRAD	115	62	1.015	0.937	CONRAD	115	62	2	0.078	0		0	0	99.000	0.000
185	11	EGALTN A	161	62	0.987	0.921	CLYDE P	161	62	6	0.074	0		0	0	99.000	0.000
230	1	LIBTYLK	115	40	0.954	0.949		0	0	0	0.000	0		0	0	99.000	0.000
231	0		0	0	99.000	99.000	AHSAHKA	115	40	1	0.063	0		0	0	99.000	0.000
239	3	BARKER	115	40	0.954	0.947		0	0	0	0.000	0		0	0	99.000	0.000
247	4	BARKER	115	40	0.954	0.947		0	0	0	0.000	0		0	0	99.000	0.000
254	4	BARKER	115	40	0.954	0.947		0	0	0	0.000	0		0	0	99.000	0.000
263	1	LIBTYLK	115	40	0.954	0.949		0	0	0	0.000	0		0	0	99.000	0.000
270	2	BARKER	115	40	0.954	0.949		0	0	0	0.000	0		0	0	99.000	0.000
271	31	LIBTYLK	115	40	0.954	0.872	CHESTER	115	40	36	0.083	0		0	0	99.000	0.000
278	12	LIBTYLK	115	40	0.954	0.932		0	0	0	0.000	0		0	0	99.000	0.000
283	3	BARKER	115	40	0.954	0.948		0	0	0	0.000	0		0	0	99.000	0.000
301	3	LIBTYLK	115	40	0.954	0.947		0	0	0	0.000	0		0	0	99.000	0.000
309	0		0	0	99.000	99.000	BREWSTER	115	40	2	0.057	0		0	0	99.000	0.000
312	0		0	0	99.000	99.000	BRIDGBAR	115	40	3	0.063	0		0	0	99.000	0.000
313	0		0	0	99.000	99.000	BRIDGPRT	115	40	8	0.085	0		0	0	99.000	0.000
323	26	BARKER	115	40	0.954	0.904	LAKEVIEW	230	40	8	0.065	0		0	0	99.000	0.000
338	2	OROVILLE	115	40	1.003	0.940	E OMAK	230	40	7	0.071	0		0	0	99.000	0.000
383	0		0	0	99.000	99.000	WAGNERLK	115	40	2	0.058	0		0	0	99.000	0.000
384	0		0	0	99.000	99.000	WAGNERLK	115	40	2	0.058	0		0	0	99.000	0.000
402	4	BARKER	115	40	0.954	0.947		0	0	0	0.000	0		0	0	99.000	0.000
404	5	BARKER	115	40	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
417	10	PTRSNFLT	230	62	0.970	0.917	PTRSNFLT	230	62	1	0.053	0		0	0	99.000	0.000
418	18	PTRSNFLT	230	62	0.970	0.908	PTRSNFLT	230	62	2	0.062	0		0	0	99.000	0.000
425	5	BARKER	115	40	0.954	0.934		0	0	0	0.000	0		0	0	99.000	0.000
445	2	DELIGHT	115	40	0.965	0.895	DELIGHT	115	40	2	0.070	0		0	0	99.000	0.000
446	3	ENNIS MT	161	62	0.975	0.948		0	0	0	0.000	0		0	0	99.000	0.000
447	3	ENNIS MT	161	62	0.975	0.948		0	0	0	0.000	0		0	0	99.000	0.000
451	11	PTRSNFLT	230	62	0.970	0.933	GAR1EAST	500	40	2	0.063	0		0	0	99.000	0.000
452	11	PTRSNFLT	230	62	0.970	0.933	GAR1EAST	500	40	2	0.063	0		0	0	99.000	0.000
462	0		0	0	99.000	99.000	HANNA	115	40	3	0.072	0		0	0	99.000	0.000
469	3	PTRSNFLT	230	62	0.970	0.941		0	0	0	0.000	0		0	0	99.000	0.000
472	7	BARKER	115	40	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
478	0		0	0	99.000	99.000	HOT SPR	500	40	1	0.052	0		0	0	99.000	0.000
479	8	BARKER	115	40	0.954	0.943		0	0	0	0.000	0		0	0	99.000	0.000
491	27	LIBTYLK	115	40	0.954	0.900	CHESTER	115	40	28	0.054	0		0	0	99.000	0.000
500	1	DELIGHT	115	40	0.965	0.945		0	0	0	0.000	0		0	0	99.000	0.000
513	2	DELIGHT	115	40	0.965	0.944		0	0	0	0.000	0		0	0	99.000	0.000
520	2	ROUNDUP	230	40	1.011	0.888	ROUNDUP	230	40	3	0.123	0		0	0	99.000	0.000
533	2	BARKER	115	40	0.954	0.949		0	0	0	0.000	0		0	0	99.000	0.000
534	9	MOAB	115	40	0.958	0.889	MOAB	115	40	10	0.069	0		0	0	99.000	0.000
542	3	BARKER	115	40	0.954	0.947		0	0	0	0.000	0		0	0	99.000	0.000
562	2	BARKER	115	40	0.954	0.949		0	0	0	0.000	0		0	0	99.000	0.000
567	4	BARKER	115	40	0.954	0.940		0	0	0	0.000	0		0	0	99.000	0.000
568	4	BARKER	115	40	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
576	10	PLEASANT	115	40	0.966	0.866	PLEASANT	115	40	14	0.100	0		0	0	99.000	0.000
580	9	DOWER RD	115	40	0.959	0.911		0	0	0	0.000	0		0	0	99.000	0.000
583	10	PRAIRIEB	115	40	0.966	0.877	PRAIRIEB	115	40	14	0.089	0		0	0	99.000	0.000
586	5	BARKER	115	40	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
595	3	GAFFNEY	115	40	0.981	0.876	GAFFNEY	115	40	3	0.105	0		0	0	99.000	0.000
651	1	BIGGRASS	161	65	0.961	0.946		0	0	0	0.000	0		0	0	99.000	0.000
661	5	AEC IPC	138	65	0.979	0.936		0	0	0	0.000	0		0	0	99.000	0.000
684	4	W OGDEN	138	65	0.995	0.931	W OGDEN	138	65	2	0.064	0		0	0	99.000	0.000
699	10	SPAN F&1	138	65	0.968	0.880	EMMAPARK	138	65	12	0.094	0		0	0	99.000	0.000
728	1	SPAN F&1	138	65	0.968	0.857	SPAN F&1	138	65	1	0.111	0		0	0	99.000	0.000
771	3	DIMP DEL	138	65	1.011	0.940	DIMP DEL	138	65	3	0.071	0		0	0	99.000	0.000
792	6	FRANKLIN	138	65	1.016	0.928	FRANKLIN	138	65	4	0.088	0		0	0	99.000	0.000
793	2	BGEORGE	115	73	0.982	0.946		0	0	0	0.000	0		0	0	99.000	0.000
794	8	BGEORGE	115	73	0.982	0.933	FRANNIE	230	65	8	0.061	0		0	0	99.000	0.000
799	1	BGEORGE	115	73	0.982	0.949		0	0	0	0.000	0		0	0	99.000	0.000
808	1	BIGGRASS	161	65	0.961	0.940		0	0	0	0.000	0		0	0	99.000	0.000
819	1	LOGAN	138	65	0.992	0.949		0	0	0	0.000	0		0	0	99.000	0.000
889	0		0	0	99.000	99.000	ETNA	115	65	2	0.052	0		0	0	99.000	0.000
907	1	RIVRDALE	138	65	0.988	0.948		0	0	0	0.000	0		0	0	99.000	0.000
935	2	ENGLE3TP	115	70	1.002	0.941	ENGLE3TP	115	70	2	0.061	0		0	0	99.000	0.000
938	2	TOLGATE	230	70	0.953	0.948		0	0	0	0.000	0		0	0	99.000	0.000
939	1	BARRLAKE	230	70	0.966	0.948		0	0	0	0.000	0		0	0	99.000	0.000
940	2	SKYRANCH	230	70	0.963	0.948		0	0	0	0.000	0		0	0	99.000	0.000
962	0		0	0	99.000	99.000	DERBY 1	115	70	1	0.054	0		0	0	99.000	0.000
963	0		0	0	99.000	99.000	DERBY 2	115	70	1	0.057	0		0	0	99.000	0.000
980	2	MARCY	230	70	0.961	0.935		0	0	0	0.000	0		0	0	99.000	0.000
981	2	SURREYRG	230	70	0.966	0.940		0	0	0	0.000	0		0	0	99.000	0.000
982	3	JEWELL2	230	70	0.953	0.948		0	0	0	0.000	0		0	0	99.000	0.000
990	13	ELATI1	230	70	0.956	0.938		0	0	0	0.000	0		0	0	99.000	0.000
991	6	ELATI2	230	70	0.956	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1007	2	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1008	3	JEWELL2	230	70	0.953	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1009	5	RIVERDAL	230	70	0.958	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1010	12	WASHINGT	230	70	0.960	0.942		0	0	0	0.000	0		0	0	99.000	0.000
1015	5	GLENN PS	230	70	0.958	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1024	2	CLARK	230	70	0.960	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1026	3	SULLIVN	230	70	0.956	0.942		0	0	0	0.000	0		0	0	99.000	0.000
1031	2	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1032	2	JEWELL2	230	70	0.953	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1041	1	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1048	2	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1049	2	CHATFLD	230	70	0.963	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1050	1	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1052	1	RIDGE	230	70	0.957	0.945		0	0	0	0.000	0		0	0	99.000	0.000
1053	9	JEWELL2	230	70	0.953	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1060	8	MONROEPS	230	70	0.954	0.942		0	0	0	0.000	0		0	0	99.000	0.000

1061	4	JEWELL2	230	70	0.953	0.945		0	0	0	0.000	0		0	0	99.000	0.000
1065	20	JEWELL2	230	70	0.953	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1066	29	JEWELL2	230	70	0.953	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1074	25	JEWELL2	230	70	0.953	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1094	3	BUCKLEY2	230	70	0.956	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1103	6	JEWELL2	230	70	0.953	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1106	12	GUNBARRE	230	70	0.972	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1110	1	SULLIVN	230	70	0.956	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1121	3	JEWELL2	230	70	0.953	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1128	6	JEWELL2	230	70	0.953	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1132	1	MONACO	230	70	0.959	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1147	7	ALVIN	115	73	0.976	0.920	ALVIN	115	73	2	0.056	0		0	0	99.000	0.000
1148	3	FRENCHCK	115	73	0.960	0.940		0	0	0	0.000	0		0	0	99.000	0.000
1153	4	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1156	4	SKYLINE	115	73	0.959	0.925		0	0	0	0.000	0		0	0	99.000	0.000
1157	5	CORLETT	115	73	0.954	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1159	7	CORLETT	115	73	0.954	0.936		0	0	0	0.000	0		0	0	99.000	0.000
1160	4	CORLETT	115	73	0.954	0.945		0	0	0	0.000	0		0	0	99.000	0.000
1166	33	CORLETT	115	73	0.954	0.914		0	0	0	0.000	0		0	0	99.000	0.000
1167	2	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1178	14	BRUSHTAP	115	73	1.010	0.878	BRUSHTAP	115	73	13	0.132	0		0	0	99.000	0.000
1180	7	GALIEN	115	73	0.967	0.919	MESSEX	115	73	2	0.080	0		0	0	99.000	0.000
1186	9	CORLETT	115	73	0.954	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1187	3	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1188	9	LIBERTY	115	73	0.983	0.908	BONNY CK	115	73	7	0.079	0		0	0	99.000	0.000
1189	7	LIBERTY	115	73	0.983	0.918	HELL CK	115	73	6	0.065	0		0	0	99.000	0.000
1202	10	FME	115	73	0.993	0.904	EFMORGTP	115	73	9	0.089	0		0	0	99.000	0.000
1211	2	CARTERMT	115	73	0.993	0.929	CARTERMT	115	73	2	0.064	0		0	0	99.000	0.000
1214	3	CORLETT	115	73	0.954	0.936		0	0	0	0.000	0		0	0	99.000	0.000
1217	4	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1218	12	COBBLAKE	115	70	0.995	0.919	COBBLAKE	115	70	4	0.076	0		0	0	99.000	0.000
1220	3	DALTON	115	73	0.999	0.937	DALTON	115	73	2	0.062	0		0	0	99.000	0.000
1244	2	HAXTUN	115	73	0.961	0.938		0	0	0	0.000	0		0	0	99.000	0.000
1245	3	FLEMING	115	73	0.964	0.936		0	0	0	0.000	0		0	0	99.000	0.000
1251	3	FRENCHCK	115	73	0.960	0.923		0	0	0	0.000	0		0	0	99.000	0.000
1253	3	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1254	3	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1274	3	CORLETT	115	73	0.954	0.924		0	0	0	0.000	0		0	0	99.000	0.000
1295	7	KIMBALL	115	73	0.983	0.939		0	0	0	0.000	0		0	0	99.000	0.000
1296	11	JACINTO	115	73	0.992	0.908	JACINTO	115	73	5	0.084	0		0	0	99.000	0.000
1312	1	CORLETT	115	73	0.954	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1313	2	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1315	2	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1316	4	LAPORTE	230	73	1.009	0.943	LAPORTE	230	73	1	0.066	0		0	0	99.000	0.000
1318	3	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1319	4	LARAMIE	115	73	0.967	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1337	6	GALIEN	115	73	0.967	0.919	STERLING	115	73	1	0.052	0		0	0	99.000	0.000
1338	4	CORLETT	115	73	0.954	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1340	1	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1343	6	REDWILLW	115	73	0.995	0.916	REDWILLW	115	73	1	0.079	0		0	0	99.000	0.000
1345	4	FRENCHCK	115	73	0.960	0.942		0	0	0	0.000	0		0	0	99.000	0.000
1346	3	FRENCHCK	115	73	0.960	0.942		0	0	0	0.000	0		0	0	99.000	0.000
1348	4	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1351	4	HAXTUN	115	73	0.961	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1352	5	FLEMING	115	73	0.964	0.942		0	0	0	0.000	0		0	0	99.000	0.000
1357	16	RICHARDS	115	73	0.997	0.911	RICHARDS	115	73	7	0.086	0		0	0	99.000	0.000
1365	4	WAGES	115	73	0.971	0.933		0	0	0	0.000	0		0	0	99.000	0.000
1367	3	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1368	0		0	0	99.000	99.000	WINDRIVR	115	73	2	0.061	0		0	0	99.000	0.000
1369	4	CORLETT	115	73	0.954	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1371	9	SANDHILL	115	73	0.993	0.885	SANDHILL	115	73	5	0.108	0		0	0	99.000	0.000
1376	2	WARRENLM	115	73	0.955	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1382	1	TORRNGTN	115	73	0.989	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1385	8	GALIEN	115	73	0.967	0.871	GALIEN	115	73	4	0.096	0		0	0	99.000	0.000
1401	4	VERNONLM	115	73	0.979	0.944	WRAY TAP	115	73	2	0.057	0		0	0	99.000	0.000
1410	4	FMS	115	73	0.992	0.937	FMS	115	73	3	0.055	0		0	0	99.000	0.000
1471	1	PAGOSA	115	73	0.964	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1489	1	PAGOSA	115	73	0.964	0.939		0	0	0	0.000	0		0	0	99.000	0.000
1502	0		0	0	99.000	99.000	TOWAOC	115	73	1	0.051	0		0	0	99.000	0.000
1508	1	PAGOSA	115	73	0.964	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1513	1	PAGOSA	115	73	0.964	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1514	1	PAGOSA	115	73	0.964	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1516	4	PAGOSA	115	73	0.964	0.923	FLOR.RIV	115	73	2	0.060	0		0	0	99.000	0.000
1520	1	PAGOSA	115	73	0.964	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1572	2	ENNIS MT	161	62	0.975	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1573	2	ENNIS MT	161	62	0.975	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1575	1	BIGGRASS	161	65	0.961	0.940		0	0	0	0.000	0		0	0	99.000	0.000
1598	7	BGEORGE	115	73	0.982	0.902	GREYBULL	115	73	9	0.081	0		0	0	99.000	0.000
1602	1	PAGOSA	115	73	0.964	0.947		0	0	0	0.000	0		0	0	99.000	0.000
1605	0		0	0	99.000	99.000	MIDPOINT	500	60	1	0.062	0		0	0	99.000	0.000
1606	0		0	0	99.000	99.000	BLACKFT	161	60	1	0.053	0		0	0	99.000	0.000
1608	5	BIGGRASS	161	65	0.961	0.921		0	0	0	0.000	0		0	0	99.000	0.000
1611	0		0	0	99.000	99.000	HINES	115	60	2	0.064	0		0	0	99.000	0.000
1631	3	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1633	2	JEWELL2	230	70	0.953	0.949		0	0	0	0.000	0		0	0	99.000	0.000
1682	2	MCCALL	138	60	0.995	0.934	MCCALL	138	60	2	0.061	0		0	0	99.000	0.000
1683	0		0	0	99.000	99.000	QUARTZ	138	60	5	0.072	0		0	0	99.000	0.000
1694	0		0	0	99.000	99.000	HINES	138	60	1	0.058	0		0	0	99.000	0.000
1750	12	BARKER	115	40	0.954	0.933		0	0	0	0.000	0		0	0	99.000	0.000
1767	2	OROVILLE	115	40	1.003	0.940	OROVILLE	115	40	6	0.063	0		0	0	99.000	0.000
1768	10	JACKRABT	161	62	0.982	0.941		0	0	0	0.000	0		0	0	99.000	0.000
1769	10	DELIGHT	115	40	0.965	0.928	HATWAI	230	40	6	0.073	0		0	0	99.000	0.000
1777	15	BARKER	115	40	0.954	0.924		0	0	0	0.000	0		0	0	99.000	0.000
1778	9	BARKER	115	40	0.954	0.937		0	0	0	0.000	0		0	0	99.000	0.000
1787	0		0	0	99.000	99.000	WELLS	115	40	9	0.092	0		0	0	99.000	0.000
1799	1	SPAN F&1	138	65	0.968	0.931		0	0	0	0.000	0		0	0	99.000	0.000
1835	1	PLATTE	115	65	1.010	0.932	PLATTE	115	65	1	0.078	0		0	0	99.000	0.000
1875	33	CORLETT	115	73	0.954	0.778	ARCHER	115	73	33	0.182	0		0	0	99.000	0.000
1896	3	CORLETT	115	73	0.954	0.946		0	0	0	0.000	0		0	0	99.000	0.000
1900	9	WAGES	115	73	0.971	0.936	N.YUMA	115	73	2	0.057	0		0	0	99.000	0.000
1903	24	DALTON	115	73	0.999	0.911	SIDNEY	115	73	10	0.099	0		0	0	99.000	0.000
1909	2	CORLETT	115	73	0.954	0.948		0	0	0	0.000	0		0	0	99.000	0.000
1911	3	FRENCHCK	115	73	0.960	0.944		0	0	0	0.000	0		0	0	99.000	0.000
1914	6	BRIARGAT	115	73	0.990	0.911	CTTNWD N	115	73	5	0.080	0		0	0	99.000	0.000
1929	16	PAGOSA	115	73	0.964	0.870	HESPERUS	115	73	18	0.096	0		0	0	99.000	0.000
1936	2	HAMLTNMA	161	62	0.989	0.943		0	0	0	0.000	0		0	0	99.000	0.000
1939	0		0	0	99.000	99.000	RIVERTON	115	73	3	0.062	0		0	0	99.000	0.000

BUSES with voltage violations

bus no	---name---	--kv-	area	-base- -case- pu vt	BASE CASE VOLT VIOLATION	lowest -cont- -case- pu vt	cont with lowest pu vt	contingencies with voltage violations
48069	CHESTER	115.0	40	0.945	***	0.857	576:	all
48165	IRVIN	115.0	40	0.949	***	0.863	576:	all
48310	OPORTUNE	115.0	40	0.949	***	0.861	576:	all
48299	OPPORTUN	115.0	40	0.947	***	0.859	576:	all
48306	OTIS	230.0	40	0.938	***	0.858	271:	all
60295	PLST VLY	138.0	60	1.025		0.970	25:	25
65155	BIGGRASS	161.0	65	0.961		0.919	418:	49 129 417 418 451 452 469 651 808 1575 1608
60220	MCCALL	138.0	60	0.995		0.934	1682:	91 1682
60305	QUARTZ	138.0	60	1.026		0.954	100:	100 1683
60306	QUARTZ	230.0	60	1.024		0.954	100:	100
61835	WJOHN DY	138.0	60	1.014		0.955	100:	100 1683
61055	NELSN TP	138.0	60	1.023		0.968	100:	100 1683
60370	WEISER	138.0	60	1.024		0.959	108:	108
60371	WEISR TP	138.0	60	1.026		0.961	108:	108
60375	WOOD RVR	138.0	60	1.007		0.932	111:	111
61825	HINES	138.0	60	1.022		0.947	119:	119 1611 1694
61826	HINES	115.0	60	1.028		0.950	119:	119 1611
62065	ENNIS MT	161.0	62	0.975		0.934	185:	134 144 145 185 417 418 446 447 451 452 1572 1573 1768
62158	SHERDNMT	161.0	62	0.973		0.932	418:	134 144 145 185 417 418 446 447 451 452 1572 1573 1608 1768
62006	TAFTAUTO	115.0	62	0.980		0.933	135:	135
62064	BRADLEYC	161.0	62	0.978		0.932	185:	144 145 185 418 451 452 1768
62084	DILLON S	161.0	62	0.970		0.922	418:	144 145 185 417 418 446 447 451 452 469 1608
62256	JACKRABT	161.0	62	0.982		0.921	185:	144 145 185 1768
62031	CUTBANK	115.0	62	0.998		0.945	163:	163
62034	BOLE	230.0	62	1.019		0.963	163:	163
62088	CTBPUMP	115.0	62	0.999		0.945	163:	163
62087	CONRAD	115.0	62	1.015		0.937	182:	182
62178	VAL-WILL	115.0	62	1.010		0.941	182:	182
62076	TRIDENT	161.0	62	0.985		0.944	1768:	185 1768
62108	CLYDE P	161.0	62	1.000		0.926	185:	185
62249	EGALTN A	161.0	62	0.987		0.921	185:	185 1768
62250	BGTMBERA	161.0	62	0.994		0.936	185:	185
62257	EMIGT AT	161.0	62	1.004		0.930	185:	185
62258	EGALTN B	161.0	62	0.987		0.921	185:	185 1768
48185	LIBTYLK	115.0	40	0.954		0.872	271:	230 239 247 254 263 270 271 278 283 301 323 402 404 417 418 425 451 452 472 479 491 533 534 542 562 567 568 576 580 583 586 1750 1769 1777 1778
40023	AHSAHKA	115.0	40	1.028		0.965	231:	231
48021	BARKER	115.0	40	0.954		0.872	576:	239 247 254 270 271 278 283 301 323 402 404 417 418 425 451 452 472 479 491 533 534 542 562 567 568 576 580 583 586 1750 1769 1777 1778
48311	OTIS	115.0	40	0.955		0.874	271:	239 247 254 271 278 283 301 323 402 404 418 425 451 452 472 479 491 534 542 567 568 576 580 583 586 1750 1769 1777 1778
48117	EASTFARM	115.0	40	0.956		0.875	271:	247 254 271 278 323 402 404 418 425 472 479 491 534 568 576 580 583 586 1750 1777 1778
48011	APPLETAP	115.0	40	0.976		0.899	271:	271 323 491 1777
48013	APPLEWAY	115.0	40	0.976		0.899	271:	271 323 491 1777
40067	ATHOL	115.0	40	0.992		0.934	271:	271
48017	ATHOLTAP	115.0	40	0.995		0.937	271:	271
48019	AVONDALE	115.0	40	0.987		0.912	271:	271 323 491
48045	BLUECRK	115.0	40	0.973		0.896	271:	271 323 491 1777
48067	CDA	115.0	40	0.974		0.897	271:	271 323 491 1777
48093	DALTON A	115.0	40	0.978		0.901	271:	271 323 491
48095	DALTON2T	115.0	40	0.981		0.905	271:	271 323 491
48097	DALTONT	115.0	40	0.978		0.901	271:	271 323 491
47033	DOWER RD	115.0	40	0.959		0.879	271:	271 278 323 404 418 472 479 491 534 576 580 583 586 1750 1777 1778
48111	DOWERRDT	115.0	40	0.959		0.879	271:	271 278 323 418 472 479 491 534 576 580 583 1750 1777 1778
48155	HERN	115.0	40	0.979		0.902	271:	271 323 491
48159	HUETTER	115.0	40	0.981		0.904	271:	271 323 491
47511	MOAB	115.0	40	0.958		0.868	576:	271 278 323 418 425 479 491 534 567 576 580 583 1750 1777 1778
48319	PLEASANT	115.0	40	0.966		0.866	576:	271 278 323 491 576 580 583 1750 1777 1778
48329	POST FLS	115.0	40	0.959		0.879	271:	271 278 323 418 472 479 491 534 576 580 583 1750 1777 1778
40855	PRAIRIEB	115.0	40	0.966		0.877	583:	271 278 323 491 534 576 583 1750 1777
48349	RAMSEY	115.0	40	0.976		0.898	271:	271 323 491 1777
48351	RATHBUS1	115.0	40	0.994		0.919	271:	271 323 491
48353	RATHBUS2	115.0	40	0.994		0.919	271:	271 323 491
48356	RATHDRME	115.0	40	0.994		0.919	271:	271 323 491
48355	RATHDRUM	115.0	40	0.994		0.919	271:	271 323 491
48357	RATHDRUM	230.0	40	0.993		0.919	271:	271 323 491
40953	SCARCELO	115.0	40	0.994		0.927	271:	271 491
48401	SPIRITLK	115.0	40	0.996		0.941	271:	271
48403	SPIRITLT	115.0	40	0.996		0.941	271:	271
40215	CHENEY	115.0	40	0.973		0.948	278:	278 1750
48387	SILVRLAK	115.0	40	0.973		0.948	278:	278 1750
40147	BREWSTER	115.0	40	1.045		0.972	313:	309 312 313 1787
47129	BRIDGBAR	115.0	40	1.047		0.971	313:	312 313 1787
47013	BRIDGPRT	115.0	40	1.054		0.969	313:	313 1787
40801	OPHIR T	115.0	40	1.039		0.983	313:	313 1787
47209	PATEROS	115.0	40	1.036		0.971	313:	313 1787
47251	TWISP	115.0	40	1.032		0.973	313:	313 1787
41157	WINTHR T	115.0	40	1.032		0.973	313:	313 1787
41159	WINTHROP	115.0	40	1.029		0.970	313:	313 1787
48179	LAKEVIEW	230.0	40	1.015		0.950	323:	323
40371	E OMAK	115.0	40	1.035		0.975	338:	338 1767
40373	E OMAK	230.0	40	1.033		0.962	338:	338
40389	ELLISFRD	115.0	40	1.011		0.949	338:	338 1767
40799	OMAK	115.0	40	1.035		0.974	338:	338 1767
40807	OROVILLE	115.0	40	1.003		0.940	338:	338 1767
41085	TONASKET	115.0	40	1.029		0.968	338:	338 1767
41151	WHITESTN	115.0	40	1.014		0.952	338:	338 1767
41125	WAGNERLK	115.0	40	1.014		0.956	383:	383 384
41127	WAGNERLT	115.0	40	1.024		0.967	384:	383 384
62030	PTRSNFLT	230.0	62	0.970		0.908	418:	417 418 451 452 469 1608
47025	DELIGHT	115.0	40	0.965		0.892	595:	417 418 445 500 513 595 1769
47073	RALSTONB	115.0	40	0.971		0.912	595:	417 418 445 513 595 1769
65025	AMPS	230.0	65	0.981		0.929	418:	417 418
65860	JFRSNPHA	161.0	65	0.979		0.944	1608:	418 1608
62014	BUTTEMHD	161.0	62	0.983		0.947	1768:	451 452 1768
62077	BUTTE MT	161.0	62	0.982		0.946	1768:	451 452 1768
40451	GAR1EAST	500.0	40	1.094		1.031	451:	451 452
40453	GAR2EAST	500.0	40	1.094		1.031	451:	451 452
47051	HANNA	115.0	40	1.032		0.960	462:	462
60192	LADD	230.0	60	1.017		0.950	520:	520
40621	LAGRANDE	230.0	40	1.007		0.926	520:	520

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              40905   ROUNDUP   230.0   40  1.011           0.888   520:520
              40449   GAFFNEY   115.0   40  0.981           0.876   595:595
              65010   AEC IPC   138.0   65  0.979           0.936   661:661
              65015   AEC SCOV  138.0   65  0.979           0.936   661:661
              65065   ANTLOP 1  138.0   65  0.979           0.937   661:661
              65070   ANTLOP 2  138.0   65  0.979           0.937   661:661
              65080   ANTLOPE   161.0   65  0.981           0.939   661:661
              65040   ANGEL     138.0   65  0.986           0.947   684:684
              65340   CLINTON   138.0   65  0.990           0.943   684:684
              66310   RIVRDALE  138.0   65  0.988           0.933   684:684 907
              66640   W OGDEN   138.0   65  0.995           0.931   684:684
              65280   CARBON    138.0   65  1.030           0.944   699:699
              65457   DG UPLCO  138.0   65  1.007           0.940   699:699
              65520   EMMAPARK  138.0   65  1.025           0.931   699:699
              65755   HELPER    138.0   65  1.028           0.942   699:699
              65760   HELPER T  138.0   65  1.030           0.946   699:699
              66015   MOUND SW  138.0   65  1.033           0.974   699:699
              66183   PANTHER   138.0   65  1.029           0.942   699:699
              66395   SPAN F&1  138.0   65  0.968           0.857   728:699 728 1799
              66415   SPHINX T  138.0   65  1.035           0.976   699:699
              66590   UPALCO    138.0   65  1.007           0.940   699:699
              66707   WILLOW C  138.0   65  1.029           0.942   699:699
              79086   PAGOSA    115.0   73  0.964           0.870  1929:699 1471 1489 1508 1513 1514 1516 1520 1602 1929
              65454   DIMP DEL  138.0   65  1.011           0.940   771:771
              65475   DUMAS     138.0   65  1.012           0.941   771:771
              66391   SOUTH MT  138.0   65  1.009           0.946   771:771
              65570   FRANKLIN  138.0   65  1.016           0.928   792:792
              65725   GRCYN TP  138.0   65  0.999           0.934   792:792
              65735   GREENCYN  138.0   65  0.992           0.936   792:792
              65900   LOGAN     138.0   65  0.992           0.935   792:792 819
              66370   SMFLD TP  138.0   65  0.991           0.947   792:792
              66375   SMITHFLD  138.0   65  0.991           0.947   792:792
              73022   BGEORGE   115.0   73  0.982           0.902  1598:793 794 799 1598
              73534   MEETSETP  115.0   73  0.988           0.911  1598:793 794 1211 1598
              65575   FRANNIE   230.0   65  1.001           0.940   794:794
              65620   GARLAND   230.0   65  0.999           0.941   794:794
              66145   OREBASIN  230.0   65  0.996           0.946   794:794
              73041   CARTERMT  115.0   73  0.993           0.924  1598:794 1211 1598
              73075   GREYBULL  115.0   73  0.999           0.918  1598:794 1598
              73340   NAHNEJEN  115.0   73  0.997           0.916  1598:794 1598
              70165   ENGLE3TP  115.0   70  1.002           0.941   935:935
              70168   ENGLEWD3  115.0   70  1.002           0.941   935:935
              70239   JEWELL2   230.0   70  0.953           0.939   990:938 982 990 991 1007 1008 1009 1010 1015 1031 1032 1041 1048 1050
1053
                                                                       1060 1061 1065 1066 1074 1094 1103 1106 1121 1128 1166 1633 1914
              70491   TOLGATE   230.0   70  0.953           0.941   990:938 982 990 991 1007 1008 1009 1010 1015 1031 1032 1048 1053 1060
1061
                                                                       1065 1066 1074 1094 1103 1106 1121 1128 1166 1633
              70047   BARRLAKE  230.0   70  0.966           0.948   939:939
              70392   SKYRANCH  230.0   70  0.963           0.948   940:940
              70432   TOWER     230.0   70  0.960           0.949   940:940 1065 1066 1074
              70154   DERBY 2   115.0   70  1.015           0.958   963:963
              70278   MARCY     230.0   70  0.961           0.935   980:980 1066
              70464   WATERTON  230.0   70  0.959           0.939   980:980 1049 1066 1074
              70284   SURREYRG  230.0   70  0.966           0.940   981:981
              70551   MURPHY    230.0   70  0.963           0.948   981:981
              70260   LEETSDAL  230.0   70  0.954           0.939   990:982 990 991 1009 1010 1015 1053 1060 1061 1065 1066 1074 1103 1106
1121
                                                                       1128 1166
              70046   BUCKLEY2  230.0   70  0.956           0.944   990:990 991 1010 1060 1061 1065 1066 1074 1094 1103 1106 1166
              70067   BUCKLEY1  230.0   70  0.958           0.947  1065:990 1065 1066 1074 1166
              70163   ELATI1    230.0   70  0.956           0.938   990:990 1010 1053 1065 1066 1074 1106 1128
              70170   ELATI2    230.0   70  0.956           0.938   990:990 991 1010 1053 1065 1066 1074 1106 1128
              70530   MONACO    230.0   70  0.959           0.947   990:990 1065 1066 1074 1132
              70283   MEADOWHL  230.0   70  0.959           0.947  1066:990 1065 1066 1074
              70291   MONROEPS  230.0   70  0.954           0.939   990:990 991 1009 1010 1015 1053 1060 1065 1066 1074 1103 1106 1128 1166
              70417   SULLIVN   230.0   70  0.956           0.942  1026:990 1026 1060 1065 1066 1074 1103 1110 1166
              70428   TECH CTR  230.0   70  0.957           0.942  1026:990 1026 1060 1065 1066 1074 1166
              70512   JEWELL1   230.0   70  0.957           0.945  1026:990 1026 1060 1065 1066 1074 1166
              73348   CORLETT   115.0   73  0.954           0.778  1875:1008 1065 1066 1074 1153 1156 1157 1159 1160 1166 1167 1186 1187
1214 1217
                                                                       1218 1253 1254 1274 1295 1296 1312 1313 1315 1316 1318 1319 1338
1340 1348
                                                                       1357 1367 1369 1376 1631 1875 1896 1903 1909
              70362   RIVERDAL  230.0   70  0.958           0.947  1009:1009 1066 1074
              70107   CHEROKEE  230.0   70  0.956           0.947  1066:1010 1065 1066 1074 1106
              70149   DENVTM    230.0   70  0.957           0.947  1066:1010 1053 1065 1066 1074
              70200   GLENN PS  230.0   70  0.958           0.943  1010:1010 1015 1066 1074
              70324   LACOMBE   230.0   70  0.956           0.947  1066:1010 1053 1065 1066 1074 1106
              70461   WASHINGT  230.0   70  0.960           0.942  1010:1010
              70112   CLARK     230.0   70  0.960           0.948  1024:1024 1066 1074
              70241   JORDAN    230.0   70  0.960           0.948  1024:1024 1066 1074
              70100   CHATFLD   230.0   70  0.963           0.944  1049:1049
              70355   RIDGE     230.0   70  0.957           0.945  1052:1052 1066 1074
              70480   WESTPS    230.0   70  0.967           0.947  1053:1053
              70343   QUINCY    230.0   70  0.961           0.947  1065:1065 1066
              70396   SMOKYHIL  230.0   70  0.960           0.949  1065:1065 1066
              70212   GREENWD   230.0   70  0.961           0.949  1066:1066
              73375   WARRENLM  115.0   73  0.955           0.778  1875:1066 1074 1153 1156 1157 1159 1160 1166 1167 1186 1187 1214 1217
1218 1253
                                                                       1254 1274 1295 1296 1313 1315 1316 1318 1319 1338 1348 1357 1367
1369 1376
                                                                       1631 1875 1896 1903 1909
              70213   GUNBARRE  230.0   70  0.972           0.943  1106:1106
              70261   LEGGETT   230.0   70  0.970           0.945  1106:1106
              70297   NIWOT     230.0   70  0.972           0.943  1106:1106
              73005   ALVIN     115.0   73  0.976           0.893  1371:1147 1371 1385
              73059   FLEMING   115.0   73  0.964           0.878  1385:1147 1180 1245 1251 1337 1343 1351 1352 1371 1385 1903
              73063   FRENCHCK  115.0   73  0.960           0.900  1385:1147 1148 1166 1180 1188 1189 1244 1245 1251 1337 1343 1345 1346
1351 1352
                                                                       1365 1371 1385 1900 1903 1911
              73080   HAXTUN    115.0   73  0.961           0.885  1385:1147 1148 1166 1180 1188 1244 1245 1251 1337 1343 1345 1346 1351
1352 1365
                                                                       1371 1385 1900 1903 1911
              73208   WAGES     115.0   73  0.971           0.923  1343:1147 1343 1345 1365 1371 1385 1900
              73210   WAUNETA   115.0   73  0.968           0.905  1371:1147 1148 1180 1337 1343 1345 1346 1365 1371 1385 1900 1903 1911
              73304   CRETESWT  115.0   73  0.976           0.893  1371:1147 1371 1385
              73043   CHEYENNE  115.0   73  0.960           0.788  1875:1153 1157 1159 1166 1186 1217 1218 1296 1348 1357 1369 1875 1903
              73077   HAPPYJCK  115.0   73  0.957           0.783  1875:1153 1156 1157 1159 1160 1166 1186 1187 1214 1217 1218 1253 1254
1296 1316
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						1318 1319 1338 1348 1357 1367 1369 1631 1875 1896 1903
73183	SKYLINE	115.0	73	0.959	0.780	1875:1156 1159 1160 1166 1186 1218 1274 1296 1338 1357 1875 1903
73480	CROWCRK	115.0	73	0.962	0.787	1875:1157 1159 1166 1218 1357 1875 1903
73109	LARAMIE	115.0	73	0.967	0.819	1875:1159 1166 1319 1357 1875
73008	ARCHER	115.0	73	0.976	0.794	1875:1166 1875
73066	GEMCTYTP	115.0	73	0.973	0.817	1875:1166 1875
73128	MAY	115.0	73	0.975	0.835	1875:1166 1875
73139	MYERS	115.0	73	0.976	0.802	1875:1166 1875
73140	MYERS TP	115.0	73	0.976	0.802	1875:1166 1875
73146	OASISTAP	115.0	73	0.976	0.836	1875:1166 1875
73152	PINEBLUF	115.0	73	0.977	0.845	1875:1166 1295 1296 1875 1903
73154	POLE CK	115.0	73	0.977	0.823	1875:1166 1875
73161	QUALLS	115.0	73	0.976	0.821	1875:1166 1875
73172	ROCKPRTP	115.0	73	0.971	0.840	1875:1166 1186 1218 1357 1875
73173	ROUNDTOP	115.0	73	0.981	0.871	1875:1166 1875
73178	SENTINEL	115.0	73	0.979	0.868	1875:1166 1875
73187	SPRINGCK	115.0	73	0.973	0.817	1875:1166 1875
73367	FTSANDER	115.0	73	0.973	0.817	1875:1166 1875
73504	PONNEQUI	115.0	73	0.966	0.819	1875:1166 1186 1218 1357 1875
73023	BIJOUTAP	115.0	73	0.991	0.898	1178:1178 1202 1410
73031	BRUSHTAP	115.0	73	1.010	0.878	1178:1178
73097	KIOWA CK	115.0	73	0.991	0.920	1178:1178 1202
73103	L.MEADOW	115.0	73	0.992	0.943	1178:1178
73117	LOST CK	115.0	73	0.999	0.949	1178:1178
73147	ORCHARD	115.0	73	0.991	0.920	1178:1178 1202
73213	WIGGINS	115.0	73	0.991	0.930	1178:1178 1202
73305	EFMORGTP	115.0	73	0.994	0.882	1178:1178 1202
73310	FME	115.0	73	0.993	0.881	1178:1178 1202
73311	FMS	115.0	73	0.992	0.883	1178:1178 1202 1410
73370	LOSTCKTP	115.0	73	0.999	0.949	1178:1178
73377	EXCEL	115.0	73	0.992	0.883	1178:1178 1202 1410
73378	FMN	115.0	73	0.994	0.882	1178:1178 1202
73379	FMWEST	115.0	73	0.992	0.883	1178:1178 1202 1410
73136	MESSEX	115.0	73	1.001	0.921	1180:1180
73191	STERLING	115.0	73	0.974	0.921	1180:1180 1337 1352 1903
73478	GALIEN	115.0	73	0.967	0.871	1385:1180 1337 1351 1352 1371 1385 1903
73024	BLKHLWTP	115.0	73	0.992	0.914	1357:1186 1218 1357 1875
73145	NUNN	115.0	73	0.981	0.889	1875:1186 1218 1357 1875
73025	BONNY CK	115.0	73	1.005	0.926	1188:1188
73083	HELL CK	115.0	73	0.986	0.911	1188:1188 1189
73084	HELL TAP	115.0	73	0.986	0.911	1188:1188 1189
73091	IDALIA	115.0	73	0.998	0.939	1188:1188 1189
73110	LIBERTY	115.0	73	0.983	0.908	1188:1188 1189
73174	SAGEBRSH	115.0	73	0.984	0.909	1188:1188 1189
73185	SO. FORK	115.0	73	1.000	0.927	1188:1188 1189
70116	COBBLAKE	115.0	70	0.995	0.912	1357:1218 1357
73044	COBBLKTP	115.0	73	0.995	0.912	1357:1218 1357
73029	BRIDGEPT	115.0	73	0.992	0.926	1903:1220 1903
73046	DALTON	115.0	73	0.999	0.911	1903:1220 1903
73236	GREENWOD	115.0	73	0.994	0.918	1903:1220 1903
73037	BUSHNELL	115.0	73	0.981	0.878	1875:1295 1296 1875 1903
73038	BUSHNLTP	115.0	73	0.981	0.878	1875:1295 1296 1875 1903
73096	KIMBALL	115.0	73	0.983	0.895	1875:1295 1296 1875 1903
73355	KIMBALLC	115.0	73	0.983	0.895	1875:1295 1296 1875 1903
73092	JACINTO	115.0	73	0.992	0.908	1296:1296 1875 1903
73106	LAPORTE	230.0	73	1.009	0.943	1316:1316
73166	REDWILLW	115.0	73	0.995	0.916	1343:1343 1900
73169	RICHARDS	115.0	73	0.997	0.911	1357:1357
73200	TIMNATH	115.0	73	0.996	0.913	1357:1357
73201	TIMNTHTP	115.0	73	0.996	0.912	1357:1357
73216	WINDRIVR	115.0	73	1.019	0.958	1368:1368 1939
73217	WINDRIVT	115.0	73	1.019	0.958	1368:1368 1939
73175	SANDHILL	115.0	73	0.993	0.885	1371:1371
73202	TORRNGTN	115.0	73	0.989	0.944	1382:1382
73225	WRAY TAP	115.0	73	1.003	0.946	1401:1401
73331	WRAYWAPA	115.0	73	1.003	0.946	1401:1401
73371	BETHELLM	115.0	73	0.984	0.949	1401:1401
73374	VERNONLM	115.0	73	0.979	0.944	1401:1401 1900
79076	AM EAST	115.0	73	0.988	0.894	1929:1516 1929
79077	BAYFIELD	115.0	73	0.987	0.897	1929:1516 1929
79099	FLOR.RIV	115.0	73	0.990	0.895	1929:1516 1929
66720	WORLAND	115.0	65	1.017	0.958	1598:1598
73019	BASIN	115.0	73	1.009	0.934	1598:1598
73123	LOVELL	115.0	73	0.999	0.928	1598:1598
73222	WORLANTP	115.0	73	1.015	0.953	1598:1598
60240	MIDPOINT	500.0	60	1.069	1.007	1605:1605
60270	OXBOW	138.0	60	0.991	0.934	1682:1682
62159	GLDNSNLT	161.0	62	0.983	0.944	1768:1768
47501	ARMSTRNG	115.0	40	1.002	0.944	1769:1769
40149	BRINKENS	115.0	40	0.996	0.939	1769:1769
47503	CHAMBERS	115.0	40	1.001	0.946	1769:1769
40239	CLARKSTN	115.0	40	1.005	0.949	1769:1769
48075	CLEARWTR	115.0	40	1.004	0.947	1769:1769
40519	HATWAI	230.0	40	1.041	0.968	1769:1769
47099	WELLS	115.0	40	1.063	0.971	1787:1787
66245	PLATTE	115.0	65	1.010	0.932	1835:1835
73104	LAGRANGE	115.0	73	0.991	0.925	1875:1875
73134	MED BOW	115.0	73	0.988	0.893	1875:1875
73361	MEDBOWHS	115.0	73	0.988	0.893	1875:1875
73362	MEDBOWTP	115.0	73	0.988	0.893	1875:1875
73047	DEERINGL	115.0	73	0.991	0.946	1900:1900
73142	N.YUMA	115.0	73	1.000	0.943	1900:1900
73230	YUMA	115.0	73	0.989	0.944	1900:1900
73131	MCGREW	115.0	73	0.992	0.946	1903:1903
73150	PEETZ	115.0	73	0.994	0.920	1903:1903
73179	SIDNEY	115.0	73	1.010	0.911	1903:1903
73389	BRIARGAT	115.0	73	0.990	0.911	1914:1914
73391	CTTNWD N	115.0	73	0.991	0.911	1914:1914
73400	EMIL AND	115.0	73	0.987	0.937	1914:1914
73410	KETTLECK	115.0	73	0.989	0.912	1914:1914
73414	MONUMENT	115.0	73	0.987	0.935	1914:1914
79023	DURANGO	115.0	73	0.997	0.916	1929:1929
79071	HESPERUS	115.0	73	1.003	0.907	1929:1929
79078	BODO	115.0	73	0.996	0.913	1929:1929
79080	CASCADEL	115.0	73	0.997	0.920	1929:1929
79088	ROCKWOOD	115.0	73	0.998	0.914	1929:1929
79089	SHENDOAH	115.0	73	0.999	0.925	1929:1929
79111	MANCOSTP	115.0	73	1.007	0.951	1929:1929
79191	COYOTE G	115.0	73	1.001	0.949	1929:1929
79257	AMES	115.0	73	0.999	0.943	1929:1929

79194	BURROBDG	115.0	73	0.999	0.936	1929:1929
79256	SILVERTN	115.0	73	0.998	0.932	1929:1929
79189	SUNSH SM	115.0	73	0.999	0.945	1929:1929
79188	TELLURID	115.0	73	0.990	0.935	1929:1929
62311	HAMLTNMA	161.0	62	0.989	0.943	1936:1936
62312	HAMLTNMB	161.0	62	0.989	0.943	1936:1936
73170	RIVERTON	115.0	73	1.022	0.960	1939:1939

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                          SUMMARY OF CONTINGENCY (CNT) NUMBERS
                               FOR LSBS, SPL1, SPL2
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Outage case   1                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90100 MTSCLSTP 500.0 to   62057 COLSTRP  500.0   circuit 1

Outage case   2                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90100 MTSCLSTP 500.0 to   62057 COLSTRP  500.0   circuit 2

Outage case   3                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90204 MTSFTPCK 230.0 to   62060 COLSTRP  230.0   circuit 1

Outage case   4                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40091 BELL BPA 500.0 to   40553 HOT SPR  500.0   circuit 1

Outage case   5                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40459 GARRISON 500.0 to   40553 HOT SPR  500.0   circuit 1

Outage case   6                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40459 GARRISON 500.0 to   62046 BROADVU  500.0   circuit 1

Outage case   7                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62057 COLSTRP  500.0 to   62046 BROADVU  500.0   circuit 1

Outage case   8                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60005 ADEL TAP 345.0 to   60006 ADELAIDE 345.0   circuit 1

Outage case   9                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60005 ADEL TAP 345.0 to   60235 MIDPOINT 345.0   circuit 1

Outage case  10                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60006 ADELAIDE 345.0 to   60235 MIDPOINT 345.0   circuit 2

Outage case  11                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60010 ADELAIDE 138.0 to   60295 PLST VLY 138.0   circuit 1

Outage case  12                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60010 ADELAIDE 138.0 to   61810 MINIDOKA 138.0   circuit 1

Outage case  13                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60010 ADELAIDE 138.0 to   61850 HEYBURN  138.0   circuit 1

Outage case  14                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60016 ALMDA TP 138.0 to   60015 ALAMEDA  138.0   circuit 1

Outage case  15                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60016 ALMDA TP 138.0 to   60335 TERRY    138.0   circuit 1

Outage case  16                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60016 ALMDA TP 138.0 to   61640 HLND TAP 138.0   circuit 1

Outage case  17                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60020 AMFLS    138.0 to   60024 AMFLS PP 138.0   circuit 1

Outage case  18                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60020 AMFLS    138.0 to   60070 BRADY    138.0   circuit 1

Outage case  19                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60020 AMFLS    138.0 to   60295 PLST VLY 138.0   circuit 1

Outage case  20                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60020 AMFLS    138.0 to   61900 RAFT RVR 138.0   circuit 1

Outage case  21                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60035 BLISS    138.0 to   60175 KING     138.0   circuit 1

Outage case  22                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60040 BOISEBCH 138.0 to   60225 MICRON   138.0   circuit 1

Outage case  23                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60040 BOISEBCH 138.0 to   61225 DRY CRK  138.0   circuit 1

Outage case  24                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60040 BOISEBCH 138.0 to   61254 LOCUST   138.0   circuit 1

Outage case  25                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60040 BOISEBCH 138.0 to   61261 MORA     138.0   circuit 1

Outage case  26                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60095 BROWNLEE 230.0   circuit 2

Outage case  27                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60095 BROWNLEE 230.0   circuit 3

Outage case  28                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60095 BROWNLEE 230.0   circuit 4

Outage case  29                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60110 CALDWELL 230.0   circuit 1

Outage case  30                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60130 DRAM     230.0   circuit 1

Outage case  31                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60232 MIDPOINT 230.0   circuit 2

Outage case  32                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60232 MIDPOINT 230.0   circuit 3

Outage case  33                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60060 BORAH    345.0 to   60005 ADEL TAP 345.0   circuit 1

Outage case  34                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60060 BORAH    345.0 to   60006 ADELAIDE 345.0   circuit 2

Outage case  35                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60062 BORAH    230.0 to   60073 BRADY    230.0   circuit 1
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Outage case  36                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60062 BORAH    230.0 to   60073 BRADY    230.0   circuit 2
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Outage case  37                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60065 BOWMONT  138.0 to   60330 SWANFALL 138.0   circuit 1
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Outage case  38                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60065 BOWMONT  138.0 to   61261 MORA     138.0   circuit 1
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Outage case  39                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60070 BRADY    138.0 to   60127 DON TAP  138.0   circuit 1
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Outage case  40                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60073 BRADY    230.0 to   60185 KINPORT  230.0   circuit 1
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Outage case  41                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60073 BRADY    230.0 to   60185 KINPORT  230.0   circuit 2
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Outage case  42                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60085 BRIDGER  345.0 to   60060 BORAH    345.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  43                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60085 BRIDGER  345.0 to   60190 KINPORT  345.0   circuit 1
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Outage case  44                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60095 BROWNLEE 230.0 to   60310 QUARTZTP 230.0   circuit 1
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Outage case  45                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60105 CALDWELL 138.0 to   60210 LOWELL   138.0   circuit 1
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Outage case  46                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60105 CALDWELL 138.0 to   60255 NAMPA    138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  47                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60115 CLIFF    138.0 to   60345 TWINFALL 138.0   circuit 1
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Outage case  48                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60115 CLIFF    138.0 to   60350 TFALL TP 138.0   circuit 1
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Outage case  49                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60115 CLIFF    138.0 to   60360 U SALMON 138.0   circuit 1
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Outage case  50                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60120 DALE     138.0 to   60340 TFAL JCT 138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  51                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60125 DON      138.0 to   60127 DON TAP  138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  52                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60127 DON TAP  138.0 to   60145 FREMONT  138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  53                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60130 DRAM     230.0 to   60232 MIDPOINT 230.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  54                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60135 EDEN     138.0 to   60245 MILNER   138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  55                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60140 EMMETT   138.0 to   60220 MCCALL   138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  56                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60150 HELLSCYN 230.0 to   60095 BROWNLEE 230.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  57                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60160 HUNT     138.0 to   60135 EDEN     138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  58                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60160 HUNT     138.0 to   60247 MLNR JCT 138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  59                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60160 HUNT     138.0 to   60285 PAUL     138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  60                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60160 HUNT     138.0 to   60350 TFALL TP 138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  61                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60170 HYBN JCT 138.0 to   60010 ADELAIDE 138.0   circuit 1
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Outage case  62                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60170 HYBN JCT 138.0 to   61850 HEYBURN  138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  63                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60175 KING     138.0 to   60120 DALE     138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  64                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60175 KING     138.0 to   60195 L MALAD  138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  65                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60175 KING     138.0 to   60200 L SALMON 138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  66                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60175 KING     138.0 to   60200 L SALMON 138.0   circuit 2
-----------------------------------------------------------------------------------------
Outage case  67                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60175 KING     138.0 to   60360 U SALMON 138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  68                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60180 KINPORT  138.0 to   60125 DON      138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  69                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60180 KINPORT  138.0 to   60125 DON      138.0   circuit 2
-----------------------------------------------------------------------------------------
Outage case  70                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60180 KINPORT  138.0 to   60315 SIPHON   138.0   circuit 1
-----------------------------------------------------------------------------------------
Outage case  71                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60195 L MALAD  138.0 to   60250 MT HOME  138.0   circuit 1
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Outage case  72                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60210 LOWELL   138.0 to   60065 BOWMONT  138.0   circuit 1
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Outage case  73                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60210 LOWELL   138.0 to   60255 NAMPA    138.0   circuit 1

Outage case  74                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60215 LUCKY PK 138.0 to   60225 MICRON   138.0   circuit 1

Outage case  75                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60215 LUCKY PK 138.0 to   60250 MT HOME  138.0   circuit 1

Outage case  76                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60220 MCCALL   138.0 to   60370 WEISER   138.0   circuit 1

Outage case  77                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60230 MIDPOINT 138.0 to   60345 TWINFALL 138.0   circuit 1

Outage case  78                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60232 MIDPOINT 230.0 to   60165 HUNT     230.0   circuit 1

Outage case  79                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60235 MIDPOINT 345.0 to   60190 KINPORT  345.0   circuit 1

Outage case  80                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60245 MILNER   138.0 to   60248 MLNR PP  138.0   circuit 1

Outage case  81                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60247 MLNR JCT 138.0 to   60170 HYBN JCT 138.0   circuit 1

Outage case  82                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60247 MLNR JCT 138.0 to   60245 MILNER   138.0   circuit 1

Outage case  83                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60250 MT HOME  138.0 to   60360 U SALMON 138.0   circuit 1

Outage case  84                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60260 ONTARIO  138.0 to   60140 EMMETT   138.0   circuit 1

Outage case  85                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60270 OXBOW    138.0 to   60220 MCCALL   138.0   circuit 1

Outage case  86                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60275 OXBOW    230.0 to   60095 BROWNLEE 230.0   circuit 1

Outage case  87                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60285 PAUL     138.0 to   60010 ADELAIDE 138.0   circuit 1

Outage case  88                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60291 PINGREE  138.0 to   60031 BLACKFT  138.0   circuit 1

Outage case  89                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60291 PINGREE  138.0 to   60125 DON      138.0   circuit 1

Outage case  90                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60300 PORTNEUF 138.0 to   60145 FREMONT  138.0   circuit 1

Outage case  91                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60305 QUARTZ   138.0 to   61055 NELSN TP 138.0   circuit 1

Outage case  92                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60305 QUARTZ   138.0 to   61835 WJOHN DY 138.0   circuit 1

Outage case  93                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60310 QUARTZTP 230.0 to   60192 LADD     230.0   circuit 1

Outage case  94                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60310 QUARTZTP 230.0 to   60306 QUARTZ   230.0   circuit 1

Outage case  95                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60315 SIPHON   138.0 to   61640 HLND TAP 138.0   circuit 1

Outage case  96                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60320 STRIKE   138.0 to   60330 SWANFALL 138.0   circuit 1

Outage case  97                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60330 SWANFALL 138.0 to   60332 SWNFL PP 138.0   circuit 1

Outage case  98                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60335 TERRY    138.0 to   60300 PORTNEUF 138.0   circuit 1

Outage case  99                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60340 TFAL JCT 138.0 to   60160 HUNT     138.0   circuit 1

Outage case 100                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60340 TFAL JCT 138.0 to   60345 TWINFALL 138.0   circuit 1

Outage case 101                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60350 TFALL TP 138.0 to   60351 TFALL PP 138.0   circuit 1

Outage case 102                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60371 WEISR TP 138.0 to   60260 ONTARIO  138.0   circuit 1

Outage case 103                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60371 WEISR TP 138.0 to   60370 WEISER   138.0   circuit 1

Outage case 104                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60375 WOOD RVR 138.0 to   60175 KING     138.0   circuit 1

Outage case 105                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60375 WOOD RVR 138.0 to   60230 MIDPOINT 138.0   circuit 1

Outage case 106                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        61055 NELSN TP 138.0 to   60371 WEISR TP 138.0   circuit 1

Outage case 107                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        61225 DRY CRK  138.0 to   60140 EMMETT   138.0   circuit 1

Outage case 108                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        61225 DRY CRK  138.0 to   61254 LOCUST   138.0   circuit 1

Outage case 109                ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        61254 LOCUST   138.0 to   61261 MORA     138.0   circuit 1
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Outage case 110               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        61800 ANDERSN  115.0 to   61805 MT HOME  115.0   circuit 1
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Outage case 111               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        61810 MINIDOKA 138.0 to   61900 RAFT RVR 138.0   circuit 1
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Outage case 112               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        61810 MINIDOKA 138.0 to   61950 UNITY    138.0   circuit 1
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Outage case 113               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        61835 WJOHN DY 138.0 to   61825 HINES    138.0   circuit 1
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Outage case 114               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        61950 UNITY    138.0 to   61850 HEYBURN  138.0   circuit 1
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Outage case 115               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60095 BROWNLEE 230.0   circuit 1
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Outage case 116               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60095 BROWNLEE 230.0 to   60265 ONTARIO  230.0   circuit 1
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Outage case 117               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60110 CALDWELL 230.0 to   60265 ONTARIO  230.0   circuit 1
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Outage case 118               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60250 MT HOME  138.0 to   60390 DANSKIN  138.0   circuit 1
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Outage case 119               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60320 STRIKE   138.0 to   60390 DANSKIN  138.0   circuit 1
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Outage case 120               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60207 LOCUST   230.0   circuit 1
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Outage case 121               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60275 OXBOW    230.0 to   60278 IMNAHA   230.0   circuit 1
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Outage case 122               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62004 ANACOND  230.0 to   62019 WILSALL  230.0   circuit 1
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Outage case 123               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62004 ANACOND  230.0 to   62030 PTRSNFLT 230.0   circuit 1
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Outage case 124               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62003 BONNERMT 161.0   circuit 1
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Outage case 125               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62009 RATTLE S 161.0   circuit 1
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Outage case 126               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62017 MT ASIMI 161.0   circuit 1
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Outage case 127               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62017 MT ASIMI 161.0   circuit 2
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Outage case 128               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62084 DILLON S 161.0   circuit 1
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Outage case 129               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62006 TAFTAUTO 115.0 to   62085 CROWCR B 115.0   circuit 1
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Outage case 130               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62009 RATTLE S 161.0 to   62003 BONNERMT 161.0   circuit 1
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Outage case 131               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62009 RATTLE S 161.0 to   62007 KERR B   161.0   circuit 1
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Outage case 132               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62009 RATTLE S 161.0 to   62008 KERR A   161.0   circuit 1
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Outage case 133               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62009 RATTLE S 161.0 to   62078 RESERVST 161.0   circuit 1
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Outage case 134               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62014 BUTTEMHD 161.0 to   62017 MT ASIMI 161.0   circuit 1
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Outage case 135               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62031 CUTBANK  115.0 to   62027 SHELBY   115.0   circuit 1
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Outage case 136               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62034 BOLE     230.0 to   62035 CNRDWAPA 230.0   circuit 1
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Outage case 137               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62035 CNRDWAPA 230.0 to   62026 SHELBY   230.0   circuit 1
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Outage case 138               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62046 BROADVU  500.0 to   62012 TOWN2    500.0   circuit 2
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Outage case 139               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62046 BROADVU  500.0 to   62013 TOWN1    500.0   circuit 1
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Outage case 140               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62053 BROADV&2 500.0 to   62046 BROADVU  500.0   circuit 2
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Outage case 141               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62053 BROADV&2 500.0 to   62046 BROADVU  500.0   circuit 4
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Outage case 142               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62054 BROADV&1 500.0 to   62046 BROADVU  500.0   circuit 1
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Outage case 143               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62054 BROADV&1 500.0 to   62046 BROADVU  500.0   circuit 3
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Outage case 144               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62057 COLSTRP  500.0 to   62053 BROADV&2 500.0   circuit 2
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Outage case 145               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62057 COLSTRP  500.0 to   62054 BROADV&1 500.0   circuit 1
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Outage case 146                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62058 SHOREYRD 230.0 to   62019 WILSALL  230.0   circuit 1

Outage case 147                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62058 SHOREYRD 230.0 to   62052 ALKALI   230.0   circuit 1

Outage case 148                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62058 SHOREYRD 230.0 to   62055 BASELINE 230.0   circuit 1

Outage case 149                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62059 MONTANA1 115.0 to   62221 NICHOL-R 115.0   circuit 1

Outage case 150                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62060 COLSTRP  230.0 to   62051 HARDIN   230.0   circuit 1

Outage case 151                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62062 RIMROCK  161.0 to   62109 ALKALI   161.0   circuit 1

Outage case 152                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62065 ENNIS MT 161.0 to   62064 BRADLEYC 161.0   circuit 1

Outage case 153                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62066 KERR     115.0 to   62303 PLAINS   115.0   circuit 1

Outage case 154                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62066 KERR     115.0 to   62304 THFLPM T 115.0   circuit 1

Outage case 155                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62069 CNRDWAPA 115.0 to   62188 CNRD-SRA 115.0   circuit 1

Outage case 156                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62070 GT FALLS 115.0 to   62180 DUTTON   115.0   circuit 1

Outage case 157                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62071 GT FALLS 230.0 to   62034 BOLE     230.0   circuit 1

Outage case 158                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62071 GT FALLS 230.0 to   62036 JUDITHGP 230.0   circuit 1

Outage case 159                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62071 GT FALLS 230.0 to   62126 LANDRSFK 230.0   circuit 1

Outage case 160                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62076 TRIDENT  161.0 to   62108 CLYDE P  161.0   circuit 1

Outage case 161                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62077 BUTTE MT 161.0 to   62014 BUTTEMHD 161.0   circuit 1

Outage case 162                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62077 BUTTE MT 161.0 to   62017 MT ASIMI 161.0   circuit 1

Outage case 163                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62077 BUTTE MT 161.0 to   62159 GLDNSNLT 161.0   circuit 1

Outage case 164                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62079 MILLERCK 161.0 to   62003 BONNERMT 161.0   circuit 1

Outage case 165                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62079 MILLERCK 161.0 to   62311 HAMLTNMA 161.0   circuit 1

Outage case 166                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62079 MILLERCK 161.0 to   62312 HAMLTNMB 161.0   circuit 1

Outage case 167                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62081 COLSTRP  115.0 to   62059 MONTANA1 115.0   circuit 1

Outage case 168                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62081 COLSTRP  115.0 to   62210 ARMELLCR 115.0   circuit 1

Outage case 169                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62082 BILINGS  230.0 to   62052 ALKALI   230.0   circuit 1

Outage case 170                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62082 BILINGS  230.0 to   62056 HUNTLEY  230.0   circuit 1

Outage case 171                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62082 BILINGS  230.0 to   62125 BILINGSW 230.0   circuit 1

Outage case 172                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62084 DILLON S 161.0 to   62158 SHERDNMT 161.0   circuit 1

Outage case 173                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62086 THOMSON  115.0 to   62085 CROWCR B 115.0   circuit 1

Outage case 174                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62086 THOMSON  115.0 to   62305 TFALLCIT 115.0   circuit 1

Outage case 175                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62086 THOMSON  115.0 to   62306 TFALCITA 115.0   circuit 1

Outage case 176                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62087 CONRAD   115.0 to   62069 CNRDWAPA 115.0   circuit 1

Outage case 177                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62087 CONRAD   115.0 to   62178 VAL-WILL 115.0   circuit 1

Outage case 178                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62088 CTBPUMP  115.0 to   62031 CUTBANK  115.0   circuit 1

Outage case 179                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62016 WILSALL  161.0   circuit 1

Outage case 180                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62249 EGALTN A 161.0   circuit 1

Outage case 181                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62250 BGTMBERA 161.0   circuit 99

Outage case 182                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62257 EMIGT AT 161.0   circuit 1
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Outage case 183                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62258 EGALTN B 161.0   circuit 1

Outage case 184                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62125 BILINGSW 230.0 to   62223 BROADVU  230.0   circuit 1

Outage case 185                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62126 LANDRSFK 230.0 to   62072 OVANDO   230.0   circuit 1

Outage case 186                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62158 SHERDNMT 161.0 to   62065 ENNIS MT 161.0   circuit 1

Outage case 187                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62159 GLDNSNLT 161.0 to   62076 TRIDENT  161.0   circuit 1

Outage case 188                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62178 VAL-WILL 115.0 to   62088 CTBPUMP  115.0   circuit 1

Outage case 189                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62180 DUTTON   115.0 to   62069 CNRDWAPA 115.0   circuit 1

Outage case 190                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62205 COLRPLJE 161.0 to   62109 ALKALI   161.0   circuit 1

Outage case 191                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62205 COLRPLJE 161.0 to   62214 CLMBUSPM 161.0   circuit 1

Outage case 192                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62205 COLRPLJE 161.0 to   62250 BGTMBERA 161.0   circuit 1

Outage case 193                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62206 NICHOLPM 115.0 to   62221 NICHOL-R 115.0   circuit 1

Outage case 194                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62210 ARMELLCR 115.0 to   62211 CASTLERT 115.0   circuit 1

Outage case 195                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62211 CASTLERT 115.0 to   62212 CASTLERK 115.0   circuit 1

Outage case 196                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62211 CASTLERT 115.0 to   62219 SARPY AT 115.0   circuit 1

Outage case 197                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62219 SARPY AT 115.0 to   62080 HARDIN   115.0   circuit 1

Outage case 198                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62223 BROADVU  230.0 to   62036 JUDITHGP 230.0   circuit 1

Outage case 199                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62223 BROADVU  230.0 to   62052 ALKALI   230.0   circuit 1

Outage case 200                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62249 EGALTN A 161.0 to   62256 JACKRABT 161.0   circuit 1

Outage case 201                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62249 EGALTN A 161.0 to   62256 JACKRABT 161.0   circuit 99

Outage case 202                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62249 EGALTN A 161.0 to   62258 EGALTN B 161.0   circuit 1

Outage case 203                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62256 JACKRABT 161.0 to   62064 BRADLEYC 161.0   circuit 1

Outage case 204                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62256 JACKRABT 161.0 to   62258 EGALTN B 161.0   circuit 99

Outage case 205                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62303 PLAINS   115.0 to   62306 TFALCITA 115.0   circuit 1

Outage case 206                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62304 THFLPM T 115.0 to   62305 TFALLCIT 115.0   circuit 1

Outage case 207                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62304 THFLPM T 115.0 to   62310 THFALLPM 115.0   circuit 1

Outage case 208                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62305 TFALLCIT 115.0 to   62309 THFALL-R 115.0   circuit 1

Outage case 209                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62308 MISSLA 7 161.0 to   62078 RESERVST 161.0   circuit 1

Outage case 210                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62308 MISSLA 7 161.0 to   62079 MILLERCK 161.0   circuit 1

Outage case 211                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48001 4LAKE TP 115.0 to   40439 FOURLKS  115.0   circuit 1

Outage case 212                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48001 4LAKE TP 115.0 to   48145 HANGMAN  115.0   circuit 1

Outage case 213                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48005 4TH&HRTP 115.0 to   48003 4TH&HRLD 115.0   circuit 1

Outage case 214                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48005 4TH&HRTP 115.0 to   48069 CHESTER  115.0   circuit 1

Outage case 215                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48005 4TH&HRTP 115.0 to   48271 NINTHCNT 115.0   circuit 1

Outage case 216                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40017 ADDY     115.0 to   48071 CHEWELAH 115.0   circuit 1

Outage case 217                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40017 ADDY     115.0 to   40263 COLV BPA 115.0   circuit 1

Outage case 218                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40017 ADDY     115.0 to   48135 GIFFORD  115.0   circuit 1

Outage case 219                ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        40017 ADDY     115.0 to   48213 LOON LK  115.0   circuit 1
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Outage case 220               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40017 ADDY     115.0 to   48223 METCHIP  115.0   circuit 1
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Outage case 221               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40019 ADDY     230.0 to   40021 ADDY 2   230.0   circuit 1
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Outage case 222               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40019 ADDY     230.0 to   40319 CUSICK   230.0   circuit 1
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Outage case 223               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40021 ADDY 2   230.0 to   40090 BELL SO  230.0   circuit 1
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Outage case 224               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40021 ADDY 2   230.0 to   40145 BOUNDARY 230.0   circuit 1
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Outage case 225               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40023 AHSAHKA  115.0 to   40367 DWORSHAK 115.0   circuit 1
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Outage case 226               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48009 AIRWAYHT 115.0 to   48010 AIRWAYTP 115.0   circuit 1
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Outage case 227               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48009 AIRWAYHT 115.0 to   48103 DEVIL GP 115.0   circuit 1
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Outage case 228               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48009 AIRWAYHT 115.0 to   40397 FAIRCHLD 115.0   circuit 1
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Outage case 229               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48009 AIRWAYHT 115.0 to   48421 SUNSET   115.0   circuit 1
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Outage case 230               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48010 AIRWAYTP 115.0 to   48132 HAL&WHIT 115.0   circuit 1
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Outage case 231               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48010 AIRWAYTP 115.0 to   48387 SILVRLAK 115.0   circuit 1
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Outage case 232               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40029 ALBENI F 115.0 to   47027 DIAM LAK 115.0   circuit 1
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Outage case 233               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40029 ALBENI F 115.0 to   40779 NEWPORTB 115.0   circuit 1
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Outage case 234               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40029 ALBENI F 115.0 to   48347 PRIEST A 115.0   circuit 1
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Outage case 235               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46001 ANC LK T 230.0 to   40261 COLUMBIA 230.0   circuit 1
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Outage case 236               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46001 ANC LK T 230.0 to   41111 VANTAGE  230.0   circuit 1
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Outage case 237               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46801 ANDRS CN 115.0 to   46807 MCKENZIE 115.0   circuit 1
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Outage case 238               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46801 ANDRS CN 115.0 to   46807 MCKENZIE 115.0   circuit 2
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Outage case 239               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46801 ANDRS CN 115.0 to   46811 N WENATC 115.0   circuit 1
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Outage case 240               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46801 ANDRS CN 115.0 to   46827 SUMMIT   115.0   circuit 1
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Outage case 241               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48011 APPLETAP 115.0 to   48095 DALTON2T 115.0   circuit 1
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Outage case 242               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48013 APPLEWAY 115.0 to   48011 APPLETAP 115.0   circuit 1
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Outage case 243               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48015 ARDEN    115.0 to   48301 ORIN     115.0   circuit 1
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Outage case 244               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47501 ARMSTRNG 115.0 to   48415 SPULMNTP 115.0   circuit 1
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Outage case 245               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40061 ASHE     500.0 to   40683 LOW MON  500.0   circuit 1
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Outage case 246               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40067 ATHOL    115.0 to   48017 ATHOLTAP 115.0   circuit 1
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Outage case 247               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48017 ATHOLTAP 115.0 to   40953 SCARCELO 115.0   circuit 1
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Outage case 248               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48019 AVONDALE 115.0 to   48356 RATHDRME 115.0   circuit 1
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Outage case 249               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48021 BARKER   115.0 to   48311 OTIS     115.0   circuit 1
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Outage case 250               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48029 BEACON S 115.0   circuit 1
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Outage case 251               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48271 NINTHCNT 115.0   circuit 1
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Outage case 252               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48277 NORTHEAS 115.0   circuit 1
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Outage case 253               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48312 OPORTUNW 115.0   circuit 1
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Outage case 254               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48371 ROSSPARK 115.0   circuit 1
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Outage case 255               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48405 SPKINDPK 115.0   circuit 1
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Outage case 256              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48025 BEACON N 230.0 to   48031 BEACON S 230.0   circuit 1

Outage case 257              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48025 BEACON N 230.0 to   40090 BELL SO  230.0   circuit 5

Outage case 258              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48025 BEACON N 230.0 to   48037 BENEWAH  230.0   circuit 1

Outage case 259              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   40087 BELL BPA 115.0   circuit 1

Outage case 260              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   48033 BELL TAP 115.0   circuit 1

Outage case 261              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   48237 MILLWOOD 115.0   circuit 1

Outage case 262              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   48271 NINTHCNT 115.0   circuit 1

Outage case 263              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   48271 NINTHCNT 115.0   circuit 2

Outage case 264              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48031 BEACON S 230.0 to   40090 BELL SO  230.0   circuit 4

Outage case 265              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48031 BEACON S 230.0 to   48357 RATHDRUM 230.0   circuit 1

Outage case 266              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   40113 BIGELOW  115.0   circuit 1

Outage case 267              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   40255 COLBERTT 115.0   circuit 1

Outage case 268              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   40281 COULEE   115.0   circuit 1

Outage case 269              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   47285 INLD EMP 115.0   circuit 1

Outage case 270              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   41015 SPRNGHIL 115.0   circuit 1

Outage case 271              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   48449 WAIKIKIT 115.0   circuit 1

Outage case 272              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40091 BELL BPA 500.0 to   41057 TAFT     500.0   circuit 1

Outage case 273              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40088 BELL MI  230.0 to   40086 BELL NO  230.0   circuit 1

Outage case 274              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40088 BELL MI  230.0 to   40090 BELL SO  230.0   circuit 1

Outage case 275              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40088 BELL MI  230.0 to   41358 COULEES3 230.0   circuit 5

Outage case 276              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40088 BELL MI  230.0 to   47091 USK      230.0   circuit 1

Outage case 277              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40086 BELL NO  230.0 to   40909 SACHEEN  230.0   circuit 1

Outage case 278              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40086 BELL NO  230.0 to   41275 WESTBPA1 230.0   circuit 1

Outage case 279              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40090 BELL SO  230.0 to   41356 COULEES1 230.0   circuit 3

Outage case 280              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40090 BELL SO  230.0 to   40624 LANCASTR 230.0   circuit 1

Outage case 281              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48033 BELL TAP 115.0 to   40087 BELL BPA 115.0   circuit 1

Outage case 282              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48033 BELL TAP 115.0 to   48381 SEVENTAP 115.0   circuit 1

Outage case 283              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48035 BENEWAH  115.0 to   48323 PLUMMER  115.0   circuit 1

Outage case 284              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48037 BENEWAH  230.0 to   48317 PINE CRK 230.0   circuit 1

Outage case 285              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48041 BIGCREEK 115.0 to   48049 BUNKRHIL 115.0   circuit 1

Outage case 286              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40113 BIGELOW  115.0 to   40483 GREEN BL 115.0   circuit 1

Outage case 287              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40113 BIGELOW  115.0 to   41089 TRENTWOD 115.0   circuit 1

Outage case 288              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46013 BKSAND T 115.0 to   40849 POTHOLES 115.0   circuit 1

Outage case 289              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48043 BLANCHRD 115.0 to   47505 HOODOO   115.0   circuit 1

Outage case 290              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48045 BLUECRK  115.0 to   48067 CDA      115.0   circuit 1

Outage case 291              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40133 BONNERS  115.0 to   41239 MOYIE T  115.0   circuit 1

Outage case 292              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40133 BONNERS  115.0 to   47194 MT HALL  115.0   circuit 1
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Outage case 293              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40133 BONNERS  115.0 to   40927 SAMUELS  115.0   circuit 1

Outage case 294              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40143 BOUNDARY 115.0 to   40731 METALINE 115.0   circuit 1

Outage case 295              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40145 BOUNDARY 230.0 to   40319 CUSICK   230.0   circuit 1

Outage case 296              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40145 BOUNDARY 230.0 to   40909 SACHEEN  230.0   circuit 1

Outage case 297              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47009 BOX CANY 115.0 to   40317 CUSICK   115.0   circuit 1

Outage case 298              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47126 BOX PS   115.0 to   41190 BOX TAP  115.0   circuit 1

Outage case 299              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       41190 BOX TAP  115.0 to   40731 METALINE 115.0   circuit 1

Outage case 300              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       41190 BOX TAP  115.0 to   48399 SPIRIT   115.0   circuit 1

Outage case 301              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47127 BRAYS LD 115.0 to   46805 CHELAN   115.0   circuit 1

Outage case 302              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47127 BRAYS LD 115.0 to   47069 ORONDO   115.0   circuit 1

Outage case 303              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40147 BREWSTER 115.0 to   47129 BRIDGBAR 115.0   circuit 1

Outage case 304              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40147 BREWSTER 115.0 to   40801 OPHIR T  115.0   circuit 1

Outage case 305              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40147 BREWSTER 115.0 to   47209 PATEROS  115.0   circuit 1

Outage case 306              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47129 BRIDGBAR 115.0 to   47013 BRIDGPRT 115.0   circuit 1

Outage case 307              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47013 BRIDGPRT 115.0 to   47099 WELLS    115.0   circuit 1

Outage case 308              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40149 BRINKENS 115.0 to   48341 POTLAT A 115.0   circuit 1

Outage case 309              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48047 BRONX    115.0 to   48293 ODEN     115.0   circuit 1

Outage case 310              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48047 BRONX    115.0 to   48377 SANDPT A 115.0   circuit 1

Outage case 311              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48049 BUNKRHIL 115.0 to   48315 PINE CRK 115.0   circuit 1

Outage case 312              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48051 BURKE    115.0 to   48053 BURKAVAA 115.0   circuit 1

Outage case 313              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48051 BURKE    115.0 to   48055 BURKAVAB 115.0   circuit 1

Outage case 314              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48051 BURKE    115.0 to   48151 HECLA    115.0   circuit 1

Outage case 315              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48051 BURKE    115.0 to   48217 LUCKYFTP 115.0   circuit 1

Outage case 316              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48057 CAB GORG 115.0 to   48065 CABINETG 115.0   circuit 1

Outage case 317              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48059 CAB GORG 230.0 to   48179 LAKEVIEW 230.0   circuit 1

Outage case 318              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48059 CAB GORG 230.0 to   48281 NOXON    230.0   circuit 1

Outage case 319              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48065 CABINETG 115.0 to   48077 CLRKFORK 115.0   circuit 1

Outage case 320              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       42312 CASCADEP 230.0 to   46831 ROCKYRH1 230.0   circuit 1

Outage case 321              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48067 CDA      115.0 to   48097 DALTONT  115.0   circuit 1

Outage case 322              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48067 CDA      115.0 to   48349 RAMSEY   115.0   circuit 1

Outage case 323              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       46805 CHELAN   115.0 to   48149 HEADWORK 115.0   circuit 1

Outage case 324              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       46805 CHELAN   115.0 to   46821 ROCKY RH 115.0   circuit 1

Outage case 325              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40215 CHENEY   115.0 to   40439 FOURLKS  115.0   circuit 1

Outage case 326              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48069 CHESTER  115.0 to   48299 OPPORTUN 115.0   circuit 1

Outage case 327              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48071 CHEWELAH 115.0 to   48441 VALLEY A 115.0   circuit 1

Outage case 328              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40223 CHIEF J3 345.0 to   40993 SNOHOMS3 345.0   circuit 3

Outage case 329              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        40225 CHIEF J4 345.0 to   40994 SNOHOMS4 345.0   circuit 4
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Outage case 330               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40231 CHIEF JO 230.0 to   41358 COULEES3 230.0   circuit 1
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Outage case 331               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40231 CHIEF JO 230.0 to   41358 COULEES3 230.0   circuit 2
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Outage case 332               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40231 CHIEF JO 230.0 to   40373 E OMAK   230.0   circuit 1
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Outage case 333               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40233 CHIEF JO 500.0 to   40287 COULEE   500.0   circuit 1
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Outage case 334               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40233 CHIEF JO 500.0 to   40749 MONROE   500.0   circuit 1
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Outage case 335               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40233 CHIEF JO 500.0 to   40973 SICKLER  500.0   circuit 1
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Outage case 336               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48073 CHMBRSTP 115.0 to   47503 CHAMBERS 115.0   circuit 1
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Outage case 337               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40239 CLARKSTN 115.0 to   48253 N LEWIST 115.0   circuit 1
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Outage case 338               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40239 CLARKSTN 115.0 to   40835 POMEROY  115.0   circuit 1
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Outage case 339               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40245 CLAYTON  115.0 to   40337 DEER PRK 115.0   circuit 1
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Outage case 340               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40245 CLAYTON  115.0 to   48213 LOON LK  115.0   circuit 1
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Outage case 341               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41753 CLE10_13 230.0 to   41357 COULEES2 230.0   circuit 1
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Outage case 342               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41754 CLE14_18 230.0 to   41358 COULEES3 230.0   circuit 1
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Outage case 343               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48075 CLEARWTR 115.0 to   48195 LOLO     115.0   circuit 1
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Outage case 344               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48075 CLEARWTR 115.0 to   48429 TENTHSTW 115.0   circuit 1
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Outage case 345               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48075 CLEARWTR 115.0 to   48464 WHEATLND 115.0   circuit 1
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Outage case 346               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48077 CLRKFORK 115.0 to   48293 ODEN     115.0   circuit 1
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Outage case 347               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41194 COL FAL1 230.0 to   41195 COL FAL2 230.0   circuit 1
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Outage case 348               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41194 COL FAL1 230.0 to   40267 CONKELLY 230.0   circuit 1
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Outage case 349               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41194 COL FAL1 230.0 to   40557 HUNGRY H 230.0   circuit 1
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Outage case 350               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41196 COL FAL3 230.0 to   40249 COL FALL 230.0   circuit 1
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Outage case 351               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41196 COL FAL3 230.0 to   40267 CONKELLY 230.0   circuit 1
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Outage case 352               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41196 COL FAL3 230.0 to   40557 HUNGRY H 230.0   circuit 1
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Outage case 353               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40247 COL FALL 115.0 to   40589 KALISPEL 115.0   circuit 1
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Outage case 354               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40247 COL FALL 115.0 to   41039 STILLWTR 115.0   circuit 1
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Outage case 355               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40249 COL FALL 230.0 to   40421 FLATHEAD 230.0   circuit 1
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Outage case 356               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48079 COLBERT  115.0 to   40255 COLBERTT 115.0   circuit 1
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Outage case 357               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40255 COLBERTT 115.0 to   40495 HALFMOON 115.0   circuit 1
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Outage case 358               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48081 COLLWALN 115.0 to   48129 FTWRIGHT 115.0   circuit 1
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Outage case 359               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48081 COLLWALN 115.0 to   48339 POSTSTRT 115.0   circuit 1
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Outage case 360               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40259 COLUMBIA 115.0 to   46033 GB55     115.0   circuit 1
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Outage case 361               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40259 COLUMBIA 115.0 to   40579 JENKINS  115.0   circuit 1
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Outage case 362               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40259 COLUMBIA 115.0 to   47071 PALISADS 115.0   circuit 1
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Outage case 363               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40259 COLUMBIA 115.0 to   41105 VALHALLA 115.0   circuit 1
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Outage case 364               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40259 COLUMBIA 115.0 to   41105 VALHALLA 115.0   circuit 2
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Outage case 365               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40261 COLUMBIA 230.0 to   41356 COULEES1 230.0   circuit 1
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Outage case 366                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40261 COLUMBIA 230.0 to   41358 COULEES3 230.0   circuit 3

Outage case 367                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40261 COLUMBIA 230.0 to   40303 COVINGTN 230.0   circuit 1

Outage case 368                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40261 COLUMBIA 230.0 to   46809 MCKENZIE 230.0   circuit 1

Outage case 369                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40261 COLUMBIA 230.0 to   46832 ROCKYRH2 230.0   circuit 1

Outage case 370                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40261 COLUMBIA 230.0 to   41111 VANTAGE  230.0   circuit 1

Outage case 371                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48083 COLV AVA 115.0 to   48143 GREENWDA 115.0   circuit 1

Outage case 372                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40263 COLV BPA 115.0 to   40607 KETTLE T 115.0   circuit 1

Outage case 373                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40263 COLV BPA 115.0 to   48399 SPIRIT   115.0   circuit 1

Outage case 374                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40267 CONKELLY 230.0 to   45305 TRUMB CR 230.0   circuit 1

Outage case 375                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40275 COOK M T 115.0 to   40607 KETTLE T 115.0   circuit 1

Outage case 376                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40275 COOK M T 115.0 to   40879 REPUBLIC 115.0   circuit 1

Outage case 377                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46150 COUL2GPD 115.0 to   40281 COULEE   115.0   circuit 1

Outage case 378                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46150 COUL2GPD 115.0 to   41127 WAGNERLT 115.0   circuit 1

Outage case 379                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41751 COULE1_5 230.0 to   41356 COULEES1 230.0   circuit 1

Outage case 380                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41752 COULE6_9 230.0 to   41357 COULEES2 230.0   circuit 1

Outage case 381                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40281 COULEE   115.0 to   41222 KELLER T 115.0   circuit 1

Outage case 382                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40281 COULEE   115.0 to   47067 NILLES C 115.0   circuit 1

Outage case 383                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40285 COULEE   300.0 to   40795 OLYMPIA  300.0   circuit 1

Outage case 384                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40287 COULEE   500.0 to   40499 HANFORD  500.0   circuit 1

Outage case 385                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40287 COULEE   500.0 to   40957 SCHULTZ  500.0   circuit 1

Outage case 386                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40287 COULEE   500.0 to   40957 SCHULTZ  500.0   circuit 2

Outage case 387                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41356 COULEES1 230.0 to   41357 COULEES2 230.0   circuit 1

Outage case 388                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41356 COULEES1 230.0 to   40851 POTHOLES 230.0   circuit 1

Outage case 389                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41357 COULEES2 230.0 to   41358 COULEES3 230.0   circuit 1

Outage case 390                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41357 COULEES2 230.0 to   46156 ROCKYFD  230.0   circuit 1

Outage case 391                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41357 COULEES2 230.0 to   41276 WESTBPA2 230.0   circuit 1

Outage case 392                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40311 CRESTN   115.0 to   40637 LARENE   115.0   circuit 1

Outage case 393                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40311 CRESTN   115.0 to   41127 WAGNERLT 115.0   circuit 1

Outage case 394                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40317 CUSICK   115.0 to   47254 USK      115.0   circuit 1

Outage case 395                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40319 CUSICK   230.0 to   47091 USK      230.0   circuit 1

Outage case 396                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48095 DALTON2T 115.0 to   48019 AVONDALE 115.0   circuit 1

Outage case 397                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48097 DALTONT  115.0 to   48093 DALTON A 115.0   circuit 1

Outage case 398                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48097 DALTONT  115.0 to   48356 RATHDRME 115.0   circuit 1

Outage case 399                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40337 DEER PRK 115.0 to   48235 MILAN TP 115.0   circuit 1

Outage case 400                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47025 DELIGHT  115.0 to   48457 WASHTUNA 115.0   circuit 1

Outage case 401                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48103 DEVIL GP 115.0 to   48269 NINEMILE 115.0   circuit 1

Outage case 402                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47027 DIAM LAK 115.0 to   40907 SACHEEN  115.0   circuit 1
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Outage case 403                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40348 DIXON    230.0 to   40551 HOT SPR  230.0   circuit 1

Outage case 404                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40348 DIXON    230.0 to   40867 RATTLE S 230.0   circuit 1

Outage case 405                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47029 DOUGLAS  115.0 to   47089 TERRY T  115.0   circuit 1

Outage case 406                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47031 DOUGLAS  230.0 to   46833 ROCKYRH3 230.0   circuit 1

Outage case 407                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47031 DOUGLAS  230.0 to   47101 WELLS    230.0   circuit 1

Outage case 408                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47031 DOUGLAS  230.0 to   47101 WELLS    230.0   circuit 2

Outage case 409                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47033 DOWER RD 115.0 to   48111 DOWERRDT 115.0   circuit 1

Outage case 410                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48111 DOWERRDT 115.0 to   48329 POST FLS 115.0   circuit 1

Outage case 411                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40369 DWORSHAK 500.0 to   40521 HATWAI   500.0   circuit 1

Outage case 412                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40369 DWORSHAK 500.0 to   41057 TAFT     500.0   circuit 1

Outage case 413                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41202 E ELLNSB 115.0 to   40385 ELLENGTP 115.0   circuit 1

Outage case 414                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   40437 FOSTER C 115.0   circuit 1

Outage case 415                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   40789 OKANOGAN 115.0   circuit 1

Outage case 416                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   40799 OMAK     115.0   circuit 1

Outage case 417                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   41085 TONASKET 115.0   circuit 1

Outage case 418                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   41151 WHITESTN 115.0   circuit 1

Outage case 419                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48117 EASTFARM 115.0 to   48329 POST FLS 115.0   circuit 1

Outage case 420                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47037 EASTMONT 115.0 to   47051 HANNA    115.0   circuit 1

Outage case 421                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47037 EASTMONT 115.0 to   47085 SO NILE  115.0   circuit 1

Outage case 422                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47037 EASTMONT 115.0 to   47089 TERRY T  115.0   circuit 1

Outage case 423                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48119 EGRANTAP 115.0 to   40383 EGRANVIL 115.0   circuit 1

Outage case 424                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40385 ELLENGTP 115.0 to   40387 ELLENSBG 115.0   circuit 1

Outage case 425                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40385 ELLENGTP 115.0 to   40579 JENKINS  115.0   circuit 1

Outage case 426                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40387 ELLENSBG 115.0 to   40755 MOXEE    115.0   circuit 1

Outage case 427                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40389 ELLISFRD 115.0 to   40807 OROVILLE 115.0   circuit 1

Outage case 428                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40389 ELLISFRD 115.0 to   41151 WHITESTN 115.0   circuit 1

Outage case 429                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40391 ELMO     115.0 to   40589 KALISPEL 115.0   circuit 1

Outage case 430                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40421 FLATHEAD 230.0 to   45175 LION MTN 230.0   circuit 1

Outage case 431                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40437 FOSTER C 115.0 to   47067 NILLES C 115.0   circuit 1

Outage case 432                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48125 FOURLBPA 115.0 to   40439 FOURLKS  115.0   circuit 1

Outage case 433                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48125 FOURLBPA 115.0 to   48132 HAL&WHIT 115.0   circuit 1

Outage case 434                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48125 FOURLBPA 115.0 to   40525 HAYFORD  115.0   circuit 1

Outage case 435                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48125 FOURLBPA 115.0 to   48387 SILVRLAK 115.0   circuit 1

Outage case 436                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48127 FRANCEDR 115.0 to   48219 LYONSTND 115.0   circuit 1

Outage case 437                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48127 FRANCEDR 115.0 to   48279 NORTHWES 115.0   circuit 1

Outage case 438                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48129 FTWRIGHT 115.0 to   48461 WEST     115.0   circuit 1

Outage case 439                ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        40449 GAFFNEY  115.0 to   48411 SPRAGUE  115.0   circuit 1
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Outage case 440               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40451 GAR1EAST 500.0 to   40459 GARRISON 500.0   circuit 1
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Outage case 441               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40453 GAR2EAST 500.0 to   40459 GARRISON 500.0   circuit 1
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Outage case 442               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48131 GARDENSP 115.0 to   40525 HAYFORD  115.0   circuit 1
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Outage case 443               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48131 GARDENSP 115.0 to   48409 SPKWASTE 115.0   circuit 1
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Outage case 444               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40457 GARRISON 230.0 to   40867 RATTLE S 230.0   circuit 1
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Outage case 445               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40459 GARRISON 500.0 to   41057 TAFT     500.0   circuit 1
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Outage case 446               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40459 GARRISON 500.0 to   41057 TAFT     500.0   circuit 2
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Outage case 447               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48139 GLENTAP  115.0 to   48137 GLENROSE 115.0   circuit 1
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Outage case 448               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48139 GLENTAP  115.0 to   48395 SOUTHEAS 115.0   circuit 1
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Outage case 449               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40479 GOOSE LK 115.0 to   40777 NESPELEM 115.0   circuit 1
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Outage case 450               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40479 GOOSE LK 115.0 to   40789 OKANOGAN 115.0   circuit 1
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Outage case 451               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48143 GREENWDA 115.0 to   48175 KETTLEAV 115.0   circuit 1
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Outage case 452               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48132 HAL&WHIT 115.0 to   48387 SILVRLAK 115.0   circuit 1
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Outage case 453               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40495 HALFMOON 115.0 to   41099 TUM TUM  115.0   circuit 1
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Outage case 454               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40499 HANFORD  500.0 to   40683 LOW MON  500.0   circuit 1
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Outage case 455               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40499 HANFORD  500.0 to   41113 VANTAGE  500.0   circuit 1
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Outage case 456               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47051 HANNA    115.0 to   41105 VALHALLA 115.0   circuit 1
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Outage case 457               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40513 HASKILL  230.0 to   40657 LIBBY    230.0   circuit 1
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Outage case 458               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40513 HASKILL  230.0 to   45305 TRUMB CR 230.0   circuit 1
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Outage case 459               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40519 HATWAI   230.0 to   48197 LOLO     230.0   circuit 1
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Outage case 460               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40519 HATWAI   230.0 to   48197 LOLO     230.0   circuit 2
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Outage case 461               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40519 HATWAI   230.0 to   48249 MOSCOW   230.0   circuit 1
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Outage case 462               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40519 HATWAI   230.0 to   48255 N LEWIST 230.0   circuit 1
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Outage case 463               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40521 HATWAI   500.0 to   40679 LOW GRAN 500.0   circuit 1
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Outage case 464               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48151 HECLA    115.0 to   48453 WALLACE  115.0   circuit 1
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Outage case 465               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48153 HECLAT   115.0 to   48041 BIGCREEK 115.0   circuit 1
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Outage case 466               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48155 HERN     115.0 to   48159 HUETTER  115.0   circuit 1
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Outage case 467               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47505 HOODOO   115.0 to   48403 SPIRITLT 115.0   circuit 1
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Outage case 468               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47507 HOPKINSB 115.0 to   48271 NINTHCNT 115.0   circuit 1
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Outage case 469               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40551 HOT SPR  230.0 to   45175 LION MTN 230.0   circuit 1
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Outage case 470               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40551 HOT SPR  230.0 to   48281 NOXON    230.0   circuit 2
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Outage case 471               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40551 HOT SPR  230.0 to   41091 TROUT CR 230.0   circuit 1
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Outage case 472               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40553 HOT SPR  500.0 to   41057 TAFT     500.0   circuit 1
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Outage case 473               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48159 HUETTER  115.0 to   48355 RATHDRUM 115.0   circuit 1
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Outage case 474               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47285 INLD EMP 115.0 to   41089 TRENTWOD 115.0   circuit 1
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Outage case 475               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48165 IRVIN    115.0 to   48299 OPPORTUN 115.0   circuit 1
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Outage case 476                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48165 IRVIN    115.0 to   48311 OTIS     115.0   circuit 1
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Outage case 477                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40587 JOSO TAP 115.0 to   41340 NINEMI T 115.0   circuit 1
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Outage case 478                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40603 KELLER   115.0 to   41222 KELLER T 115.0   circuit 1
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Outage case 479                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41222 KELLER T 115.0 to   40777 NESPELEM 115.0   circuit 1
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Outage case 480                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40607 KETTLE T 115.0 to   48175 KETTLEAV 115.0   circuit 1
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Outage case 481                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48177 KOOSKIA  115.0 to   48379 SCOTPAPR 115.0   circuit 1
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Outage case 482                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40617 LACLEDE  115.0 to   40857 PRIEST   115.0   circuit 1
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Outage case 483                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40617 LACLEDE  115.0 to   40933 SANDPONT 115.0   circuit 1
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Outage case 484                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40621 LAGRANDE 230.0 to   40905 ROUNDUP  230.0   circuit 1
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Outage case 485                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48179 LAKEVIEW 230.0 to   48357 RATHDRUM 230.0   circuit 1
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Outage case 486                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40624 LANCASTR 230.0 to   40787 NOXONBPA 230.0   circuit 1
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Outage case 487                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40637 LARENE   115.0 to   41015 SPRNGHIL 115.0   circuit 1
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Outage case 488                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40655 LIBBY    115.0 to   47278 LIBBYFEC 115.0   circuit 1
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Outage case 489                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40657 LIBBY    230.0 to   40787 NOXONBPA 230.0   circuit 1
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Outage case 490                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47278 LIBBYFEC 115.0 to   41097 TROY     115.0   circuit 1
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Outage case 491                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48185 LIBTYLK  115.0 to   48299 OPPORTUN 115.0   circuit 1
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Outage case 492                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48185 LIBTYLK  115.0 to   48311 OTIS     115.0   circuit 1
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Outage case 493                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48187 LIND     115.0 to   47025 DELIGHT  115.0   circuit 1
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Outage case 494                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48187 LIND     115.0 to   47073 RALSTONB 115.0   circuit 1
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Outage case 495                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40665 LIT GOOS 500.0 to   40679 LOW GRAN 500.0   circuit 1
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Outage case 496                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40665 LIT GOOS 500.0 to   40679 LOW GRAN 500.0   circuit 2
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Outage case 497                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40665 LIT GOOS 500.0 to   40683 LOW MON  500.0   circuit 1
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Outage case 498                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40665 LIT GOOS 500.0 to   40683 LOW MON  500.0   circuit 2
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Outage case 499                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40683 LOW MON  500.0 to   40917 SACJWA T 500.0   circuit 1
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Outage case 500                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48217 LUCKYFTP 115.0 to   48153 HECLAT   115.0   circuit 1
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Outage case 501                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48217 LUCKYFTP 115.0 to   48215 LUCKY F  115.0   circuit 1
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Outage case 502                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48219 LYONSTND 115.0 to   48371 ROSSPARK 115.0   circuit 1
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Outage case 503                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46043 MAE VL T 230.0 to   40851 POTHOLES 230.0   circuit 1
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Outage case 504                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47185 MALOTT   115.0 to   40789 OKANOGAN 115.0   circuit 1
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Outage case 505                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47185 MALOTT   115.0 to   41157 WINTHR T 115.0   circuit 1
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Outage case 506                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40691 MAPLE VL 345.0 to   40891 ROCKY RH 345.0   circuit 1
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Outage case 507                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48221 MARENGO  115.0 to   47073 RALSTONB 115.0   circuit 1
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Outage case 508                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46045 MATTAWA  230.0 to   41111 VANTAGE  230.0   circuit 1
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Outage case 509                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46807 MCKENZIE 115.0 to   46817 ROCK IS2 115.0   circuit 1
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Outage case 510                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46807 MCKENZIE 115.0 to   41105 VALHALLA 115.0   circuit 1
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Outage case 511                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46807 MCKENZIE 115.0 to   46829 WENATCHE 115.0   circuit 1
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Outage case 512                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46807 MCKENZIE 115.0 to   46829 WENATCHE 115.0   circuit 2
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Outage case 513              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       46809 MCKENZIE 230.0 to   46831 ROCKYRH1 230.0   circuit 1

Outage case 514              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       41351 MCNRY S1 230.0 to   40905 ROUNDUP  230.0   circuit 1

Outage case 515              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48223 METCHIP  115.0 to   48015 ARDEN    115.0   circuit 1

Outage case 516              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48225 METRO    115.0 to   48339 POSTSTRT 115.0   circuit 1

Outage case 517              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48225 METRO    115.0 to   48421 SUNSET   115.0   circuit 1

Outage case 518              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47509 MICA     115.0 to   48231 MICA TAP 115.0   circuit 1

Outage case 519              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48231 MICA TAP 115.0 to   47507 HOPKINSB 115.0   circuit 1

Outage case 520              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       41346 MIDWAYB1 230.0 to   40851 POTHOLES 230.0   circuit 1

Outage case 521              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       41347 MIDWAYB2 230.0 to   41111 VANTAGE  230.0   circuit 1

Outage case 522              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48235 MILAN TP 115.0 to   41099 TUM TUM  115.0   circuit 1

Outage case 523              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48237 MILLWOOD 115.0 to   48163 I.E.PAPR 115.0   circuit 1

Outage case 524              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48237 MILLWOOD 115.0 to   48165 IRVIN    115.0   circuit 1

Outage case 525              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48237 MILLWOOD 115.0 to   48312 OPORTUNW 115.0   circuit 1

Outage case 526              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48239 MISSION  115.0 to   48045 BLUECRK  115.0   circuit 1

Outage case 527              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47511 MOAB     115.0 to   48310 OPORTUNE 115.0   circuit 1

Outage case 528              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47511 MOAB     115.0 to   48319 PLEASANT 115.0   circuit 1

Outage case 529              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       41239 MOYIE T  115.0 to   41240 MOYIE TX 115.0   circuit 1

Outage case 530              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       41239 MOYIE T  115.0 to   41169 YAAK     115.0   circuit 1

Outage case 531              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       41240 MOYIE TX 115.0 to   41241 N BENCH  115.0   circuit 1

Outage case 532              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47194 MT HALL  115.0 to   41299 SMITHFLS 115.0   circuit 1

Outage case 533              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48253 N LEWIST 115.0 to   48075 CLEARWTR 115.0   circuit 1

Outage case 534              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       46811 N WENATC 115.0 to   46821 ROCKY RH 115.0   circuit 1

Outage case 535              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       46811 N WENATC 115.0 to   46829 WENATCHE 115.0   circuit 1

Outage case 536              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       40779 NEWPORTB 115.0 to   47086 PINE ST  115.0   circuit 1

Outage case 537              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48258 NEWPORTT 115.0 to   48043 BLANCHRD 115.0   circuit 1

Outage case 538              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48258 NEWPORTT 115.0 to   48259 NEWPORTA 115.0   circuit 1

Outage case 539              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48258 NEWPORTT 115.0 to   47086 PINE ST  115.0   circuit 1

Outage case 540              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       41340 NINEMI T 115.0 to   41131 WALAWALA 115.0   circuit 1

Outage case 541              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47574 NINEMIF1 115.0 to   41340 NINEMI T 115.0   circuit 1

Outage case 542              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       47572 NINEMIF2 230.0 to   45331 WALLULA  230.0   circuit 1

Outage case 543              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48269 NINEMILE 115.0 to   48461 WEST     115.0   circuit 1

Outage case 544              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48271 NINTHCNT 115.0 to   48139 GLENTAP  115.0   circuit 1

Outage case 545              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48271 NINTHCNT 115.0 to   48431 THIRHACH 115.0   circuit 1

Outage case 546              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48277 NORTHEAS 115.0 to   48224 MEAD     115.0   circuit 1

Outage case 547              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48279 NORTHWES 115.0 to   48461 WEST     115.0   circuit 1

Outage case 548              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE       48281 NOXON    230.0 to   40787 NOXONBPA 230.0   circuit 1

Outage case 549              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        48281 NOXON    230.0 to   48317 PINE CRK 230.0   circuit 1
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Outage case 550               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40787 NOXONBPA 230.0 to   48289 NOXONCON 230.0   circuit 1
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Outage case 551               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48289 NOXONCON 230.0 to   41091 TROUT CR 230.0   circuit 1
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Outage case 552               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48295 ODESSA   115.0 to   40577 IRBY     115.0   circuit 1
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Outage case 553               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48297 OGARA    115.0 to   48315 PINE CRK 115.0   circuit 1
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Outage case 554               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40789 OKANOGAN 115.0 to   40801 OPHIR T  115.0   circuit 1
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Outage case 555               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48310 OPORTUNE 115.0 to   48312 OPORTUNW 115.0   circuit 1
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Outage case 556               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48310 OPORTUNE 115.0 to   48299 OPPORTUN 115.0   circuit 1
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Outage case 557               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48301 ORIN     115.0 to   48083 COLV AVA 115.0   circuit 1
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Outage case 558               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48303 OROFINO  115.0 to   40023 AHSAHKA  115.0   circuit 1
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Outage case 559               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47069 ORONDO   115.0 to   46821 ROCKY RH 115.0   circuit 1
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Outage case 560               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48305 OSBURN   115.0 to   48315 PINE CRK 115.0   circuit 1
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Outage case 561               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48311 OTIS     115.0 to   48117 EASTFARM 115.0   circuit 1
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Outage case 562               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48311 OTIS     115.0 to   47511 MOAB     115.0   circuit 1
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Outage case 563               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48306 OTIS     230.0 to   48031 BEACON S 230.0   circuit 1
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Outage case 564               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48306 OTIS     230.0 to   48357 RATHDRUM 230.0   circuit 1
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Outage case 565               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48306 OTIS     230.0 to   48357 RATHDRUM 230.0   circuit 2
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Outage case 566               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47071 PALISADS 115.0 to   46075 QUINCY T 115.0   circuit 1
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Outage case 567               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47209 PATEROS  115.0 to   47251 TWISP    115.0   circuit 1
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Outage case 568               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48315 PINE CRK 115.0 to   48473 YELOWSTN 115.0   circuit 1
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Outage case 569               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47086 PINE ST  115.0 to   47254 USK      115.0   circuit 1
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Outage case 570               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48319 PLEASANT 115.0 to   48355 RATHDRUM 115.0   circuit 1
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Outage case 571               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48323 PLUMMER  115.0 to   48297 OGARA    115.0   circuit 1
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Outage case 572               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40835 POMEROY  115.0 to   41131 WALAWALA 115.0   circuit 1
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Outage case 573               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        45245 POMONA   230.0 to   41111 VANTAGE  230.0   circuit 1
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Outage case 574               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48329 POST FLS 115.0 to   40855 PRAIRIEB 115.0   circuit 1
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Outage case 575               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48339 POSTSTRT 115.0 to   48431 THIRHACH 115.0   circuit 1
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Outage case 576               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40849 POTHOLES 115.0 to   46095 SEEP TP  115.0   circuit 1
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Outage case 577               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40855 PRAIRIEB 115.0 to   48349 RAMSEY   115.0   circuit 1
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Outage case 578               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40857 PRIEST   115.0 to   48347 PRIEST A 115.0   circuit 1
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Outage case 579               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48349 RAMSEY   115.0 to   48011 APPLETAP 115.0   circuit 1
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Outage case 580               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48349 RAMSEY   115.0 to   48155 HERN     115.0   circuit 1
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Outage case 581               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48351 RATHBUS1 115.0 to   48355 RATHDRUM 115.0   circuit 1
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Outage case 582               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48353 RATHBUS2 115.0 to   48356 RATHDRME 115.0   circuit 1
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Outage case 583               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48356 RATHDRME 115.0 to   48355 RATHDRUM 115.0   circuit 1
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Outage case 584               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48356 RATHDRME 115.0 to   40953 SCARCELO 115.0   circuit 1
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Outage case 585               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40869 RAVER    500.0 to   40957 SCHULTZ  500.0   circuit 1
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Outage case 586              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40869 RAVER    500.0 to   40957 SCHULTZ  500.0   circuit 2
Outage case 587              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40869 RAVER    500.0 to   40957 SCHULTZ  500.0   circuit 3
Outage case 588              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40869 RAVER    500.0 to   40957 SCHULTZ  500.0   circuit 4
Outage case 589              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48363 REARDAN  115.0 to   40449 GAFFNEY  115.0   circuit 1
Outage case 590              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46817 ROCK IS2 115.0 to   41105 VALHALLA 115.0   circuit 1
Outage case 591              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48367 ROCKFORD 115.0 to   48231 MICA TAP 115.0   circuit 1
Outage case 592              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46821 ROCKY RH 115.0 to   46829 WENATCHE 115.0   circuit 1
Outage case 593              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46831 ROCKYRH1 230.0 to   46832 ROCKYRH2 230.0   circuit 1
Outage case 594              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        46832 ROCKYRH2 230.0 to   46833 ROCKYRH3 230.0   circuit 1
Outage case 595              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48371 ROSSPARK 115.0 to   48431 THIRHACH 115.0   circuit 1
Outage case 596              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40927 SAMUELS  115.0 to   40965 SELLE    115.0   circuit 1
Outage case 597              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40929 SAND CRK 115.0 to   40931 SAND TP  115.0   circuit 1
Outage case 598              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40929 SAND CRK 115.0 to   48377 SANDPT A 115.0   circuit 1
Outage case 599              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40929 SAND CRK 115.0 to   40965 SELLE    115.0   circuit 1
Outage case 600              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40931 SAND TP  115.0 to   40933 SANDPONT 115.0   circuit 1
Outage case 601              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        42448 SCENIC   115.0 to   46827 SUMMIT   115.0   circuit 1
Outage case 602              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40955 SCHRAG   115.0 to   46091 SCHRAG T 115.0   circuit 1
Outage case 603              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40957 SCHULTZ  500.0 to   40973 SICKLER  500.0   circuit 1
Outage case 604              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40957 SCHULTZ  500.0 to   41113 VANTAGE  500.0   circuit 1
Outage case 605              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48379 SCOTPAPR 115.0 to   48171 KAMIAH   115.0   circuit 1
Outage case 606              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48381 SEVENTAP 115.0 to   48127 FRANCEDR 115.0   circuit 1
Outage case 607              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48383 SHAWNEE  115.0 to   47501 ARMSTRNG 115.0   circuit 1
Outage case 608              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48395 SOUTHEAS 115.0 to   48421 SUNSET   115.0   circuit 1
Outage case 609              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48397 SPANGLE  115.0 to   48001 4LAKE TP 115.0   circuit 1
Outage case 610              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48403 SPIRITLT 115.0 to   48017 ATHOLTAP 115.0   circuit 1
Outage case 611              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48403 SPIRITLT 115.0 to   48401 SPIRITLK 115.0   circuit 1
Outage case 612              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48405 SPKINDPK 115.0 to   48021 BARKER   115.0   circuit 1
Outage case 613              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48405 SPKINDPK 115.0 to   48299 OPPORTUN 115.0   circuit 1
Outage case 614              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48409 SPKWASTE 115.0 to   48461 WEST     115.0   circuit 1
Outage case 615              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41039 STILLWTR 115.0 to   41087 TREGO    115.0   circuit 1
Outage case 616              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48417 STMARIES 115.0 to   48297 OGARA    115.0   circuit 1
Outage case 617              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48419 STRATFRD 115.0 to   46447 SUMERFAL 115.0   circuit 1
Outage case 618              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41260 SULLIVNB 115.0 to   41115 VERA     115.0   circuit 1
Outage case 619              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41260 SULLIVNB 115.0 to   41117 VERA TAP 115.0   circuit 1
Outage case 620              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48421 SUNSET   115.0 to   48131 GARDENSP 115.0   circuit 1
Outage case 621              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48421 SUNSET   115.0 to   48145 HANGMAN  115.0   circuit 1
Outage case 622              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41089 TRENTWOD 115.0 to   41117 VERA TAP 115.0   circuit 1
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Outage case 623                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41097 TROY     115.0 to   41169 YAAK     115.0   circuit 1

Outage case 624                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        47251 TWISP    115.0 to   41157 WINTHR T 115.0   circuit 1

Outage case 625                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48441 VALLEY A 115.0 to   48123 FORD     115.0   circuit 1

Outage case 626                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41107 VALY WAY 115.0 to   41117 VERA TAP 115.0   circuit 1

Outage case 627                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48443 VANT AVA 230.0 to   41111 VANTAGE  230.0   circuit 1

Outage case 628                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48445 VIOLA    115.0 to   40149 BRINKENS 115.0   circuit 1

Outage case 629                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41125 WAGNERLK 115.0 to   48469 WILBURT  115.0   circuit 1

Outage case 630                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41127 WAGNERLT 115.0 to   48469 WILBURT  115.0   circuit 1

Outage case 631                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48449 WAIKIKIT 115.0 to   48277 NORTHEAS 115.0   circuit 1

Outage case 632                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48449 WAIKIKIT 115.0 to   48447 WAIKIKI  115.0   circuit 1

Outage case 633                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48453 WALLACE  115.0 to   48305 OSBURN   115.0   circuit 1

Outage case 634                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48463 WEST     230.0 to   41275 WESTBPA1 230.0   circuit 1

Outage case 635                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48463 WEST     230.0 to   41276 WESTBPA2 230.0   circuit 1

Outage case 636                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48471 WILSNCKT 115.0 to   40577 IRBY     115.0   circuit 1

Outage case 637                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        41157 WINTHR T 115.0 to   41159 WINTHROP 115.0   circuit 1

Outage case 638                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48473 YELOWSTN 115.0 to   48239 MISSION  115.0   circuit 1

Outage case 639                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65000 5TH WEST 138.0 to   65865 JORDAN   138.0   circuit 1

Outage case 640                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65000 5TH WEST 138.0 to   66012 MORT CRT 138.0   circuit 1

Outage case 641                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65010 AEC IPC  138.0 to   65015 AEC SCOV 138.0   circuit 1

Outage case 642                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65015 AEC SCOV 138.0 to   65065 ANTLOP 1 138.0   circuit 1

Outage case 643                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65015 AEC SCOV 138.0 to   65070 ANTLOP 2 138.0   circuit 1

Outage case 644                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65020 AMAX     138.0 to   65790 HORSSHOE 138.0   circuit 1

Outage case 645                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65025 AMPS     230.0 to   65075 ANTLOPE  230.0   circuit 1

Outage case 646                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65030 ANACONDA 138.0 to   65345 CNTRATOR 138.0   circuit 1

Outage case 647                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65030 ANACONDA 138.0 to   66560 TOOELE   138.0   circuit 1

Outage case 648                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65040 ANGEL    138.0 to   65050 ANGEL ST 138.0   circuit 1

Outage case 649                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65045 ANGEL NT 138.0 to   66480 SYRACUSE 138.0   circuit 1

Outage case 650                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65050 ANGEL ST 138.0 to   65873 JCT STR  138.0   circuit 1

Outage case 651                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65050 ANGEL ST 138.0 to   66480 SYRACUSE 138.0   circuit 1

Outage case 652                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65055 ANSCHUTZ 138.0 to   66545 THIEF TP 138.0   circuit 1

Outage case 653                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65060 ANT MINE 230.0 to   66745 YELLOWCK 230.0   circuit 1

Outage case 654                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65075 ANTLOPE  230.0 to   65910 LOST RIV 230.0   circuit 1

Outage case 655                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65080 ANTLOPE  161.0 to   65670 GOSHEN   161.0   circuit 1

Outage case 656                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65085 ASHLEY   138.0 to   66590 UPALCO   138.0   circuit 1

Outage case 657                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65090 ATLANTIC 230.0 to   66315 ROCKSPGS 230.0   circuit 1

Outage case 658                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65090 ATLANTIC 230.0 to   66740 WYOPO    230.0   circuit 1

Outage case 659                ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        65095 BADWATER 230.0 to   66410 SPENCE   230.0   circuit 1
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Outage case 660               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65095 BADWATER 230.0 to   66535 THERMOPL 230.0   circuit 1
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Outage case 661               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65100 BAIROIL  115.0 to   65730 GREATDIV 115.0   circuit 1
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Outage case 662               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65100 BAIROIL  115.0 to   66685 WHISKEYP 115.0   circuit 1
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Outage case 663               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65105 BAR-X    230.0 to   66240 PLATTE   230.0   circuit 1
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Outage case 664               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65105 BAR-X    230.0 to   66250 PT ROCKS 230.0   circuit 1
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Outage case 665               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65110 BARNEY   138.0 to   65345 CNTRATOR 138.0   circuit 1
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Outage case 666               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65110 BARNEY   138.0 to   66135 OQUIRRH  138.0   circuit 1
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Outage case 667               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65125 BEKER IN 138.0 to   65360 CONDATAP 138.0   circuit 1
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Outage case 668               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65135 BENLOMND 345.0 to   66134 OQUIRRH  345.0   circuit 1
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Outage case 669               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65135 BENLOMND 345.0 to   66510 TERMINAL 345.0   circuit 1
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Outage case 670               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65140 BENLOMND 230.0 to   65160 BIRCH CK 230.0   circuit 1
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Outage case 671               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65140 BENLOMND 230.0 to   66050 NAUGHTON 230.0   circuit 1
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Outage case 672               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65140 BENLOMND 230.0 to   66475 SYRACUSE 230.0   circuit 1
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Outage case 673               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   65225 BRIGHAM  138.0   circuit 1
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Outage case 674               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   65505 EL MONTE 138.0   circuit 1
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Outage case 675               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   65505 EL MONTE 138.0   circuit 2
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Outage case 676               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   65785 HONEYVIL 138.0   circuit 1
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Outage case 677               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66480 SYRACUSE 138.0   circuit 1
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Outage case 678               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66640 W OGDEN  138.0   circuit 1
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Outage case 679               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66650 WARREN   138.0   circuit 1
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Outage case 680               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66675 WESTZIRC 138.0   circuit 1
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Outage case 681               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66680 WHEELON  138.0   circuit 1
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Outage case 682               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65155 BIGGRASS 161.0 to   65860 JFRSNPHA 161.0   circuit 1
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Outage case 683               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65160 BIRCH CK 230.0 to   66050 NAUGHTON 230.0   circuit 1
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Outage case 684               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65160 BIRCH CK 230.0 to   66270 RAILROAD 230.0   circuit 1
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Outage case 685               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65165 BLACKSFK 230.0 to   66010 MONUMENT 230.0   circuit 1
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Outage case 686               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65165 BLACKSFK 230.0 to   66670 WESTVACO 230.0   circuit 1
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Outage case 687               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65175 BLUE RIM 230.0 to   65215 BRDGR PP 230.0   circuit 1
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Outage case 688               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65175 BLUE RIM 230.0 to   66325 S. TRONA 230.0   circuit 1
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Outage case 689               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65180 BANGERTR 138.0 to   65255 CAMP TAP 138.0   circuit 1
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Outage case 690               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65180 BANGERTR 138.0 to   66135 OQUIRRH  138.0   circuit 1
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Outage case 691               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65192 BONANZA  138.0 to   65457 DG UPLCO 138.0   circuit 1
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Outage case 692               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65192 BONANZA  138.0 to   66278 RANGELY  138.0   circuit 1
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Outage case 693               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65193 BONANZA  345.0 to   65995 MONA     345.0   circuit 1
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Outage case 694               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65195 BONNEVIL 161.0 to   65485 EAGLE RK 161.0   circuit 1
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Outage case 695               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65205 BOUNTIFL 138.0 to   66205 PARRISH  138.0   circuit 1
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Outage case 696                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65210 BPA RIGB 161.0 to   66295 RIGBY    161.0   circuit 1

Outage case 697                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65215 BRDGR PP 230.0 to   65555 FIREHOLE 230.0   circuit 1

Outage case 698                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65220 BRIDGER  230.0 to   66020 MUSTANG  230.0   circuit 1

Outage case 699                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65220 BRIDGER  230.0 to   66250 PT ROCKS 230.0   circuit 1

Outage case 700                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65220 BRIDGER  230.0 to   66315 ROCKSPGS 230.0   circuit 1

Outage case 701                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65225 BRIGHAM  138.0 to   66680 WHEELON  138.0   circuit 1

Outage case 702                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65235 BUFFALO  230.0 to   65293 CARR DRA 230.0   circuit 1

Outage case 703                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65235 BUFFALO  230.0 to   65875 KAYCEE   230.0   circuit 1

Outage case 704                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65235 BUFFALO  230.0 to   66335 SHERIDAN 230.0   circuit 1

Outage case 705                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65240 BUTVILLE 138.0 to   65750 HAMMER   138.0   circuit 1

Outage case 706                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65240 BUTVILLE 138.0 to   66085 NINETY S 138.0   circuit 1

Outage case 707                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65255 CAMP TAP 138.0 to   66577 TRI CITY 138.0   circuit 1

Outage case 708                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   65805 HUNTNGTN 345.0   circuit 1

Outage case 709                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   65945 MIDVALLY 345.0   circuit 1

Outage case 710                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   65995 MONA     345.0   circuit 1

Outage case 711                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   65995 MONA     345.0   circuit 2

Outage case 712                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66080 NINETY S 345.0   circuit 1

Outage case 713                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66134 OQUIRRH  345.0   circuit 1

Outage case 714                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66400 SPAN FRK 345.0   circuit 1

Outage case 715                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66510 TERMINAL 345.0   circuit 1

Outage case 716                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66578 TRI CITY 345.0   circuit 1

Outage case 717                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65261 CAMP WIL 138.0 to   65906 LONEPEK2 138.0   circuit 1

Outage case 718                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   65755 HELPER   138.0   circuit 1

Outage case 719                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   65760 HELPER T 138.0   circuit 1

Outage case 720                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   66183 PANTHER  138.0   circuit 1

Outage case 721                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   66395 SPAN F&1 138.0   circuit 1

Outage case 722                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   66405 SPAN FRK 138.0   circuit 2

Outage case 723                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65285 CARIBO 1 138.0 to   65360 CONDATAP 138.0   circuit 1

Outage case 724                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65285 CARIBO 1 138.0 to   66000 MONSANT1 138.0   circuit 1

Outage case 725                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65285 CARIBO 1 138.0 to   66385 SODA     138.0   circuit 1

Outage case 726                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65290 CARIBO 2 138.0 to   65695 GRACE    138.0   circuit 1

Outage case 727                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65290 CARIBO 2 138.0 to   66005 MONSANT2 138.0   circuit 2

Outage case 728                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65293 CARR DRA 230.0 to   66725 WYODAK   230.0   circuit 1

Outage case 729                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65295 CARTER   138.0 to   66365 SKULL TP 138.0   circuit 1

Outage case 730                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65300 CASPERPP 230.0 to   65420 DAVEJOHN 230.0   circuit 1

Outage case 731                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65300 CASPERPP 230.0 to   65955 MIDWEST  230.0   circuit 1

Outage case 732                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65300 CASPERPP 230.0 to   66305 RIVERTON 230.0   circuit 1
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Outage case 733              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65310 CENTENAL 138.0 to   65455 DECKLAKE 138.0   circuit 1

Outage case 734              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65310 CENTENAL 138.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 735              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65320 CHAPPELC 230.0 to   66132 OPAL TAP 230.0   circuit 1

Outage case 736              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65340 CLINTON  138.0 to   66310 RIVRDALE 138.0   circuit 1

Outage case 737              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65340 CLINTON  138.0 to   66480 SYRACUSE 138.0   circuit 1

Outage case 738              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65345 CNTRATOR 138.0 to   66135 OQUIRRH  138.0   circuit 1

Outage case 739              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65355 COLUMBIA 138.0 to   66015 MOUND SW 138.0   circuit 1

Outage case 740              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65355 COLUMBIA 138.0 to   66450 SUNNYSID 138.0   circuit 1

Outage case 741              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65365 COTTONWD 138.0 to   65750 HAMMER   138.0   circuit 1

Outage case 742              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65365 COTTONWD 138.0 to   65930 MCCELAND 138.0   circuit 1

Outage case 743              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65365 COTTONWD 138.0 to   66386 SNYDERTP 138.0   circuit 1

Outage case 744              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65365 COTTONWD 138.0 to   66550 THIRTY S 138.0   circuit 1

Outage case 745              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65380 CRYSTALX 115.0 to   65480 E JACKSN 115.0   circuit 1

Outage case 746              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65380 CRYSTALX 115.0 to   66530 TETON    115.0   circuit 1

Outage case 747              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65390 CUDAHY   138.0 to   65740 GROW     138.0   circuit 1

Outage case 748              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65390 CUDAHY   138.0 to   66205 PARRISH  138.0   circuit 1

Outage case 749              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65390 CUDAHY   138.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 750              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65395 CUTLER   138.0 to   66680 WHEELON  138.0   circuit 1

Outage case 751              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65415 DAVEJO&1 230.0 to   65420 DAVEJOHN 230.0   circuit 1

Outage case 752              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65415 DAVEJO&1 230.0 to   66410 SPENCE   230.0   circuit 1

Outage case 753              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65420 DAVEJOHN 230.0 to   65460 DIFICULT 230.0   circuit 1

Outage case 754              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65420 DAVEJOHN 230.0 to   66745 YELLOWCK 230.0   circuit 1

Outage case 755              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65450 DECKER   230.0 to   65660 GOOSE CK 230.0   circuit 1

Outage case 756              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65450 DECKER   230.0 to   66735 WYOMONT  230.0   circuit 1

Outage case 757              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65454 DIMP DEL 138.0 to   65475 DUMAS    138.0   circuit 1

Outage case 758              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65454 DIMP DEL 138.0 to   66256 QUARRY   138.0   circuit 1

Outage case 759              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65455 DECKLAKE 138.0 to   66190 PARKWAY  138.0   circuit 1

Outage case 760              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65457 DG UPLCO 138.0 to   66590 UPALCO   138.0   circuit 1

Outage case 761              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65460 DIFICULT 230.0 to   65975 MINERS   230.0   circuit 1

Outage case 762              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65470 DRUMMOND 115.0 to   65675 GOSHEN   115.0   circuit 1

Outage case 763              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65470 DRUMMOND 115.0 to   65915 MACKS IN 115.0   circuit 1

Outage case 764              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65470 DRUMMOND 115.0 to   66495 TARGHEE  115.0   circuit 1

Outage case 765              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65475 DUMAS    138.0 to   66085 NINETY S 138.0   circuit 1

Outage case 766              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65475 DUMAS    138.0 to   66391 SOUTH MT 138.0   circuit 1

Outage case 767              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65480 E JACKSN 115.0 to   65845 JACKSONJ 115.0   circuit 1

Outage case 768              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65485 EAGLE RK 161.0 to   65670 GOSHEN   161.0   circuit 1

Outage case 769              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        65485 EAGLE RK 161.0 to   66695 WIDFALLS 161.0   circuit 1
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Outage case 770               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65510 EMERY    345.0 to   65805 HUNTNGTN 345.0   circuit 1
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Outage case 771               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65510 EMERY    345.0 to   66340 SIGURD   345.0   circuit 1
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Outage case 772               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65510 EMERY    345.0 to   66340 SIGURD   345.0   circuit 2
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Outage case 773               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65510 EMERY    345.0 to   66401 SPAN TAP 345.0   circuit 1
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Outage case 774               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65520 EMMAPARK 138.0 to   66183 PANTHER  138.0   circuit 1
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Outage case 775               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65520 EMMAPARK 138.0 to   66590 UPALCO   138.0   circuit 1
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Outage case 776               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65535 ETNA     115.0 to   66380 SNAKE RV 115.0   circuit 1
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Outage case 777               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65540 EVANSTON 138.0 to   66275 RAILROAD 138.0   circuit 1
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Outage case 778               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65540 EVANSTON 138.0 to   66545 THIEF TP 138.0   circuit 1
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Outage case 779               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65545 EXXON WY 230.0 to   66010 MONUMENT 230.0   circuit 1
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Outage case 780               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65555 FIREHOLE 230.0 to   65895 LITTLEMT 230.0   circuit 1
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Outage case 781               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65555 FIREHOLE 230.0 to   66315 ROCKSPGS 230.0   circuit 1
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Outage case 782               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65560 FISHCREK 161.0 to   65670 GOSHEN   161.0   circuit 1
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Outage case 783               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65560 FISHCREK 161.0 to   65690 GRACE    161.0   circuit 1
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Outage case 784               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65565 FLAMGORG 230.0 to   65895 LITTLEMT 230.0   circuit 1
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Outage case 785               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65570 FRANKLIN 138.0 to   65725 GRCYN TP 138.0   circuit 1
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Outage case 786               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65570 FRANKLIN 138.0 to   66570 TREASTON 138.0   circuit 1
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Outage case 787               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65575 FRANNIE  230.0 to   65620 GARLAND  230.0   circuit 1
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Outage case 788               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65575 FRANNIE  230.0 to   66750 YELOWTLP 230.0   circuit 1
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Outage case 789               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65580 FT CREEK 230.0 to   65975 MINERS   230.0   circuit 1
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Outage case 790               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65590 GADSBY   138.0 to   65611 GAD GAST 138.0   circuit 1
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Outage case 791               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65590 GADSBY   138.0 to   65865 JORDAN   138.0   circuit 1
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Outage case 792               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65590 GADSBY   138.0 to   66520 TERMINAL 138.0   circuit 2
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Outage case 793               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65620 GARLAND  230.0 to   66145 OREBASIN 230.0   circuit 1
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Outage case 794               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65630 GEMST TP 161.0 to   65635 GEMSTATE 161.0   circuit 1
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Outage case 795               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65630 GEMST TP 161.0 to   66392 SOUTEAST 161.0   circuit 1
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Outage case 796               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65630 GEMST TP 161.0 to   66695 WIDFALLS 161.0   circuit 1
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Outage case 797               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65655 GLENCO J 138.0 to   66045 NAUGHTN2 138.0   circuit 1
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Outage case 798               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65655 GLENCO J 138.0 to   66425 STR 204  138.0   circuit 1
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Outage case 799               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65660 GOOSE CK 230.0 to   66335 SHERIDAN 230.0   circuit 1
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Outage case 800               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65660 GOOSE CK 230.0 to   66750 YELOWTLP 230.0   circuit 1
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Outage case 801               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   65840 IONA     161.0   circuit 1
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Outage case 802               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   65850 JEFFERSN 161.0   circuit 1
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Outage case 803               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   66295 RIGBY    161.0   circuit 1
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Outage case 804               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   66430 SUGARMIL 161.0   circuit 1
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Outage case 805               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   66465 SWAN VAL 161.0   circuit 1
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Outage case 806              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65675 GOSHEN   115.0 to   66185 PALISADE 115.0   circuit 1
Outage case 807              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65695 GRACE    138.0 to   66130 ONEIDA   138.0   circuit 1
Outage case 808              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65695 GRACE    138.0 to   66385 SODA     138.0   circuit 1
Outage case 809              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65695 GRACE    138.0 to   66570 TREASTON 138.0   circuit 1
Outage case 810              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65695 GRACE    138.0 to   66570 TREASTON 138.0   circuit 2
Outage case 811              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65720 GRASS CK 230.0 to   66145 OREBASIN 230.0   circuit 1
Outage case 812              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65720 GRASS CK 230.0 to   66535 THERMOPL 230.0   circuit 1
Outage case 813              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65725 GRCYN TP 138.0 to   65735 GREENCYN 138.0   circuit 1
Outage case 814              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65725 GRCYN TP 138.0 to   66375 SMITHFLD 138.0   circuit 1
Outage case 815              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65730 GREATDIV 115.0 to   66025 MUSTANG  115.0   circuit 1
Outage case 816              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65735 GREENCYN 138.0 to   65900 LOGAN    138.0   circuit 1
Outage case 817              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65735 GREENCYN 138.0 to   66370 SMFLD TP 138.0   circuit 1
Outage case 818              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65740 GROW     138.0 to   65873 JCT STR  138.0   circuit 1
Outage case 819              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65740 GROW     138.0 to   66520 TERMINAL 138.0   circuit 1
Outage case 820              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65760 HELPER T 138.0 to   66015 MOUND SW 138.0   circuit 1
Outage case 821              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65770 HIGHLD T 138.0 to   65905 LONEPEK1 138.0   circuit 1
Outage case 822              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65775 HOBACK   115.0 to   66265 RAFTER J 115.0   circuit 1
Outage case 823              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65775 HOBACK   115.0 to   66380 SNAKE RV 115.0   circuit 1
Outage case 824              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65780 HOGGARD  138.0 to   66135 OQUIRRH  138.0   circuit 1
Outage case 825              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65780 HOGGARD  138.0 to   66642 W VAL    138.0   circuit 1
Outage case 826              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65785 HONEYVIL 138.0 to   65890 LAMPO    138.0   circuit 1
Outage case 827              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65785 HONEYVIL 138.0 to   66680 WHEELON  138.0   circuit 1
Outage case 828              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65790 HORSSHOE 138.0 to   66520 TERMINAL 138.0   circuit 1
Outage case 829              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65805 HUNTNGTN 345.0 to   66225 PINTO    345.0   circuit 1
Outage case 830              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65805 HUNTNGTN 345.0 to   66400 SPAN FRK 345.0   circuit 1
Outage case 831              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65810 HUNTNGTN 138.0 to   65935 MCFADDEN 138.0   circuit 1
Outage case 832              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65840 IONA     161.0 to   66295 RIGBY    161.0   circuit 1
Outage case 833              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65845 JACKSONJ 115.0 to   66265 RAFTER J 115.0   circuit 1
Outage case 834              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65845 JACKSONJ 115.0 to   66710 WILSON   115.0   circuit 1
Outage case 835              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65850 JEFFERSN 161.0 to   66295 RIGBY    161.0   circuit 1
Outage case 836              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65865 JORDAN   138.0 to   66520 TERMINAL 138.0   circuit 1
Outage case 837              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65870 JOSPH TP 138.0 to   66110 NUCORS F 138.0   circuit 1
Outage case 838              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65870 JOSPH TP 138.0 to   66680 WHEELON  138.0   circuit 1
Outage case 839              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65873 JCT STR  138.0 to   66205 PARRISH  138.0   circuit 1
Outage case 840              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65875 KAYCEE   230.0 to   65955 MIDWEST  230.0   circuit 1
Outage case 841              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65880 KIM CLRK 138.0 to   66650 WARREN   138.0   circuit 1
Outage case 842              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65885 LAKEPARK 138.0 to   66520 TERMINAL 138.0   circuit 1
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Outage case 843                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65885 LAKEPARK 138.0 to   66642 W VAL    138.0   circuit 1

Outage case 844                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65905 LONEPEK1 138.0 to   65906 LONEPEK2 138.0   circuit 1

Outage case 845                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65905 LONEPEK1 138.0 to   66391 SOUTH MT 138.0   circuit 1

Outage case 846                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65915 MACKS IN 115.0 to   66665 WEST YEL 115.0   circuit 1

Outage case 847                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65920 MALAD    138.0 to   66105 NUCOR TP 138.0   circuit 1

Outage case 848                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65925 MART MAR 138.0 to   66070 NEBO     138.0   circuit 1

Outage case 849                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65930 MCCELAND 138.0 to   66012 MORT CRT 138.0   circuit 1

Outage case 850                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65930 MCCELAND 138.0 to   66550 THIRTY S 138.0   circuit 1

Outage case 851                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65937 MEADOWBR 138.0 to   66500 TAYLORSV 138.0   circuit 1

Outage case 852                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65937 MEADOWBR 138.0 to   66550 THIRTY S 138.0   circuit 1

Outage case 853                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65945 MIDVALLY 345.0 to   66510 TERMINAL 345.0   circuit 1

Outage case 854                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65950 MIDWAY   138.0 to   66360 SILVR CR 138.0   circuit 1

Outage case 855                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65975 MINERS   230.0 to   66240 PLATTE   230.0   circuit 1

Outage case 856                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65995 MONA     345.0 to   66340 SIGURD   345.0   circuit 1

Outage case 857                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65995 MONA     345.0 to   66340 SIGURD   345.0   circuit 2

Outage case 858                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66010 MONUMENT 230.0 to   66050 NAUGHTON 230.0   circuit 1

Outage case 859                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66010 MONUMENT 230.0 to   66325 S. TRONA 230.0   circuit 1

Outage case 860                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66015 MOUND SW 138.0 to   66415 SPHINX T 138.0   circuit 1

Outage case 861                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66020 MUSTANG  230.0 to   66410 SPENCE   230.0   circuit 1

Outage case 862                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66035 NAT SM T 138.0 to   66085 NINETY S 138.0   circuit 1

Outage case 863                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66035 NAT SM T 138.0 to   66135 OQUIRRH  138.0   circuit 1

Outage case 864                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66040 NAUGHTN1 138.0 to   66365 SKULL TP 138.0   circuit 1

Outage case 865                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66050 NAUGHTON 230.0 to   66132 OPAL TAP 230.0   circuit 1

Outage case 866                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66050 NAUGHTON 230.0 to   66565 TREASTON 230.0   circuit 1

Outage case 867                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66080 NINETY S 345.0 to   66510 TERMINAL 345.0   circuit 1

Outage case 868                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66085 NINETY S 138.0 to   66256 QUARRY   138.0   circuit 1

Outage case 869                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66085 NINETY S 138.0 to   66285 RIDING R 138.0   circuit 1

Outage case 870                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66085 NINETY S 138.0 to   66326 SANDYX   138.0   circuit 1

Outage case 871                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66085 NINETY S 138.0 to   66660 WEST JOR 138.0   circuit 1

Outage case 872                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66105 NUCOR TP 138.0 to   66115 NUCORS O 138.0   circuit 1

Outage case 873                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66105 NUCOR TP 138.0 to   66680 WHEELON  138.0   circuit 1

Outage case 874                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66110 NUCORS F 138.0 to   66115 NUCORS O 138.0   circuit 1

Outage case 875                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66130 ONEIDA   138.0 to   66150 OVID     138.0   circuit 1

Outage case 876                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66130 ONEIDA   138.0 to   66570 TREASTON 138.0   circuit 1

Outage case 877                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66135 OQUIRRH  138.0 to   66455 SW RK 2  138.0   circuit 1

Outage case 878                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66155 PAINTER  138.0 to   66275 RAILROAD 138.0   circuit 1

Outage case 879                ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        66155 PAINTER  138.0 to   66425 STR 204  138.0   circuit 1
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Outage case 880               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66180 PALISADE 230.0 to   66266 RAVEN    230.0   circuit 1
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Outage case 881               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66180 PALISADE 230.0 to   66315 ROCKSPGS 230.0   circuit 1
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Outage case 882               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66183 PANTHER  138.0 to   66707 WILLOW C 138.0   circuit 1
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Outage case 883               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66185 PALISADE 115.0 to   66380 SNAKE RV 115.0   circuit 1
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Outage case 884               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66185 PALISADE 115.0 to   66470 SWAN VAL 115.0   circuit 1
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Outage case 885               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66190 PARKWAY  138.0 to   66550 THIRTY S 138.0   circuit 1
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Outage case 886               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66205 PARRISH  138.0 to   66520 TERMINAL 138.0   circuit 1
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Outage case 887               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66205 PARRISH  138.0 to   66520 TERMINAL 138.0   circuit 2
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Outage case 888               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66215 PEPCON   138.0 to   66220 PEPCON I 138.0   circuit 1
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Outage case 889               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66215 PEPCON   138.0 to   66635 W CEDAR  138.0   circuit 1
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Outage case 890               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66222 PINE CYN 138.0 to   66560 TOOELE   138.0   circuit 1
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Outage case 891               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66222 PINE CYN 138.0 to   66585 U CARB T 138.0   circuit 1
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Outage case 892               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66245 PLATTE   115.0 to   66685 WHISKEYP 115.0   circuit 1
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Outage case 893               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66266 RAVEN    230.0 to   66670 WESTVACO 230.0   circuit 1
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Outage case 894               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66275 RAILROAD 138.0 to   66690 WHITNEY  138.0   circuit 1
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Outage case 895               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66285 RIDING R 138.0 to   66550 THIRTY S 138.0   circuit 1
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Outage case 896               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66290 RIDGLD T 138.0 to   66520 TERMINAL 138.0   circuit 1
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Outage case 897               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66290 RIDGLD T 138.0 to   66550 THIRTY S 138.0   circuit 1
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Outage case 898               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66295 RIGBY    161.0 to   66430 SUGARMIL 161.0   circuit 1
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Outage case 899               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66305 RIVERTON 230.0 to   66535 THERMOPL 230.0   circuit 1
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Outage case 900               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66305 RIVERTON 230.0 to   66740 WYOPO    230.0   circuit 1
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Outage case 901               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66310 RIVRDALE 138.0 to   66640 W OGDEN  138.0   circuit 1
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Outage case 902               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66320 RYCMN TP 138.0 to   66425 STR 204  138.0   circuit 1
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Outage case 903               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66325 S. TRONA 230.0 to   66715 WOLD     230.0   circuit 1
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Outage case 904               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66360 SILVR CR 138.0 to   66386 SNYDERTP 138.0   circuit 1
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Outage case 905               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66370 SMFLD TP 138.0 to   66375 SMITHFLD 138.0   circuit 1
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Outage case 906               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66370 SMFLD TP 138.0 to   66680 WHEELON  138.0   circuit 1
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Outage case 907               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66386 SNYDERTP 138.0 to   66387 SNYDERVL 138.0   circuit 1
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Outage case 908               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66392 SOUTEAST 161.0 to   66430 SUGARMIL 161.0   circuit 1
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Outage case 909               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66395 SPAN F&1 138.0 to   66405 SPAN FRK 138.0   circuit 1
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Outage case 910               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66401 SPAN TAP 345.0 to   66578 TRI CITY 345.0   circuit 1
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Outage case 911               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66470 SWAN VAL 115.0 to   66490 TARGHE T 115.0   circuit 1
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Outage case 912               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66475 SYRACUSE 230.0 to   66515 TERMINAL 230.0   circuit 1
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Outage case 913               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66480 SYRACUSE 138.0 to   66650 WARREN   138.0   circuit 1
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Outage case 914               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66490 TARGHE T 115.0 to   66495 TARGHEE  115.0   circuit 1
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Outage case 915               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66490 TARGHE T 115.0 to   66530 TETON    115.0   circuit 1
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Outage case 916                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66500 TAYLORSV 138.0 to   66660 WEST JOR 138.0   circuit 1

Outage case 917                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66520 TERMINAL 138.0 to   66585 U CARB T 138.0   circuit 1

Outage case 918                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66520 TERMINAL 138.0 to   66595 UPP      138.0   circuit 1

Outage case 919                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66530 TETON    115.0 to   66710 WILSON   115.0   circuit 1

Outage case 920                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66540 THERPACE 115.0 to   66720 WORLAND  115.0   circuit 1

Outage case 921                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66570 TREASTON 138.0 to   66680 WHEELON  138.0   circuit 1

Outage case 922                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66570 TREASTON 138.0 to   66680 WHEELON  138.0   circuit 2

Outage case 923                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66570 TREASTON 138.0 to   66680 WHEELON  138.0   circuit 3

Outage case 924                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70021 ROCKYTMP 115.0 to   70322 PLAINVW  115.0   circuit 1

Outage case 925                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70023 ALLISON  115.0 to   70242 KENDRICK 115.0   circuit 1

Outage case 926                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70036 ARAPAHOA 115.0 to   70037 ARAPAHOB 115.0   circuit 1

Outage case 927                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70036 ARAPAHOA 115.0 to   70384 SHERIDAN 115.0   circuit 1

Outage case 928                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70036 ARAPAHOA 115.0 to   70531 AIR LIQ  115.0   circuit 1

Outage case 929                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70037 ARAPAHOB 115.0 to   70165 ENGLE3TP 115.0   circuit 1

Outage case 930                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70038 ARAPAHOE 230.0 to   70527 SANTEFE  230.0   circuit 1

Outage case 931                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70040 ARSENAL  115.0 to   70217 HAVANA2  115.0   circuit 1

Outage case 932                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70046 BUCKLEY2 230.0 to   70491 TOLGATE  230.0   circuit 1

Outage case 933                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70048 GREENVAL 230.0 to   70047 BARRLAKE 230.0   circuit 1

Outage case 934                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70048 GREENVAL 230.0 to   70392 SKYRANCH 230.0   circuit 1

Outage case 935                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70048 GREENVAL 230.0 to   70393 SKYRANCT 230.0   circuit 1

Outage case 936                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70058 BO HYDRO 115.0 to   70295 NCAR     115.0   circuit 1

Outage case 937                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70058 BO HYDRO 115.0 to   70424 SUNSHTAP 115.0   circuit 1

Outage case 938                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70059 BO TERM  115.0 to   70424 SUNSHTAP 115.0   circuit 1

Outage case 939                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70059 BO TERM  115.0 to   70444 VALMONT  115.0   circuit 1

Outage case 940                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70065 BROMFLD1 115.0 to   70066 BROMFLD2 115.0   circuit 1

Outage case 941                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70067 BUCKLEY1 230.0 to   70512 JEWELL1  230.0   circuit 1

Outage case 942                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70071 CABINCRK 115.0 to   70197 GEORGETN 115.0   circuit 1

Outage case 943                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70073 CALIFOR1 115.0 to   70075 CALIFOR3 115.0   circuit 1

Outage case 944                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70073 CALIFOR1 115.0 to   70299 NORTH542 115.0   circuit 1

Outage case 945                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70074 CALIFOR2 115.0 to   70215 HARRISPS 115.0   circuit 1

Outage case 946                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70075 CALIFOR3 115.0 to   70074 CALIFOR2 115.0   circuit 1

Outage case 947                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70087 CAPHILL1 115.0 to   70088 CAPHILL2 115.0   circuit 1

Outage case 948                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70087 CAPHILL1 115.0 to   70300 NORTH547 115.0   circuit 1

Outage case 949                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70088 CAPHILL2 115.0 to   70148 DENVTM   115.0   circuit 1

Outage case 950                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70088 CAPHILL2 115.0 to   70215 HARRISPS 115.0   circuit 1

Outage case 951                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70091 CASTLRCK 115.0 to   70138 DANIELPK 115.0   circuit 1

Outage case 952                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70107 CHEROKEE 230.0 to   70047 BARRLAKE 230.0   circuit 1
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Outage case 953                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70107 CHEROKEE 230.0 to   70324 LACOMBE  230.0   circuit 1

Outage case 954                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70107 CHEROKEE 230.0 to   70355 RIDGE    230.0   circuit 1

Outage case 955                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70107 CHEROKEE 230.0 to   70362 RIVERDAL 230.0   circuit 1

Outage case 956                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70108 CHEROKEN 115.0 to   70153 DERBY 1  115.0   circuit 1

Outage case 957                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70108 CHEROKEN 115.0 to   70154 DERBY 2  115.0   circuit 1

Outage case 958                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70108 CHEROKEN 115.0 to   70175 FEDERHT2 115.0   circuit 2

Outage case 959                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70108 CHEROKEN 115.0 to   70307 P.VALLEY 115.0   circuit 1

Outage case 960                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70039 ARGO     115.0   circuit 1

Outage case 961                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70041 ARVADA   115.0   circuit 1

Outage case 962                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70108 CHEROKEN 115.0   circuit 1

Outage case 963                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70126 CONOCO   115.0   circuit 1

Outage case 964                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70174 FEDERHT1 115.0   circuit 1

Outage case 965                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70276 MAPLETO1 115.0   circuit 1

Outage case 966                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70277 MAPLETO2 115.0   circuit 1

Outage case 967                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70298 NORTH PS 115.0   circuit 1

Outage case 968                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70299 NORTH542 115.0   circuit 2

Outage case 969                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70112 CLARK    230.0 to   70241 JORDAN   230.0   circuit 1

Outage case 970                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70124 CONIFER  115.0 to   70429 TINYTOWN 115.0   circuit 1

Outage case 971                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70127 COORSREC 115.0 to   70194 FULTONTS 115.0   circuit 1

Outage case 972                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70137 DAKOTA   115.0 to   70036 ARAPAHOA 115.0   circuit 1

Outage case 973                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70212 GREENWD  230.0   circuit 1

Outage case 974                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70278 MARCY    230.0   circuit 1

Outage case 975                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70284 SURREYRG 230.0   circuit 1

Outage case 976                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70286 MIDWAYPS 230.0   circuit 1

Outage case 977                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70331 PRAIRIE  230.0   circuit 1

Outage case 978                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70142 DEERCREK 115.0 to   70463 WATERTON 115.0   circuit 1

Outage case 979                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70153 DERBY 1  115.0 to   70040 ARSENAL  115.0   circuit 1

Outage case 980                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70154 DERBY 2  115.0 to   70216 HAVANA1  115.0   circuit 1

Outage case 981                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70156 DILLON   230.0 to   70072 CABINCRK 230.0   circuit 1

Outage case 982                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70162 EAST     115.0 to   70430 TOLGATE1 115.0   circuit 1

Outage case 983                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70162 EAST     115.0 to   70431 TOLGATE2 115.0   circuit 1

Outage case 984                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70163 ELATI1   230.0 to   70149 DENVTM   230.0   circuit 1

Outage case 985                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70163 ELATI1   230.0 to   70170 ELATI2   230.0   circuit 1

Outage case 986                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70164 ELDORADO 115.0 to   70295 NCAR     115.0   circuit 1

Outage case 987                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70164 ELDORADO 115.0 to   70322 PLAINVW  115.0   circuit 1

Outage case 988                ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70164 ELDORADO 115.0 to   70365 ROCKYFLA 115.0   circuit 1

Outage case 989                ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        70164 ELDORADO 115.0 to   70444 VALMONT  115.0   circuit 1
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Outage case 990               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70165 ENGLE3TP 115.0 to   70168 ENGLEWD3 115.0   circuit 1
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Outage case 991               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70165 ENGLE3TP 115.0 to   70263 LITTLET1 115.0   circuit 1
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Outage case 992               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70166 ENGLEWD1 115.0 to   70384 SHERIDAN 115.0   circuit 1
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Outage case 993               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70167 ENGLEWD2 115.0 to   70037 ARAPAHOB 115.0   circuit 1
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Outage case 994               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70169 ENNIS    115.0 to   70234 HUDSON   115.0   circuit 1
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Outage case 995               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70172 FED CNTR 115.0 to   70173 FEDCTRTP 115.0   circuit 1
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Outage case 996               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70173 FEDCTRTP 115.0 to   70148 DENVTM   115.0   circuit 1
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Outage case 997               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70175 FEDERHT2 115.0 to   70066 BROMFLD2 115.0   circuit 1
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Outage case 998               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70191 FTLUPTON 115.0 to   70127 COORSREC 115.0   circuit 1
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Outage case 999               ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70191 FTLUPTON 115.0 to   70234 HUDSON   115.0   circuit 1
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Outage case 1000              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70191 FTLUPTON 115.0 to   70450 VASQUEZ  115.0   circuit 1
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Outage case 1001              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70192 FTLUPTON 230.0 to   70048 GREENVAL 230.0   circuit 1
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Outage case 1002              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70192 FTLUPTON 230.0 to   70311 PAWNEE   230.0   circuit 1
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Outage case 1003              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70192 FTLUPTON 230.0 to   70362 RIVERDAL 230.0   circuit 1
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Outage case 1004              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70192 FTLUPTON 230.0 to   70461 WASHINGT 230.0   circuit 1
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Outage case 1005              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70194 FULTONTS 115.0 to   70171 ERIETAP  115.0   circuit 1
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Outage case 1006              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70197 GEORGETN 115.0 to   70218 HENDERPS 115.0   circuit 1
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Outage case 1007              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70198 GILCREST 115.0 to   70450 VASQUEZ  115.0   circuit 1
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Outage case 1008              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70200 GLENN PS 230.0 to   70107 CHEROKEE 230.0   circuit 1
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Outage case 1009              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70200 GLENN PS 230.0 to   70461 WASHINGT 230.0   circuit 1
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Outage case 1010              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70202 GODFRETP 115.0 to   70198 GILCREST 115.0   circuit 1
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Outage case 1011              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70202 GODFRETP 115.0 to   70209 GREELEY  115.0   circuit 1
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Outage case 1012              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70202 GODFRETP 115.0 to   70240 JOHNSTN  115.0   circuit 1
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Outage case 1013              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70208 GRAY ST  115.0 to   70045 BANCROFT 115.0   circuit 1
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Outage case 1014              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70208 GRAY ST  115.0 to   70148 DENVTM   115.0   circuit 1
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Outage case 1015              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70208 GRAY ST  115.0 to   70402 SOUTH 2  115.0   circuit 1
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Outage case 1016              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70209 GREELEY  115.0 to   70290 MONFORT  115.0   circuit 1
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Outage case 1017              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70209 GREELEY  115.0 to   70470 WELD  PS 115.0   circuit 1
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Outage case 1018              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70212 GREENWD  230.0 to   70112 CLARK    230.0   circuit 1
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Outage case 1019              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70212 GREENWD  230.0 to   70331 PRAIRIE  230.0   circuit 1
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Outage case 1020              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70212 GREENWD  230.0 to   70428 TECH CTR 230.0   circuit 1
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Outage case 1021              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70216 HAVANA1  115.0 to   70537 FITZSMNS 115.0   circuit 1
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Outage case 1022              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70217 HAVANA2  115.0 to   70162 EAST     115.0   circuit 1
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Outage case 1023              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70224 HOGBACK  115.0 to   70050 BERGENPK 115.0   circuit 1
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Outage case 1024              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70224 HOGBACK  115.0 to   70400 SODALAKE 115.0   circuit 1
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Outage case 1025              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70237 IDAHOSPG 230.0 to   70072 CABINCRK 230.0   circuit 1
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Outage case 1026              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70239 JEWELL2  230.0 to   70260 LEETSDAL 230.0   circuit 1

Outage case 1027              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70241 JORDAN   230.0 to   70283 MEADOWHL 230.0   circuit 1

Outage case 1028              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70242 KENDRICK 115.0 to   70045 BANCROFT 115.0   circuit 1

Outage case 1029              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70244 LAFAYETT 115.0 to   70171 ERIETAP  115.0   circuit 1

Outage case 1030              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70251 LAKEWOD1 115.0 to   70208 GRAY ST  115.0   circuit 1

Outage case 1031              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70252 LAKEWOD2 115.0 to   70208 GRAY ST  115.0   circuit 1

Outage case 1032              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70259 LEETSDAL 115.0 to   70215 HARRISPS 115.0   circuit 1

Outage case 1033              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70259 LEETSDAL 115.0 to   70443 UNIVRSTP 115.0   circuit 1

Outage case 1034              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70260 LEETSDAL 230.0 to   70530 MONACO   230.0   circuit 1

Outage case 1035              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70261 LEGGETT  230.0 to   70297 NIWOT    230.0   circuit 1

Outage case 1036              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70262 LEYDEN   115.0 to   70322 PLAINVW  115.0   circuit 1

Outage case 1037              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70262 LEYDEN   115.0 to   70340 QUAKER1  115.0   circuit 1

Outage case 1038              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70263 LITTLET1 115.0 to   70264 LITTLET2 115.0   circuit 1

Outage case 1039              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70264 LITTLET2 115.0 to   70463 WATERTON 115.0   circuit 1

Outage case 1040              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70265 LOOKOUT  115.0 to   70224 HOGBACK  115.0   circuit 1

Outage case 1041              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70265 LOOKOUT  115.0 to   70342 QUAKERTP 115.0   circuit 1

Outage case 1042              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70072 CABINCRK 230.0   circuit 2

Outage case 1043              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70100 CHATFLD  230.0   circuit 1

Outage case 1044              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70237 IDAHOSPG 230.0   circuit 1

Outage case 1045              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70261 LEGGETT  230.0   circuit 1

Outage case 1046              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70355 RIDGE    230.0   circuit 1

Outage case 1047              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70480 WESTPS   230.0   circuit 1

Outage case 1048              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70570 INDIANA  230.0   circuit 1

Outage case 1049              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70269 LOUISVIL 115.0 to   70066 BROMFLD2 115.0   circuit 1

Outage case 1050              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70276 MAPLETO1 115.0 to   70300 NORTH547 115.0   circuit 1

Outage case 1051              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70279 MARTIN 1 115.0 to   70463 WATERTON 115.0   circuit 1

Outage case 1052              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70280 MARTIN 2 115.0 to   70463 WATERTON 115.0   circuit 1

Outage case 1053              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70284 SURREYRG 230.0 to   70551 MURPHY   230.0   circuit 1

Outage case 1054              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70291 MONROEPS 230.0 to   70170 ELATI2   230.0   circuit 1

Outage case 1055              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70291 MONROEPS 230.0 to   70260 LEETSDAL 230.0   circuit 1

Outage case 1056              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70297 NIWOT    230.0 to   70213 GUNBARRE 230.0   circuit 1

Outage case 1057              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70298 NORTH PS 115.0 to   70377 SANDOWN  115.0   circuit 1

Outage case 1058              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70307 P.VALLEY 115.0 to   70191 FTLUPTON 115.0   circuit 1

Outage case 1059              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70311 PAWNEE   230.0 to   70139 DANIELPK 230.0   circuit 1

Outage case 1060              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70311 PAWNEE   230.0 to   70343 QUINCY   230.0   circuit 1

Outage case 1061              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70323 PLATTEPS 115.0 to   70039 ARGO     115.0   circuit 1

Outage case 1062              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70323 PLATTEPS 115.0 to   70148 DENVTM   115.0   circuit 1
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Outage case 1063              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70324 LACOMBE  230.0 to   70149 DENVTM   230.0   circuit 1

Outage case 1064              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70328 PORTAL   115.0 to   70218 HENDERPS 115.0   circuit 1

Outage case 1065              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70340 QUAKER1  115.0 to   70341 QUAKER2  115.0   circuit 1

Outage case 1066              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70342 QUAKERTP 115.0 to   70173 FEDCTRTP 115.0   circuit 1

Outage case 1067              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70342 QUAKERTP 115.0 to   70341 QUAKER2  115.0   circuit 1

Outage case 1068              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70343 QUINCY   230.0 to   70396 SMOKYHIL 230.0   circuit 1

Outage case 1069              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70345 RALSTON1 115.0 to   70354 RIDGE    115.0   circuit 1

Outage case 1070              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70346 RALSTON2 115.0 to   70365 ROCKYFLA 115.0   circuit 1

Outage case 1071              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70251 LAKEWOD1 115.0   circuit 1

Outage case 1072              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70252 LAKEWOD2 115.0   circuit 1

Outage case 1073              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70262 LEYDEN   115.0   circuit 1

Outage case 1074              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70346 RALSTON2 115.0   circuit 1

Outage case 1075              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70369 RUSSELL  115.0   circuit 1

Outage case 1076              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70368 ROSEDALE 115.0 to   70439 UNC      115.0   circuit 1

Outage case 1077              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70368 ROSEDALE 115.0 to   70470 WELD  PS 115.0   circuit 1

Outage case 1078              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70369 RUSSELL  115.0 to   70041 ARVADA   115.0   circuit 1

Outage case 1079              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70377 SANDOWN  115.0 to   70277 MAPLETO2 115.0   circuit 1

Outage case 1080              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70382 SEMPER   115.0 to   70065 BROMFLD1 115.0   circuit 1

Outage case 1081              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70382 SEMPER   115.0 to   70174 FEDERHT1 115.0   circuit 1

Outage case 1082              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70392 SKYRANCH 230.0 to   70432 TOWER    230.0   circuit 1

Outage case 1083              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70393 SKYRANCT 230.0 to   70396 SMOKYHIL 230.0   circuit 1

Outage case 1084              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70395 SMOKYHIL 115.0 to   70416 STRASBRG 115.0   circuit 1

Outage case 1085              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70395 SMOKYHIL 115.0 to   70430 TOLGATE1 115.0   circuit 1

Outage case 1086              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70395 SMOKYHIL 115.0 to   70431 TOLGATE2 115.0   circuit 1

Outage case 1087              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70395 SMOKYHIL 115.0 to   70521 PEAKVIEW 115.0   circuit 1

Outage case 1088              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70396 SMOKYHIL 230.0 to   70046 BUCKLEY2 230.0   circuit 1

Outage case 1089              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70396 SMOKYHIL 230.0 to   70067 BUCKLEY1 230.0   circuit 1

Outage case 1090              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70396 SMOKYHIL 230.0 to   70283 MEADOWHL 230.0   circuit 1

Outage case 1091              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70398 SOUTH1TP 115.0 to   70037 ARAPAHOB 115.0   circuit 1

Outage case 1092              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70398 SOUTH1TP 115.0 to   70045 BANCROFT 115.0   circuit 1

Outage case 1093              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70400 SODALAKE 115.0 to   70023 ALLISON  115.0   circuit 1

Outage case 1094              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70400 SODALAKE 115.0 to   70142 DEERCREK 115.0   circuit 1

Outage case 1095              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70400 SODALAKE 115.0 to   70429 TINYTOWN 115.0   circuit 1

Outage case 1096              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70401 SOUTH 1  115.0 to   70398 SOUTH1TP 115.0   circuit 1

Outage case 1097              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   70048 GREENVAL 230.0   circuit 1

Outage case 1098              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   70192 FTLUPTON 230.0   circuit 1

Outage case 1099              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        70410 ST.VRAIN 230.0 to   70192 FTLUPTON 230.0   circuit 2
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Outage case 1100              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   70297 NIWOT    230.0   circuit 1
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Outage case 1101              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   70474 WINDSOR  230.0   circuit 1
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Outage case 1102              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70424 SUNSHTAP 115.0 to   70423 SUNSHINE 115.0   circuit 1
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Outage case 1103              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70427 TARRYALL 230.0 to   70139 DANIELPK 230.0   circuit 1
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Outage case 1104              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70428 TECH CTR 230.0 to   70417 SULLIVN  230.0   circuit 1
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Outage case 1105              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70432 TOWER    230.0 to   70396 SMOKYHIL 230.0   circuit 1
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Outage case 1106              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70439 UNC      115.0 to   70290 MONFORT  115.0   circuit 1
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Outage case 1107              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70441 UNIVERS1 115.0 to   70442 UNIVERS2 115.0   circuit 1
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Outage case 1108              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70441 UNIVERS1 115.0 to   70443 UNIVRSTP 115.0   circuit 1
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Outage case 1109              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70442 UNIVERS2 115.0 to   70036 ARAPAHOA 115.0   circuit 1
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Outage case 1110              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70059 BO TERM  115.0   circuit 2
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Outage case 1111              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70065 BROMFLD1 115.0   circuit 1
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Outage case 1112              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70244 LAFAYETT 115.0   circuit 1
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Outage case 1113              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70269 LOUISVIL 115.0   circuit 1
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Outage case 1114              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70345 RALSTON1 115.0   circuit 1
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Outage case 1115              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70447 VALMONT  230.0 to   70410 ST.VRAIN 230.0   circuit 1
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Outage case 1116              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70447 VALMONT  230.0 to   70543 SIMMS    230.0   circuit 1
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Outage case 1117              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70463 WATERTON 115.0 to   70522 ROXBOROU 115.0   circuit 1
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Outage case 1118              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70464 WATERTON 230.0 to   70100 CHATFLD  230.0   circuit 1
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Outage case 1119              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70464 WATERTON 230.0 to   70278 MARCY    230.0   circuit 1
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Outage case 1120              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70470 WELD  PS 115.0 to   70240 JOHNSTN  115.0   circuit 1
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Outage case 1121              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70471 WELD  PS 230.0 to   70410 ST.VRAIN 230.0   circuit 1
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Outage case 1122              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70480 WESTPS   230.0 to   70149 DENVTM   230.0   circuit 1
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Outage case 1123              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70491 TOLGATE  230.0 to   70239 JEWELL2  230.0   circuit 1
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Outage case 1124              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70512 JEWELL1  230.0 to   70417 SULLIVN  230.0   circuit 1
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Outage case 1125              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70527 SANTEFE  230.0 to   70139 DANIELPK 230.0   circuit 1
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Outage case 1126              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70530 MONACO   230.0 to   70212 GREENWD  230.0   circuit 1
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Outage case 1127              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70531 AIR LIQ  115.0 to   70402 SOUTH 2  115.0   circuit 1
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Outage case 1128              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70537 FITZSMNS 115.0 to   70162 EAST     115.0   circuit 1
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Outage case 1129              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70543 SIMMS    230.0 to   70570 INDIANA  230.0   circuit 1
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Outage case 1130              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70551 MURPHY   230.0 to   70396 SMOKYHIL 230.0   circuit 1
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Outage case 1131              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73002 AIRPORT  115.0 to   73026 BOYD     115.0   circuit 1
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Outage case 1132              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73002 AIRPORT  115.0 to   73432 KODAKWTP 115.0   circuit 1
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Outage case 1133              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73003 AKRON    115.0 to   73020 BEAVERCK 115.0   circuit 1
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Outage case 1134              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73003 AKRON    115.0 to   73372 OTIS LM  115.0   circuit 1
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Outage case 1135              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73042 CASPERLM 115.0   circuit 1
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Outage case 1136              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73042 CASPERLM 115.0   circuit 2
Outage case 1137              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73062 FREMONT  115.0   circuit 1
Outage case 1138              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73137 MIRACLEM 115.0   circuit 1
Outage case 1139              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73137 MIRACLEM 115.0   circuit 2
Outage case 1140              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73162 RADERVIL 115.0   circuit 1
Outage case 1141              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73005 ALVIN    115.0 to   73175 SANDHILL 115.0   circuit 1
Outage case 1142              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73005 ALVIN    115.0 to   73210 WAUNETA  115.0   circuit 1
Outage case 1143              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73005 ALVIN    115.0 to   73304 CRETESWT 115.0   circuit 1
Outage case 1144              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73006 ANTON    115.0 to   73010 ARICKARE 115.0   circuit 1
Outage case 1145              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73006 ANTON    115.0 to   73125 LSCHANCE 115.0   circuit 1
Outage case 1146              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73007 ARAPASUB 115.0 to   73207 WAANIBE  115.0   circuit 1
Outage case 1147              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73043 CHEYENNE 115.0   circuit 1
Outage case 1148              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73140 MYERS TP 115.0   circuit 1
Outage case 1149              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73152 PINEBLUF 115.0   circuit 1
Outage case 1150              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73183 SKYLINE  115.0   circuit 1
Outage case 1151              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73480 CROWCRK  115.0   circuit 1
Outage case 1152              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73009 ARCHER   230.0 to   73011 AULT     230.0   circuit 1
Outage case 1153              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73009 ARCHER   230.0 to   73190 STEGALL  230.0   circuit 1
Outage case 1154              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73009 ARCHER   230.0 to   79039 HAYDEN   230.0   circuit 1
Outage case 1155              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73010 ARICKARE 115.0 to   73094 JOES     115.0   circuit 1
Outage case 1156              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   73165 RAWHIDE  230.0   circuit 1
Outage case 1157              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   73199 TIMBERLN 230.0   circuit 1
Outage case 1158              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   73212 WELD  LM 230.0   circuit 1
Outage case 1159              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   73212 WELD  LM 230.0   circuit 2
Outage case 1160              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73012 AULT     345.0 to   73108 LAR.RIVR 345.0   circuit 1
Outage case 1161              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73012 AULT     345.0 to   79014 CRAIG    345.0   circuit 1
Outage case 1162              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73013 B.CK PS  115.0 to   73020 BEAVERCK 115.0   circuit 1
Outage case 1163              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73014 B.CK PS  230.0 to   73192 STORY    230.0   circuit 1
Outage case 1164              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73015 B.CK TRI 115.0 to   73020 BEAVERCK 115.0   circuit 1
Outage case 1165              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73016 B.CK TRI 230.0 to   73192 STORY    230.0   circuit 1
Outage case 1166              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73017 B.SANDY  115.0 to   73125 LSCHANCE 115.0   circuit 1
Outage case 1167              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73017 B.SANDY  115.0 to   73318 LIMON    115.0   circuit 1
Outage case 1168              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73018 B.SANDY  230.0 to   73036 BURLNGTN 230.0   circuit 1
Outage case 1169              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73018 B.SANDY  230.0 to   73531 LINCOLNT 230.0   circuit 1
Outage case 1170              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73019 BASIN    115.0 to   73075 GREYBULL 115.0   circuit 1
Outage case 1171              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73019 BASIN    115.0 to   73222 WORLANTP 115.0   circuit 1
Outage case 1172              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73020 BEAVERCK 115.0 to   73031 BRUSHTAP 115.0   circuit 1
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Outage case 1173              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73020 BEAVERCK 115.0 to   73065 GARY     115.0   circuit 1

Outage case 1174              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73020 BEAVERCK 115.0 to   73136 MESSEX   115.0   circuit 1

Outage case 1175              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73020 BEAVERCK 115.0 to   73464 ADENA    115.0   circuit 1

Outage case 1176              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73022 BGEORGE  115.0 to   73123 LOVELL   115.0   circuit 1

Outage case 1177              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73022 BGEORGE  115.0 to   73534 MEETSETP 115.0   circuit 1

Outage case 1178              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73023 BIJOUTAP 115.0 to   73097 KIOWA CK 115.0   circuit 1

Outage case 1179              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73023 BIJOUTAP 115.0 to   73379 FMWEST   115.0   circuit 1

Outage case 1180              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73024 BLKHLWTP 115.0 to   73044 COBBLKTP 115.0   circuit 1

Outage case 1181              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73024 BLKHLWTP 115.0 to   73145 NUNN     115.0   circuit 1

Outage case 1182              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73025 BONNY CK 115.0 to   73035 BURLNGTN 115.0   circuit 1

Outage case 1183              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73025 BONNY CK 115.0 to   73185 SO. FORK 115.0   circuit 1

Outage case 1184              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73026 BOYD     115.0 to   73050 DERBYHIL 115.0   circuit 1

Outage case 1185              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73026 BOYD     115.0 to   73114 LONETREE 115.0   circuit 1

Outage case 1186              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73026 BOYD     115.0 to   73118 LOVE E   115.0   circuit 1

Outage case 1187              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73027 BOYD     230.0 to   73078 HARMONY  230.0   circuit 1

Outage case 1188              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73027 BOYD     230.0 to   73116 LONGPEAK 230.0   circuit 1

Outage case 1189              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73028 BOYSEN   115.0 to   73045 COPPERMT 115.0   circuit 1

Outage case 1190              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73028 BOYSEN   115.0 to   73197 THERMOPL 115.0   circuit 1

Outage case 1191              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73028 BOYSEN   115.0 to   73479 HARRSBRG 115.0   circuit 1

Outage case 1192              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73029 BRIDGEPT 115.0 to   73131 MCGREW   115.0   circuit 1

Outage case 1193              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73029 BRIDGEPT 115.0 to   73236 GREENWOD 115.0   circuit 1

Outage case 1194              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73030 BRIGHTNW 115.0 to   73493 SANDCRK  115.0   circuit 1

Outage case 1195              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73030 BRIGHTNW 115.0 to   73503 ERIE TAP 115.0   circuit 1

Outage case 1196              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73031 BRUSHTAP 115.0 to   73305 EFMORGTP 115.0   circuit 1

Outage case 1197              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73034 BURL PSC 115.0 to   73209 WANIBETP 115.0   circuit 1

Outage case 1198              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73034 BURL PSC 115.0 to   73485 BURL KC  115.0   circuit 1

Outage case 1199              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73035 BURLNGTN 115.0 to   73485 BURL KC  115.0   circuit 1

Outage case 1200              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73037 BUSHNELL 115.0 to   73038 BUSHNLTP 115.0   circuit 1

Outage case 1201              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73038 BUSHNLTP 115.0 to   73096 KIMBALL  115.0   circuit 1

Outage case 1202              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73038 BUSHNLTP 115.0 to   73152 PINEBLUF 115.0   circuit 1

Outage case 1203              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73039 CARTERLK 115.0 to   73058 FLATIRON 115.0   circuit 1

Outage case 1204              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73039 CARTERLK 115.0 to   73124 LOVEWTAP 115.0   circuit 1

Outage case 1205              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73041 CARTERMT 115.0 to   73197 THERMOPL 115.0   circuit 1

Outage case 1206              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73041 CARTERMT 115.0 to   73534 MEETSETP 115.0   circuit 1

Outage case 1207              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73042 CASPERLM 115.0 to   73070 GLENRCKN 115.0   circuit 1

Outage case 1208              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73043 CHEYENNE 115.0 to   73077 HAPPYJCK 115.0   circuit 1

Outage case 1209              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        73043 CHEYENNE 115.0 to   73109 LARAMIE  115.0   circuit 1
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Outage case 1210              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73043 CHEYENNE 115.0 to   73480 CROWCRK  115.0   circuit 1
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Outage case 1211              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73043 CHEYENNE 115.0 to   73504 PONNEQUI 115.0   circuit 1
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Outage case 1212              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73044 COBBLKTP 115.0 to   73201 TIMNTHTP 115.0   circuit 1
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Outage case 1213              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73045 COPPERMT 115.0 to   73162 RADERVIL 115.0   circuit 1
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Outage case 1214              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73046 DALTON   115.0 to   73179 SIDNEY   115.0   circuit 1
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Outage case 1215              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73046 DALTON   115.0 to   73236 GREENWOD 115.0   circuit 1
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Outage case 1216              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73047 DEERINGL 115.0 to   73053 ECKLEY   115.0   circuit 1
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Outage case 1217              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73047 DEERINGL 115.0 to   73142 N.YUMA   115.0   circuit 1
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Outage case 1218              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73047 DEERINGL 115.0 to   73230 YUMA     115.0   circuit 1
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Outage case 1219              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73047 DEERINGL 115.0 to   73372 OTIS LM  115.0   circuit 1
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Outage case 1220              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73048 DEL CTAP 115.0 to   73049 DELCAMIN 115.0   circuit 1
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Outage case 1221              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73048 DEL CTAP 115.0 to   73115 LONGPEAK 115.0   circuit 1
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Outage case 1222              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73048 DEL CTAP 115.0 to   73133 MEADOW   115.0   circuit 1
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Outage case 1223              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73049 DELCAMIN 115.0 to   73501 RINNVALL 115.0   circuit 1
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Outage case 1224              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73050 DERBYHIL 115.0 to   73373 VALLEYLM 115.0   circuit 1
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Outage case 1225              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73051 DIXON CK 115.0 to   73052 DRAKE RD 115.0   circuit 1
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Outage case 1226              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73051 DIXON CK 115.0 to   73089 HRSTHTAP 115.0   circuit 1
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Outage case 1227              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73051 DIXON CK 115.0 to   73149 OVERLAND 115.0   circuit 1
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Outage case 1228              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73052 DRAKE RD 115.0 to   73198 TIMBERLN 115.0   circuit 1
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Outage case 1229              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73053 ECKLEY   115.0 to   73225 WRAY TAP 115.0   circuit 1
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Outage case 1230              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73053 ECKLEY   115.0 to   73326 ROBB     115.0   circuit 1
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Outage case 1231              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73053 ECKLEY   115.0 to   73371 BETHELLM 115.0   circuit 1
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Outage case 1232              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73056 ESTES    115.0 to   73127 LYONS    115.0   circuit 1
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Outage case 1233              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73056 ESTES    115.0 to   73155 POLEHILL 115.0   circuit 1
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Outage case 1234              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73056 ESTES    115.0 to   73232 MARYLKSB 115.0   circuit 1
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Outage case 1235              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73056 ESTES    115.0 to   73233 MARYLKTP 115.0   circuit 1
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Outage case 1236              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73058 FLATIRON 115.0 to   73089 HRSTHTAP 115.0   circuit 1
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Outage case 1237              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73058 FLATIRON 115.0 to   73155 POLEHILL 115.0   circuit 1
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Outage case 1238              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73059 FLEMING  115.0 to   73080 HAXTUN   115.0   circuit 1
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Outage case 1239              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73059 FLEMING  115.0 to   73478 GALIEN   115.0   circuit 1
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Outage case 1240              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73060 FORDHAM  115.0 to   73113 LNGMNTNW 115.0   circuit 1
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Outage case 1241              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73060 FORDHAM  115.0 to   73196 TERRY    115.0   circuit 1
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Outage case 1242              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73060 FORDHAM  115.0 to   73437 ROGERSRD 115.0   circuit 1
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Outage case 1243              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73061 FRASER   138.0 to   73220 WINDYGAP 138.0   circuit 1
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Outage case 1244              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73063 FRENCHCK 115.0 to   73080 HAXTUN   115.0   circuit 1
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Outage case 1245              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73063 FRENCHCK 115.0 to   73210 WAUNETA  115.0   circuit 1
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Outage case 1246              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73065 GARY     115.0 to   73221 WOODROW  115.0   circuit 1
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Outage case 1247              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73066 GEMCTYTP 115.0 to   73077 HAPPYJCK 115.0   circuit 1
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Outage case 1248              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73066 GEMCTYTP 115.0 to   73146 OASISTAP 115.0   circuit 1
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Outage case 1249              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73066 GEMCTYTP 115.0 to   73187 SPRINGCK 115.0   circuit 1
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Outage case 1250              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73067 GERING   115.0 to   73131 MCGREW   115.0   circuit 1
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Outage case 1251              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73067 GERING   115.0 to   73189 STEGALL  115.0   circuit 1
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Outage case 1252              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73067 GERING   115.0 to   73365 EMIGRANT 115.0   circuit 1
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Outage case 1253              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73070 GLENRCKN 115.0   circuit 1
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Outage case 1254              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73076 GUERNTAP 115.0   circuit 1
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Outage case 1255              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73153 PODOLAK  115.0   circuit 1
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Outage case 1256              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73255 LINGLETP 115.0   circuit 1
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Outage case 1257              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73366 WAGNHNDS 115.0   circuit 1
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Outage case 1258              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73071 GLENRCKS 115.0 to   73167 REFNRYTP 115.0   circuit 1
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Outage case 1259              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73071 GLENRCKS 115.0 to   73366 WAGNHNDS 115.0   circuit 1
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Outage case 1260              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73072 GOREPASS 138.0 to   73102 KREMLING 138.0   circuit 1
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Outage case 1261              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73072 GOREPASS 138.0 to   73220 WINDYGAP 138.0   circuit 1
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Outage case 1262              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73072 GOREPASS 138.0 to   79038 HAYDEN   138.0   circuit 1
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Outage case 1263              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73075 GREYBULL 115.0 to   73123 LOVELL   115.0   circuit 1
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Outage case 1264              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73075 GREYBULL 115.0 to   73340 NAHNEJEN 115.0   circuit 1
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Outage case 1265              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73076 GUERNTAP 115.0 to   73189 STEGALL  115.0   circuit 1
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Outage case 1266              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73076 GUERNTAP 115.0 to   73359 LIMESTON 115.0   circuit 1
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Outage case 1267              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73076 GUERNTAP 115.0 to   73368 GUERNRRL 115.0   circuit 1
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Outage case 1268              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73077 HAPPYJCK 115.0 to   73348 CORLETT  115.0   circuit 1
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Outage case 1269              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73078 HARMONY  230.0 to   73199 TIMBERLN 230.0   circuit 1
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Outage case 1270              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73079 HARVARD  115.0 to   73113 LNGMNTNW 115.0   circuit 1
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Outage case 1271              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73081 HDOME    115.0 to   73234 JIMRDYTP 115.0   circuit 1
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Outage case 1272              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73083 HELL CK  115.0 to   73084 HELL TAP 115.0   circuit 1
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Outage case 1273              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73083 HELL CK  115.0 to   73174 SAGEBRSH 115.0   circuit 1
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Outage case 1274              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73084 HELL TAP 115.0 to   73110 LIBERTY  115.0   circuit 1
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Outage case 1275              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73084 HELL TAP 115.0 to   73185 SO. FORK 115.0   circuit 1
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Outage case 1276              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73086 HORSESHO 115.0 to   73120 LOVE W   115.0   circuit 1
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Outage case 1277              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73086 HORSESHO 115.0 to   73499 BOYDLAKE 115.0   circuit 1
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Outage case 1278              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73087 WESTHILL 230.0 to   73148 OSAGE    230.0   circuit 1
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Outage case 1279              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73087 WESTHILL 230.0 to   73164 LANGE    230.0   circuit 1
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Outage case 1280              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73088 HOYT     115.0 to   73103 L.MEADOW 115.0   circuit 1
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Outage case 1281              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73088 HOYT     115.0 to   73464 ADENA    115.0   circuit 1
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Outage case 1282              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73088 HOYT     115.0 to   73493 SANDCRK  115.0   circuit 1
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Outage case 1283              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73089 HRSTHTAP 115.0 to   73203 TRILBY   115.0   circuit 1

Outage case 1284              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73089 HRSTHTAP 115.0 to   73235 MASONVIL 115.0   circuit 1

Outage case 1285              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73090 HYGIENE  115.0 to   73113 LNGMNTNW 115.0   circuit 1

Outage case 1286              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73090 HYGIENE  115.0 to   73127 LYONS    115.0   circuit 1

Outage case 1287              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73091 IDALIA   115.0 to   73185 SO. FORK 115.0   circuit 1

Outage case 1288              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73091 IDALIA   115.0 to   73206 VERNONTP 115.0   circuit 1

Outage case 1289              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73092 JACINTO  115.0 to   73096 KIMBALL  115.0   circuit 1

Outage case 1290              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73092 JACINTO  115.0 to   73179 SIDNEY   115.0   circuit 1

Outage case 1291              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73093 JIMREADY 115.0 to   73234 JIMRDYTP 115.0   circuit 1

Outage case 1292              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73095 KERSEYTP 115.0 to   73158 PROSPEC  115.0   circuit 1

Outage case 1293              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73095 KERSEYTP 115.0 to   73211 WELD  LM 115.0   circuit 1

Outage case 1294              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73096 KIMBALL  115.0 to   73355 KIMBALLC 115.0   circuit 1

Outage case 1295              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73097 KIOWA CK 115.0 to   73147 ORCHARD  115.0   circuit 1

Outage case 1296              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73097 KIOWA CK 115.0 to   73158 PROSPEC  115.0   circuit 1

Outage case 1297              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73097 KIOWA CK 115.0 to   73213 WIGGINS  115.0   circuit 1

Outage case 1298              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73098 KODAK    115.0 to   73369 KODAKETP 115.0   circuit 1

Outage case 1299              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73098 KODAK    115.0 to   73432 KODAKWTP 115.0   circuit 1

Outage case 1300              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73099 KORTES   115.0 to   73100 KORTESTP 115.0   circuit 1

Outage case 1301              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73099 KORTES   115.0 to   73137 MIRACLEM 115.0   circuit 1

Outage case 1302              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73100 KORTESTP 115.0 to   73137 MIRACLEM 115.0   circuit 1

Outage case 1303              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73100 KORTESTP 115.0 to   73176 SEMINOE  115.0   circuit 1

Outage case 1304              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73102 KREMLING 138.0 to   73204 TROUBLE  138.0   circuit 1

Outage case 1305              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73103 L.MEADOW 115.0 to   73213 WIGGINS  115.0   circuit 1

Outage case 1306              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73104 LAGRANGE 115.0 to   73173 ROUNDTOP 115.0   circuit 1

Outage case 1307              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73104 LAGRANGE 115.0 to   73189 STEGALL  115.0   circuit 1

Outage case 1308              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73105 LAPORTE  115.0 to   73298 BELLVUTP 115.0   circuit 1

Outage case 1309              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73105 LAPORTE  115.0 to   73506 LAPORTAP 115.0   circuit 1

Outage case 1310              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73106 LAPORTE  230.0 to   73165 RAWHIDE  230.0   circuit 1

Outage case 1311              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73107 LAR.RIVR 230.0 to   73190 STEGALL  230.0   circuit 1

Outage case 1312              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73108 LAR.RIVR 345.0 to   73193 STORY    345.0   circuit 1

Outage case 1313              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73109 LARAMIE  115.0 to   73362 MEDBOWTP 115.0   circuit 1

Outage case 1314              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73111 LINDEN   115.0 to   73156 POUDRE   115.0   circuit 1

Outage case 1315              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73111 LINDEN   115.0 to   73198 TIMBERLN 115.0   circuit 1

Outage case 1316              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73112 LINGLE   115.0 to   73255 LINGLETP 115.0   circuit 1

Outage case 1317              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73113 LNGMNTNW 115.0 to   73133 MEADOW   115.0   circuit 1

Outage case 1318              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73115 LONGPEAK 115.0 to   73196 TERRY    115.0   circuit 1

Outage case 1319              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        73117 LOST CK  115.0 to   73370 LOSTCKTP 115.0   circuit 1
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Outage case 1320              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73118 LOVE E   115.0 to   73499 BOYDLAKE 115.0   circuit 1
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Outage case 1321              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73120 LOVE W   115.0 to   73124 LOVEWTAP 115.0   circuit 1
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Outage case 1322              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73123 LOVELL   115.0 to   73228 YELLOWBR 115.0   circuit 1
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Outage case 1323              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73123 LOVELL   115.0 to   73228 YELLOWBR 115.0   circuit 2
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Outage case 1324              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73124 LOVEWTAP 115.0 to   73373 VALLEYLM 115.0   circuit 1
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Outage case 1325              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73125 LSCHANCE 115.0 to   73194 SWOODROW 115.0   circuit 1
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Outage case 1326              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73126 LYMAN    115.0 to   73202 TORRNGTN 115.0   circuit 1
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Outage case 1327              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73126 LYMAN    115.0 to   73256 LYMANTP  115.0   circuit 1
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Outage case 1328              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73127 LYONS    115.0 to   73171 ROCKMTCM 115.0   circuit 1
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Outage case 1329              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73128 MAY      115.0 to   73146 OASISTAP 115.0   circuit 1
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Outage case 1330              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73134 MED BOW  115.0 to   73362 MEDBOWTP 115.0   circuit 1
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Outage case 1331              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73136 MESSEX   115.0 to   73191 STERLING 115.0   circuit 1
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Outage case 1332              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73137 MIRACLEM 115.0 to   73146 OASISTAP 115.0   circuit 1
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Outage case 1333              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73137 MIRACLEM 115.0 to   73177 SEMINOTP 115.0   circuit 1
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Outage case 1334              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73137 MIRACLEM 115.0 to   73362 MEDBOWTP 115.0   circuit 1
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Outage case 1335              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73139 MYERS    115.0 to   73140 MYERS TP 115.0   circuit 1
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Outage case 1336              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73140 MYERS TP 115.0 to   73154 POLE CK  115.0   circuit 1
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Outage case 1337              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73142 N.YUMA   115.0 to   73166 REDWILLW 115.0   circuit 1
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Outage case 1338              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73143 N.YUMA   230.0 to   73180 SIDNEY   230.0   circuit 1
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Outage case 1339              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73143 N.YUMA   230.0 to   73192 STORY    230.0   circuit 1
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Outage case 1340              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73143 N.YUMA   230.0 to   73224 WRAY     230.0   circuit 1
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Outage case 1341              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73144 NCWCD    138.0 to   73220 WINDYGAP 138.0   circuit 1
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Outage case 1342              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73145 NUNN     115.0 to   73172 ROCKPRTP 115.0   circuit 1
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Outage case 1343              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73148 OSAGE    230.0 to   73283 YELOWCRK 230.0   circuit 1
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Outage case 1344              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73149 OVERLAND 115.0 to   73506 LAPORTAP 115.0   circuit 1
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Outage case 1345              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73150 PEETZ    115.0 to   73179 SIDNEY   115.0   circuit 1
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Outage case 1346              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73150 PEETZ    115.0 to   73191 STERLING 115.0   circuit 1
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Outage case 1347              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73151 PILOT BU 115.0 to   73217 WINDRIVT 115.0   circuit 1
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Outage case 1348              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73151 PILOT BU 115.0 to   73479 HARRSBRG 115.0   circuit 1
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Outage case 1349              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73154 POLE CK  115.0 to   73161 QUALLS   115.0   circuit 1
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Outage case 1350              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73154 POLE CK  115.0 to   73173 ROUNDTOP 115.0   circuit 1
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Outage case 1351              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73156 POUDRE   115.0 to   73169 RICHARDS 115.0   circuit 1
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Outage case 1352              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73156 POUDRE   115.0 to   73506 LAPORTAP 115.0   circuit 1
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Outage case 1353              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73158 PROSPEC  115.0 to   73370 LOSTCKTP 115.0   circuit 1
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Outage case 1354              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73159 PROSPVAL 115.0 to   73493 SANDCRK  115.0   circuit 1
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Outage case 1355              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73162 RADERVIL 115.0 to   73336 ERVAYBAS 115.0   circuit 1
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Outage case 1356              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73164 LANGE    230.0 to   73186 LOOKOUT  230.0   circuit 1

Outage case 1357              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73165 RAWHIDE  230.0 to   73199 TIMBERLN 230.0   circuit 1

Outage case 1358              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73165 RAWHIDE  230.0 to   73199 TIMBERLN 230.0   circuit 2

Outage case 1359              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73166 REDWILLW 115.0 to   73208 WAGES    115.0   circuit 1

Outage case 1360              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73168 RENO     230.0 to   73276 TEKLA    230.0   circuit 1

Outage case 1361              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73169 RICHARDS 115.0 to   73201 TIMNTHTP 115.0   circuit 1

Outage case 1362              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73170 RIVERTON 115.0 to   73217 WINDRIVT 115.0   circuit 1

Outage case 1363              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73172 ROCKPRTP 115.0 to   73504 PONNEQUI 115.0   circuit 1

Outage case 1364              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73173 ROUNDTOP 115.0 to   73178 SENTINEL 115.0   circuit 1

Outage case 1365              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73175 SANDHILL 115.0 to   73223 WRAY     115.0   circuit 1

Outage case 1366              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73176 SEMINOE  115.0 to   73177 SEMINOTP 115.0   circuit 1

Outage case 1367              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73177 SEMINOTP 115.0 to   73182 SINCLAIR 115.0   circuit 1

Outage case 1368              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73180 SIDNEY   230.0 to   73190 STEGALL  230.0   circuit 1

Outage case 1369              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73182 SINCLAIR 115.0 to   73205 TROWBRDG 115.0   circuit 1

Outage case 1370              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73183 SKYLINE  115.0 to   73375 WARRENLM 115.0   circuit 1

Outage case 1371              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73184 SMOKYHLW 115.0 to   73209 WANIBETP 115.0   circuit 1

Outage case 1372              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73186 LOOKOUT  230.0 to   73283 YELOWCRK 230.0   circuit 1

Outage case 1373              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73186 LOOKOUT  230.0 to   73294 HUGHES   230.0   circuit 1

Outage case 1374              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73187 SPRINGCK 115.0 to   73367 FTSANDER 115.0   circuit 1

Outage case 1375              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73188 STEGALDC 230.0 to   73190 STEGALL  230.0   circuit 1

Outage case 1376              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73189 STEGALL  115.0 to   73256 LYMANTP  115.0   circuit 1

Outage case 1377              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73189 STEGALL  115.0 to   73365 EMIGRANT 115.0   circuit 1

Outage case 1378              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73190 STEGALL  230.0 to   73087 WESTHILL 230.0   circuit 1

Outage case 1379              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73191 STERLING 115.0 to   73478 GALIEN   115.0   circuit 1

Outage case 1380              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73194 SWOODROW 115.0 to   73221 WOODROW  115.0   circuit 1

Outage case 1381              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73195 TCAPS    115.0 to   73197 THERMOPL 115.0   circuit 1

Outage case 1382              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73195 TCAPS    115.0 to   73234 JIMRDYTP 115.0   circuit 1

Outage case 1383              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73196 TERRY    115.0 to   73437 ROGERSRD 115.0   circuit 1

Outage case 1384              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73196 TERRY    115.0 to   73503 ERIE TAP 115.0   circuit 1

Outage case 1385              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73197 THERMOPL 115.0 to   73222 WORLANTP 115.0   circuit 1

Outage case 1386              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73200 TIMNATH  115.0 to   73201 TIMNTHTP 115.0   circuit 1

Outage case 1387              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73204 TROUBLE  138.0 to   73220 WINDYGAP 138.0   circuit 1

Outage case 1388              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73206 VERNONTP 115.0 to   73223 WRAY     115.0   circuit 1

Outage case 1389              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73207 WAANIBE  115.0 to   73209 WANIBETP 115.0   circuit 1

Outage case 1390              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73208 WAGES    115.0 to   73210 WAUNETA  115.0   circuit 1

Outage case 1391              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73211 WELD  LM 115.0 to   73369 KODAKETP 115.0   circuit 1

Outage case 1392              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73214 WILDCAT  115.0 to   73365 EMIGRANT 115.0   circuit 1
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Outage case 1393              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73216 WINDRIVR 115.0 to   73217 WINDRIVT 115.0   circuit 1

Outage case 1394              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73218 WINDSOR  115.0 to   73369 KODAKETP 115.0   circuit 1

Outage case 1395              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73223 WRAY     115.0 to   73225 WRAY TAP 115.0   circuit 1

Outage case 1396              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73225 WRAY TAP 115.0 to   73331 WRAYWAPA 115.0   circuit 1

Outage case 1397              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73231 MARYLKPP 115.0 to   73233 MARYLKTP 115.0   circuit 1

Outage case 1398              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73232 MARYLKSB 115.0 to   73233 MARYLKTP 115.0   circuit 1

Outage case 1399              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73255 LINGLETP 115.0 to   73256 LYMANTP  115.0   circuit 1

Outage case 1400              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73297 BELLEVUE 115.0 to   73298 BELLVUTP 115.0   circuit 1

Outage case 1401              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73298 BELLVUTP 115.0 to   73325 RIPPLE   115.0   circuit 1

Outage case 1402              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73305 EFMORGTP 115.0 to   73310 FME      115.0   circuit 1

Outage case 1403              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73305 EFMORGTP 115.0 to   73378 FMN      115.0   circuit 1

Outage case 1404              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73305 EFMORGTP 115.0 to   73379 FMWEST   115.0   circuit 1

Outage case 1405              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73311 FMS      115.0 to   73377 EXCEL    115.0   circuit 1

Outage case 1406              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73311 FMS      115.0 to   73379 FMWEST   115.0   circuit 1

Outage case 1407              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73335 DUTONBAS 115.0 to   73336 ERVAYBAS 115.0   circuit 1

Outage case 1408              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73348 CORLETT  115.0 to   73375 WARRENLM 115.0   circuit 1

Outage case 1409              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73354 JACKLOPE 115.0 to   73364 WARMSPGS 115.0   circuit 1

Outage case 1410              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73361 MEDBOWHS 115.0 to   73362 MEDBOWTP 115.0   circuit 1

Outage case 1411              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73364 WARMSPGS 115.0 to   73366 WAGNHNDS 115.0   circuit 1

Outage case 1412              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73371 BETHELLM 115.0 to   73374 VERNONLM 115.0   circuit 1

Outage case 1413              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73380 ARIES    230.0 to   73419 RD NIXON 230.0   circuit 1

Outage case 1414              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73380 ARIES    230.0 to   73421 STETSON  230.0   circuit 1

Outage case 1415              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73384 BIRDSALE 115.0 to   73387 BIRDSALW 115.0   circuit 1

Outage case 1416              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73384 BIRDSALE 115.0 to   73422 TEMPLTON 115.0   circuit 1

Outage case 1417              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73387 BIRDSALW 115.0 to   73411 MESA12KV 115.0   circuit 1

Outage case 1418              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73387 BIRDSALW 115.0 to   73425 WOODMEN  115.0   circuit 1

Outage case 1419              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73388 BRADLEY  115.0 to   73404 FOUNTAIN 115.0   circuit 1

Outage case 1420              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73388 BRADLEY  115.0 to   73409 KELKER W 115.0   circuit 1

Outage case 1421              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73389 BRIARGAT 115.0 to   73391 CTTNWD N 115.0   circuit 1

Outage case 1422              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73389 BRIARGAT 115.0 to   73410 KETTLECK 115.0   circuit 1

Outage case 1423              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73390 CSOC     115.0 to   73405 GEESEN   115.0   circuit 1

Outage case 1424              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73391 CTTNWD N 115.0 to   73410 KETTLECK 115.0   circuit 1

Outage case 1425              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73392 CTTNWD N 230.0 to   73394 CTTNWD S 230.0   circuit 1

Outage case 1426              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73392 CTTNWD N 230.0 to   73477 FULLER   230.0   circuit 1

Outage case 1427              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73393 CTTNWD S 115.0 to   73406 IND PARK 115.0   circuit 1

Outage case 1428              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73393 CTTNWD S 115.0 to   73422 TEMPLTON 115.0   circuit 1

Outage case 1429              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        73393 CTTNWD S 115.0 to   73425 WOODMEN  115.0   circuit 1
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Outage case 1430              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73393 CTTNWD S 115.0 to   73490 RAMPART  115.0   circuit 1
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Outage case 1431              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73394 CTTNWD S 230.0 to   73421 STETSON  230.0   circuit 1
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Outage case 1432              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73397 DRAKE N  115.0 to   73398 DRAKE S  115.0   circuit 1
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Outage case 1433              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73397 DRAKE N  115.0 to   73430 FAIRVWCS 115.0   circuit 1
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Outage case 1434              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73397 DRAKE N  115.0 to   73494 ATMELDTP 115.0   circuit 1
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Outage case 1435              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73398 DRAKE S  115.0 to   73409 KELKER W 115.0   circuit 1
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Outage case 1436              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73398 DRAKE S  115.0 to   73490 RAMPART  115.0   circuit 1
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Outage case 1437              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73400 EMIL AND 115.0 to   73414 MONUMENT 115.0   circuit 1
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Outage case 1438              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73402 FALCONMV 115.0 to   73405 GEESEN   115.0   circuit 1
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Outage case 1439              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73402 FALCONMV 115.0 to   73481 FULLER   115.0   circuit 1
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Outage case 1440              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73404 FOUNTAIN 115.0 to   73417 RD NIXON 115.0   circuit 1
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Outage case 1441              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73405 GEESEN   115.0 to   73416 RANCHO   115.0   circuit 1
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Outage case 1442              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73407 KELKER   230.0 to   73419 RD NIXON 230.0   circuit 1
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Outage case 1443              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73408 KELKER E 115.0 to   73409 KELKER W 115.0   circuit 1
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Outage case 1444              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73408 KELKER E 115.0 to   73422 TEMPLTON 115.0   circuit 1
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Outage case 1445              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73408 KELKER E 115.0 to   73495 ATMELKTP 115.0   circuit 1
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Outage case 1446              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73409 KELKER W 115.0 to   73420 ROCKISLD 115.0   circuit 1
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Outage case 1447              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73410 KETTLECK 115.0 to   73414 MONUMENT 115.0   circuit 1
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Outage case 1448              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73411 MESA12KV 115.0 to   73430 FAIRVWCS 115.0   circuit 1
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Outage case 1449              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73412 MIDWAYBR 115.0 to   73416 RANCHO   115.0   circuit 1
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Outage case 1450              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73412 MIDWAYBR 115.0 to   73417 RD NIXON 115.0   circuit 1
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Outage case 1451              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73413 MIDWAYBR 230.0 to   73419 RD NIXON 230.0   circuit 1
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Outage case 1452              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73419 RD NIXON 230.0 to   73477 FULLER   230.0   circuit 1
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Outage case 1453              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73420 ROCKISLD 115.0 to   73422 TEMPLTON 115.0   circuit 1
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Outage case 1454              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73432 KODAKWTP 115.0 to   73433 WINDSOR1 115.0   circuit 1
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Outage case 1455              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73494 ATMELDTP 115.0 to   73496 ATMELSUB 115.0   circuit 1
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Outage case 1456              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73495 ATMELKTP 115.0 to   73496 ATMELSUB 115.0   circuit 1
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Outage case 1457              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73501 RINNVALL 115.0 to   73502 DACONO   115.0   circuit 1
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Outage case 1458              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73502 DACONO   115.0 to   73503 ERIE TAP 115.0   circuit 1
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Outage case 1459              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73531 LINCOLNT 230.0 to   73413 MIDWAYBR 230.0   circuit 1
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Outage case 1460              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73551 W CANON  230.0 to   73413 MIDWAYBR 230.0   circuit 1
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Outage case 1461              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79001 ARTESIA  138.0 to   79038 HAYDEN   138.0   circuit 1
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Outage case 1462              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79001 ARTESIA  138.0 to   79067 VERNAL   138.0   circuit 1
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Outage case 1463              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79002 AXIAL    138.0 to   79038 HAYDEN   138.0   circuit 1
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Outage case 1464              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79002 AXIAL    138.0 to   79046 MEEKER   138.0   circuit 1
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Outage case 1465              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79005 BEARS    345.0 to   79014 CRAIG    345.0   circuit 1
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Outage case 1466              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79007 BLUEMESA 115.0 to   79020 CURECANT 115.0   circuit 1

Outage case 1467              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79007 BLUEMESA 115.0 to   79084 LAKECITY 115.0   circuit 1

Outage case 1468              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79007 BLUEMESA 115.0 to   79090 SKITO    115.0   circuit 1

Outage case 1469              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79011 CAHONE   115.0 to   79052 NUCLA    115.0   circuit 1

Outage case 1470              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79011 CAHONE   115.0 to   79117 Y.JACK 2 115.0   circuit 1

Outage case 1471              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79011 CAHONE   115.0 to   79180 GRCUT TP 115.0   circuit 1

Outage case 1472              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79012 CORTEZ   115.0 to   79073 BLUEDOOR 115.0   circuit 1

Outage case 1473              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79012 CORTEZ   115.0 to   79075 EMPIRETS 115.0   circuit 1

Outage case 1474              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79013 CRAIG    230.0 to   79039 HAYDEN   230.0   circuit 1

Outage case 1475              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79013 CRAIG    230.0 to   79039 HAYDEN   230.0   circuit 2

Outage case 1476              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79013 CRAIG    230.0 to   79059 RIFLE WA 230.0   circuit 1

Outage case 1477              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79020 CURECANT 115.0 to   79192 SOCANAL  115.0   circuit 1

Outage case 1478              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79020 CURECANT 115.0 to   79253 CRYSTAL  115.0   circuit 1

Outage case 1479              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79021 CURECANT 230.0 to   79045 LOSTCANY 230.0   circuit 1

Outage case 1480              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79021 CURECANT 230.0 to   79054 PONCHABR 230.0   circuit 1

Outage case 1481              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79021 CURECANT 230.0 to   79070 NORTHFRK 230.0   circuit 1

Outage case 1482              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79021 CURECANT 230.0 to   79163 MORROWPT 230.0   circuit 1

Outage case 1483              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79023 DURANGO  115.0 to   79077 BAYFIELD 115.0   circuit 1

Outage case 1484              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79023 DURANGO  115.0 to   79078 BODO     115.0   circuit 1

Outage case 1485              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79023 DURANGO  115.0 to   79089 SHENDOAH 115.0   circuit 1

Outage case 1486              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79023 DURANGO  115.0 to   79191 COYOTE G 115.0   circuit 1

Outage case 1487              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79026 FLAMGORG 138.0 to   79067 VERNAL   138.0   circuit 1

Outage case 1488              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79026 FLAMGORG 138.0 to   79067 VERNAL   138.0   circuit 2

Outage case 1489              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79036 GRANDJCT 345.0 to   79049 MONTROSE 345.0   circuit 1

Outage case 1490              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79037 GUNNISON 115.0 to   79090 SKITO    115.0   circuit 1

Outage case 1491              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79042 HOTCHKIS 115.0 to   79050 NORTHFRK 115.0   circuit 1

Outage case 1492              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79042 HOTCHKIS 115.0 to   79104 GARNETAP 115.0   circuit 1

Outage case 1493              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79044 LOSTCANY 115.0 to   79074 E.CORTEZ 115.0   circuit 1

Outage case 1494              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79044 LOSTCANY 115.0 to   79075 EMPIRETS 115.0   circuit 1

Outage case 1495              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79044 LOSTCANY 115.0 to   79111 MANCOSTP 115.0   circuit 1

Outage case 1496              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79044 LOSTCANY 115.0 to   79122 TOWAOC   115.0   circuit 1

Outage case 1497              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79045 LOSTCANY 230.0 to   79061 SHIP PS  230.0   circuit 1

Outage case 1498              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79048 MONTROSE 115.0 to   79052 NUCLA    115.0   circuit 1

Outage case 1499              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79048 MONTROSE 115.0 to   79082 HAPPYCAN 115.0   circuit 1

Outage case 1500              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79048 MONTROSE 115.0 to   79115 SPRCKTAP 115.0   circuit 1

Outage case 1501              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79048 MONTROSE 115.0 to   79192 SOCANAL  115.0   circuit 1

Outage case 1502              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79049 MONTROSE 345.0 to   79072 HESPERUS 345.0   circuit 1
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Outage case 1503              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79050 NORTHFRK 115.0 to   79083 JUANITA  115.0   circuit 1

Outage case 1504              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79052 NUCLA    115.0 to   79187 NORWOOD  115.0   circuit 1

Outage case 1505              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79054 PONCHABR 230.0 to   73551 W CANON  230.0   circuit 1

Outage case 1506              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79059 RIFLE WA 230.0 to   79070 NORTHFRK 230.0   circuit 1

Outage case 1507              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79060 SANJN PS 345.0 to   79072 HESPERUS 345.0   circuit 1

Outage case 1508              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79071 HESPERUS 115.0 to   79078 BODO     115.0   circuit 1

Outage case 1509              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79071 HESPERUS 115.0 to   79088 ROCKWOOD 115.0   circuit 1

Outage case 1510              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79071 HESPERUS 115.0 to   79099 FLOR.RIV 115.0   circuit 1

Outage case 1511              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79073 BLUEDOOR 115.0 to   79074 E.CORTEZ 115.0   circuit 1

Outage case 1512              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79075 EMPIRETS 115.0 to   79180 GRCUT TP 115.0   circuit 1

Outage case 1513              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79076 AM EAST  115.0 to   79077 BAYFIELD 115.0   circuit 1

Outage case 1514              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79076 AM EAST  115.0 to   79099 FLOR.RIV 115.0   circuit 1

Outage case 1515              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79077 BAYFIELD 115.0 to   79086 PAGOSA   115.0   circuit 1

Outage case 1516              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79079 BULLOCK  115.0 to   79082 HAPPYCAN 115.0   circuit 1

Outage case 1517              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79079 BULLOCK  115.0 to   79115 SPRCKTAP 115.0   circuit 1

Outage case 1518              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79080 CASCADEL 115.0 to   79088 ROCKWOOD 115.0   circuit 1

Outage case 1519              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79080 CASCADEL 115.0 to   79256 SILVERTN 115.0   circuit 1

Outage case 1520              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79081 CRSTBUTT 115.0 to   79090 SKITO    115.0   circuit 1

Outage case 1521              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79085 NORTHMSA 115.0 to   79104 GARNETAP 115.0   circuit 1

Outage case 1522              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79085 NORTHMSA 115.0 to   79115 SPRCKTAP 115.0   circuit 1

Outage case 1523              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79089 SHENDOAH 115.0 to   79111 MANCOSTP 115.0   circuit 1

Outage case 1524              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79103 GARNET M 115.0 to   79104 GARNETAP 115.0   circuit 1

Outage case 1525              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79107 HOVEN NO 115.0 to   79117 Y.JACK 2 115.0   circuit 1

Outage case 1526              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79108 HOVENWEP 115.0 to   79121 SANDCANY 115.0   circuit 1

Outage case 1527              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79110 MAIN  CO 115.0 to   79118 Y.JACK W 115.0   circuit 1

Outage case 1528              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79110 MAIN  CO 115.0 to   79120 MOQUI C  115.0   circuit 1

Outage case 1529              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79110 MAIN  CO 115.0 to   79121 SANDCANY 115.0   circuit 1

Outage case 1530              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79110 MAIN  CO 115.0 to   79262 CEMNT CK 115.0   circuit 1

Outage case 1531              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79117 Y.JACK 2 115.0 to   79118 Y.JACK W 115.0   circuit 1

Outage case 1532              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79122 TOWAOC   115.0 to   79262 CEMNT CK 115.0   circuit 1

Outage case 1533              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79174 MOLINA-L 115.0 to   79175 MOLINA-U 115.0   circuit 1

Outage case 1534              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79179 GRT CUT  115.0 to   79180 GRCUT TP 115.0   circuit 1

Outage case 1535              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79187 NORWOOD  115.0 to   79189 SUNSH SM 115.0   circuit 1

Outage case 1536              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79188 TELLURID 115.0 to   79189 SUNSH SM 115.0   circuit 1

Outage case 1537              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79189 SUNSH SM 115.0 to   79257 AMES     115.0   circuit 1

Outage case 1538              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79190 DALLASCR 115.0 to   79193 MCKENZIX 115.0   circuit 1

Outage case 1539              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT LINE        79191 COYOTE G 115.0 to   79260 ELPASOTP 115.0   circuit 1
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Outage case 1540              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79192 SOCANAL  115.0 to   79193 MCKENZIX 115.0   circuit 1
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Outage case 1541              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79194 BURROBDG 115.0 to   79256 SILVERTN 115.0   circuit 1
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Outage case 1542              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79194 BURROBDG 115.0 to   79257 AMES     115.0   circuit 1
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Outage case 1543              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63003 CUSTER   230.0 to   63002 CRSOVRUM 230.0   circuit 1
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Outage case 1544              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63003 CUSTER   230.0 to   63012 ROSEBUD  230.0   circuit 1
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Outage case 1545              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63004 FT PECK  161.0 to   63011 RICHARDC 161.0   circuit 1
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Outage case 1546              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90204 MTSFTPCK 230.0 to   90211 MTSRICHC 230.0   circuit 1
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Outage case 1547              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63006 HARLEM   161.0 to   63008 HAVRE    161.0   circuit 1
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Outage case 1548              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90206 MTSHARLM 230.0 to   90208 MTSHAVRE 230.0   circuit 1
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Outage case 1549              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63007 HAVRE    115.0 to   63013 RUDYARD  115.0   circuit 1
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Outage case 1550              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63008 HAVRE    161.0 to   63015 VERONA   161.0   circuit 1
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Outage case 1551              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90208 MTSHAVRE 230.0 to   90215 MTSVER   230.0   circuit 1
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Outage case 1552              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63009 MALTA UM 161.0 to   63006 HARLEM   161.0   circuit 1
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Outage case 1553              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90209 MTSMALTA 230.0 to   90206 MTSHARLM 230.0   circuit 1
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Outage case 1554              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63010 MILCTYDC 230.0 to   63012 ROSEBUD  230.0   circuit 1
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Outage case 1555              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63011 RICHARDC 161.0 to   63009 MALTA UM 161.0   circuit 1
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Outage case 1556              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90211 MTSRICHC 230.0 to   90209 MTSMALTA 230.0   circuit 1
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Outage case 1557              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63013 RUDYARD  115.0 to   63014 TIBERTAP 115.0   circuit 1
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Outage case 1558              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        26043 INTERMT  345.0 to   65995 MONA     345.0   circuit 1
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Outage case 1559              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        26043 INTERMT  345.0 to   65995 MONA     345.0   circuit 2
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Outage case 1560              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40391 ELMO     115.0 to   62066 KERR     115.0   circuit 1
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Outage case 1561              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40457 GARRISON 230.0 to   62072 OVANDO   230.0   circuit 1
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Outage case 1562              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        40551 HOT SPR  230.0 to   62072 OVANDO   230.0   circuit 1
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Outage case 1563              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        50822 NLYPHS   230.0 to   40145 BOUNDARY 230.0   circuit 1
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Outage case 1564              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62004 ANACOND  230.0 to   40457 GARRISON 230.0   circuit 1
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Outage case 1565              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62004 ANACOND  230.0 to   40457 GARRISON 230.0   circuit 2
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Outage case 1566              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62012 TOWN2    500.0 to   40453 GAR2EAST 500.0   circuit 2
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Outage case 1567              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62013 TOWN1    500.0 to   40451 GAR1EAST 500.0   circuit 1
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Outage case 1568              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62027 SHELBY   115.0 to   63014 TIBERTAP 115.0   circuit 1
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Outage case 1569              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62030 PTRSNFLT 230.0 to   65025 AMPS     230.0   circuit 1
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Outage case 1570              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62051 HARDIN   230.0 to   63002 CRSOVRUM 230.0   circuit 1
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Outage case 1571              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62056 HUNTLEY  230.0 to   63002 CRSOVRUM 230.0   circuit 1
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Outage case 1572              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62084 DILLON S 161.0 to   65155 BIGGRASS 161.0   circuit 1
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Outage case 1573              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62085 CROWCR B 115.0 to   48055 BURKAVAB 115.0   circuit 1
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Outage case 1574              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        62086 THOMSON  115.0 to   48053 BURKAVAA 115.0   circuit 1
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Outage case 1575              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63008 HAVRE    161.0 to   62023 GT FALLS 161.0   circuit 1
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Outage case 1576              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90208 MTSHAVRE 230.0 to   90223 MTSGFALL 230.0   circuit 1
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Outage case 1577              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65060 ANT MINE 230.0 to   73276 TEKLA    230.0   circuit 1
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Outage case 1578              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65085 ASHLEY   138.0 to   79067 VERNAL   138.0   circuit 1
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Outage case 1579              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65305 CASPERPP 115.0 to   73167 REFNRYTP 115.0   circuit 1
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Outage case 1580              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65420 DAVEJOHN 230.0 to   73107 LAR.RIVR 230.0   circuit 1
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Outage case 1581              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65420 DAVEJOHN 230.0 to   73190 STEGALL  230.0   circuit 1
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Outage case 1582              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65425 DAVEJOHN 115.0 to   73070 GLENRCKN 115.0   circuit 1
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Outage case 1583              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65425 DAVEJOHN 115.0 to   73071 GLENRCKS 115.0   circuit 1
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Outage case 1584              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66235 PINTO PS 345.0 to   14101 FOURCORN 345.0   circuit 1
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Outage case 1585              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66540 THERPACE 115.0 to   73197 THERMOPL 115.0   circuit 1
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Outage case 1586              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66720 WORLAND  115.0 to   73222 WORLANTP 115.0   circuit 1
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Outage case 1587              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66725 WYODAK   230.0 to   73148 OSAGE    230.0   circuit 1
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Outage case 1588              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66725 WYODAK   230.0 to   73168 RENO     230.0   circuit 1
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Outage case 1589              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66725 WYODAK   230.0 to   73294 HUGHES   230.0   circuit 1
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Outage case 1590              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66750 YELOWTLP 230.0 to   62045 BLGS PHA 230.0   circuit 1
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Outage case 1591              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66755 YELOWTLP 161.0 to   62061 RMRK PHA 161.0   circuit 1
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Outage case 1592              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66750 YELOWTLP 230.0 to   73229 YELLOWBR 230.0   circuit 1
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Outage case 1593              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73042 CASPERLM 115.0 to   65305 CASPERPP 115.0   circuit 1
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Outage case 1594              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73229 YELLOWBR 230.0 to   63001 CROS PHA 230.0   circuit 1
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Outage case 1595              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79001 ARTESIA  138.0 to   66278 RANGELY  138.0   circuit 1
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Outage case 1596              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79005 BEARS    345.0 to   65193 BONANZA  345.0   circuit 1
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Outage case 1597              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79046 MEEKER   138.0 to   66278 RANGELY  138.0   circuit 1
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Outage case 1598              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79067 VERNAL   138.0 to   65192 BONANZA  138.0   circuit 1
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Outage case 1599              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        45029 BURNS    500.0 to   60240 MIDPOINT 500.0   circuit 1
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Outage case 1600              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60030 BLACKFT  161.0 to   65670 GOSHEN   161.0   circuit 1
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Outage case 1601              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60073 BRADY    230.0 to   65075 ANTLOPE  230.0   circuit 1
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Outage case 1602              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60085 BRIDGER  345.0 to   65665 GOSHEN   345.0   circuit 1
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Outage case 1603              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60150 HELLSCYN 230.0 to   45103 ENTERPRS 230.0   circuit 1
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Outage case 1604              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        60235 MIDPOINT 345.0 to   64061 IDAHO-NV 345.0   circuit 1
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Outage case 1605              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        61826 HINES    115.0 to   40507 HARNEY   115.0   circuit 1
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Outage case 1606              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65135 BENLOMND 345.0 to   60060 BORAH    345.0   circuit 1
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Outage case 1607              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65665 GOSHEN   345.0 to   60190 KINPORT  345.0   circuit 1
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Outage case 1608              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        65920 MALAD    138.0 to   60020 AMFLS    138.0   circuit 1
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Outage case 1609              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        66565 TREASTON 230.0 to   60073 BRADY    230.0   circuit 1
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Outage case 1610              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70193 FTN VALL 115.0 to   73412 MIDWAYBR 115.0   circuit 1
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Outage case 1611              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70274 MALTA    230.0 to   73138 MT.ELBRT 230.0   circuit 1
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Outage case 1612              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70287 MILL     115.0 to   73296 FRASER   115.0   circuit 1
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Outage case 1613              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70308 PALMER   115.0 to   73414 MONUMENT 115.0   circuit 1

Outage case 1614              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70327 PONCHA   115.0 to   79037 GUNNISON 115.0   circuit 1

Outage case 1615              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70358 RIFLE PS 230.0 to   79059 RIFLE WA 230.0   circuit 1

Outage case 1616              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   73116 LONGPEAK 230.0   circuit 1

Outage case 1617              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70470 WELD  PS 115.0 to   73211 WELD  LM 115.0   circuit 1

Outage case 1618              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70471 WELD  PS 230.0 to   73212 WELD  LM 230.0   circuit 1

Outage case 1619              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70476 WOODLAND 115.0 to   73400 EMIL AND 115.0   circuit 1

Outage case 1620              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   70474 WINDSOR  230.0   circuit 1

Outage case 1621              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70005 BRUSHCPP 115.0 to   73013 B.CK PS  115.0   circuit 1

Outage case 1622              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70005 BRUSHCPP 115.0 to   73013 B.CK PS  115.0   circuit 2

Outage case 1623              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73044 COBBLKTP 115.0 to   70116 COBBLAKE 115.0   circuit 1

Outage case 1624              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73105 LAPORTE  115.0 to   70256 LAPORTPS 115.0   circuit 1

Outage case 1625              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73192 STORY    230.0 to   70311 PAWNEE   230.0   circuit 1

Outage case 1626              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73477 FULLER   230.0 to   70122 COMANCHE 230.0   circuit 1

Outage case 1627              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73477 FULLER   230.0 to   70139 DANIELPK 230.0   circuit 1

Outage case 1628              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73413 MIDWAYBR 230.0 to   70286 MIDWAYPS 230.0   circuit 1

Outage case 1629              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79054 PONCHABR 230.0 to   70375 SAN LUIS 230.0   circuit 1

Outage case 1630              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79105 GLADETAP 115.0 to   79260 ELPASOTP 115.0   circuit 1

Outage case 1631              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        63015 VERONA   161.0 to   62024 RAINBOW  161.0   circuit 1

Outage case 1632              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        90215 MTSVER   230.0 to   90224 MTSRNBW  230.0   circuit 1

Outage case 1633              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70358 RIFLE PS 230.0 to   79250 AMATLAS  230.0   circuit 1

Outage case 1634              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        70525 MTHARRIS 138.0 to   79038 HAYDEN   138.0   circuit 1

Outage case 1635              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79173 COLBRAN  115.0 to   79174 MOLINA-L 115.0   circuit 1

Outage case 1636              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79033 GOREPASS 230.0 to   79039 HAYDEN   230.0   circuit 1

Outage case 1637              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79034 GRANDJCT 115.0 to   79048 MONTROSE 115.0   circuit 1

Outage case 1638              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79039 HAYDEN   230.0 to   79091 WOLCOTTP 230.0   circuit 1

Outage case 1639              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79046 MEEKER   138.0 to   79056 RIFLE CU 138.0   circuit 1

Outage case 1640              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79057 RIFLE CU 230.0 to   79059 RIFLE WA 230.0   circuit 1

Outage case 1641              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79014 CRAIG    345.0 to   79058 RIFLE CU 345.0   circuit 1

Outage case 1642              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        79036 GRANDJCT 345.0 to   79058 RIFLE CU 345.0   circuit 1

Outage case 1643              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        48197 LOLO     230.0 to   60278 IMNAHA   230.0   circuit 1

Outage case 1644              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT LINE        73412 MIDWAYBR 115.0 to   70285 MIDWAYPS 115.0   circuit 1

Outage case 1645              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60006 ADELAIDE 345.0 to   60010 ADELAIDE 138.0   circuit 1

Outage case 1646              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60006 ADELAIDE 345.0 to   60010 ADELAIDE 138.0   circuit 2

Outage case 1647              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60030 BLACKFT  161.0 to   60031 BLACKFT  138.0   circuit 1

Outage case 1648              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60045 BOISEBCH 230.0 to   60040 BOISEBCH 138.0   circuit 1

Outage case 1649              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT TRANSFORMER 60045 BOISEBCH 230.0 to   60040 BOISEBCH 138.0   circuit 2
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Outage case 1650              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60045 BOISEBCH 230.0 to   60040 BOISEBCH 138.0   circuit 3
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Outage case 1651              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60045 BOISEBCH 230.0 to   60040 BOISEBCH 138.0   circuit 4
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Outage case 1652              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60060 BORAH    345.0 to   60062 BORAH    230.0   circuit 1
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Outage case 1653              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60073 BRADY    230.0 to   60070 BRADY    138.0   circuit 1
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Outage case 1654              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60073 BRADY    230.0 to   60070 BRADY    138.0   circuit 2
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Outage case 1655              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60073 BRADY    230.0 to   60070 BRADY    138.0   circuit 3
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Outage case 1656              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60110 CALDWELL 230.0 to   60105 CALDWELL 138.0   circuit 1
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Outage case 1657              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60110 CALDWELL 230.0 to   60105 CALDWELL 138.0   circuit 2
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Outage case 1658              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60115 CLIFF    138.0 to   60116 SHSNFALS   6.6   circuit 1
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Outage case 1659              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60130 DRAM     230.0 to   60225 MICRON   138.0   circuit 1
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Outage case 1660              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60130 DRAM     230.0 to   60225 MICRON   138.0   circuit 2
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Outage case 1661              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60165 HUNT     230.0 to   60160 HUNT     138.0   circuit 1
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Outage case 1662              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60165 HUNT     230.0 to   60160 HUNT     138.0   circuit 2
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Outage case 1663              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60165 HUNT     230.0 to   60160 HUNT     138.0   circuit 3
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Outage case 1664              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60185 KINPORT  230.0 to   60180 KINPORT  138.0   circuit 1
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Outage case 1665              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60185 KINPORT  230.0 to   60180 KINPORT  138.0   circuit 2
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Outage case 1666              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60190 KINPORT  345.0 to   60185 KINPORT  230.0   circuit 1
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Outage case 1667              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60195 L MALAD  138.0 to   60196 L MALAD    6.9   circuit 1
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Outage case 1668              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60232 MIDPOINT 230.0 to   60230 MIDPOINT 138.0   circuit 1
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Outage case 1669              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60235 MIDPOINT 345.0 to   60232 MIDPOINT 230.0   circuit 1
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Outage case 1670              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60235 MIDPOINT 345.0 to   60232 MIDPOINT 230.0   circuit 2
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Outage case 1671              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60240 MIDPOINT 500.0 to   60235 MIDPOINT 345.0   circuit 1
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Outage case 1672              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60250 MT HOME  138.0 to   61805 MT HOME  115.0   circuit 1
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Outage case 1673              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60265 ONTARIO  230.0 to   60260 ONTARIO  138.0   circuit 1
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Outage case 1674              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60275 OXBOW    230.0 to   60270 OXBOW    138.0   circuit 1
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Outage case 1675              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60306 QUARTZ   230.0 to   60305 QUARTZ   138.0   circuit 1
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Outage case 1676              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60332 SWNFL PP 138.0 to   60331 SWANFALL   6.9   circuit 1
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Outage case 1677              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60351 TFALL PP 138.0 to   60352 TWINFALS   6.9   circuit 1
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Outage case 1678              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60360 U SALMON 138.0 to   60361 U SAMN 1   6.9   circuit 1
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Outage case 1679              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60360 U SALMON 138.0 to   60362 U SAMN 2   6.9   circuit 1
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Outage case 1680              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60360 U SALMON 138.0 to   60363 U SAMN 3   6.9   circuit 1
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Outage case 1681              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60360 U SALMON 138.0 to   60364 U SAMN 4   6.9   circuit 1
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Outage case 1682              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61800 ANDERSN  115.0 to   61801 ANDERSN1   6.9   circuit 1
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Outage case 1683              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61800 ANDERSN  115.0 to   61802 ANDERSN2   6.9   circuit 1
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Outage case 1684              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61810 MINIDOKA 138.0 to   61811 MINIDOKA   2.4   circuit 1
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Outage case 1685              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61810 MINIDOKA 138.0 to   61812 MINIDOKA   4.2   circuit 1
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Outage case 1686              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61825 HINES    138.0 to   61826 HINES    115.0   circuit 1
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Outage case 1687              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60265 ONTARIO  230.0 to   60260 ONTARIO  138.0   circuit 2
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Outage case 1688              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60207 LOCUST   230.0 to   61254 LOCUST   138.0   circuit 1
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Outage case 1689              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 90208 MTSHAVRE 230.0 to   63007 HAVRE    115.0   circuit 1
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Outage case 1690              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62004 ANACOND  230.0 to   62005 ANACOND  161.0   circuit 1
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Outage case 1691              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62004 ANACOND  230.0 to   62005 ANACOND  161.0   circuit 2
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Outage case 1692              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62005 ANACOND  161.0 to   62115 ANACOND  100.0   circuit 1
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Outage case 1693              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62005 ANACOND  161.0 to   62115 ANACOND  100.0   circuit 2
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Outage case 1694              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62006 TAFTAUTO 115.0 to   62090 TAFTAUTO 100.0   circuit 1
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Outage case 1695              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62007 KERR B   161.0 to   62066 KERR     115.0   circuit 1
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Outage case 1696              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62007 KERR B   161.0 to   62066 KERR     115.0   circuit 2
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Outage case 1697              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62008 KERR A   161.0 to   62066 KERR     115.0   circuit 1
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Outage case 1698              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62008 KERR A   161.0 to   62066 KERR     115.0   circuit 2
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Outage case 1699              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62009 RATTLE S 161.0 to   62114 MISOULA  100.0   circuit 1
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Outage case 1700              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62009 RATTLE S 161.0 to   62114 MISOULA  100.0   circuit 2
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Outage case 1701              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62019 WILSALL  230.0 to   62016 WILSALL  161.0   circuit 1
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Outage case 1702              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62019 WILSALL  230.0 to   62016 WILSALL  161.0   circuit 2
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Outage case 1703              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62023 GT FALLS 161.0 to   62119 RAINBOW  100.0   circuit 1
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Outage case 1704              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 90223 MTSGFALL 230.0 to   62119 RAINBOW  100.0   circuit 1
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Outage case 1705              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62024 RAINBOW  161.0 to   62119 RAINBOW  100.0   circuit 1
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Outage case 1706              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 90224 MTSRNBW  230.0 to   62119 RAINBOW  100.0   circuit 1
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Outage case 1707              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62026 SHELBY   230.0 to   62027 SHELBY   115.0   circuit 1
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Outage case 1708              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62033 ANA BPA  115.0 to   62004 ANACOND  230.0   circuit 1
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Outage case 1709              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62035 CNRDWAPA 230.0 to   62069 CNRDWAPA 115.0   circuit 1
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Outage case 1710              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62036 JUDITHGP 230.0 to   62104 JUDITHGP 100.0   circuit 1
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Outage case 1711              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62046 BROADVU  500.0 to   62223 BROADVU  230.0   circuit 1
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Outage case 1712              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62046 BROADVU  500.0 to   62223 BROADVU  230.0   circuit 2
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Outage case 1713              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62051 HARDIN   230.0 to   62080 HARDIN   115.0   circuit 1
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Outage case 1714              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62052 ALKALI   230.0 to   62109 ALKALI   161.0   circuit 1
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Outage case 1715              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62052 ALKALI   230.0 to   62109 ALKALI   161.0   circuit 2
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Outage case 1716              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62055 BASELINE 230.0 to   62099 BASELINE 100.0   circuit 1
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Outage case 1717              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62057 COLSTRP  500.0 to   62060 COLSTRP  230.0   circuit 1
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Outage case 1718              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62057 COLSTRP  500.0 to   62060 COLSTRP  230.0   circuit 2
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Outage case 1719              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62060 COLSTRP  230.0 to   62081 COLSTRP  115.0   circuit 1
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Outage case 1720              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62060 COLSTRP  230.0 to   62081 COLSTRP  115.0   circuit 2
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Outage case 1721              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62062 RIMROCK  161.0 to   62061 RMRK PHA 161.0   circuit 1
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Outage case 1722              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62062 RIMROCK  161.0 to   62096 RIMROCK  100.0   circuit 1
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Outage case 1723              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62062 RIMROCK  161.0 to   62096 RIMROCK  100.0   circuit 2

Outage case 1724              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62064 BRADLEYC 161.0 to   62105 BRADLEYC 100.0   circuit 1

Outage case 1725              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62070 GT FALLS 115.0 to   62118 GT FALLS 100.0   circuit 1

Outage case 1726              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62071 GT FALLS 230.0 to   62118 GT FALLS 100.0   circuit 1

Outage case 1727              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62071 GT FALLS 230.0 to   62118 GT FALLS 100.0   circuit 2

Outage case 1728              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62076 TRIDENT  161.0 to   62021 THREERIV 100.0   circuit 1

Outage case 1729              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62077 BUTTE MT 161.0 to   62116 BUTTE MT 100.0   circuit 1

Outage case 1730              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62077 BUTTE MT 161.0 to   62116 BUTTE MT 100.0   circuit 2

Outage case 1731              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62078 RESERVST 161.0 to   62113 RESERVST 100.0   circuit 1

Outage case 1732              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62079 MILLERCK 161.0 to   62112 MILLERCK 100.0   circuit 1

Outage case 1733              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62082 BILINGS  230.0 to   62045 BLGS PHA 230.0   circuit 1

Outage case 1734              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62082 BILINGS  230.0 to   62097 BILINGS  100.0   circuit 1

Outage case 1735              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62082 BILINGS  230.0 to   62097 BILINGS  100.0   circuit 2

Outage case 1736              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62086 THOMSON  115.0 to   62000 THOMSON    6.6   circuit 1

Outage case 1737              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62205 COLRPLJE 161.0 to   62220 COLRPLJE 100.0   circuit 1

Outage case 1738              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62223 BROADVU  230.0 to   62089 BROADVU  100.0   circuit 2

Outage case 1739              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40021 ADDY 2   230.0 to   40017 ADDY     115.0   circuit 1

Outage case 1740              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48025 BEACON N 230.0 to   48023 BEACON N 115.0   circuit 1

Outage case 1741              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48031 BEACON S 230.0 to   48029 BEACON S 115.0   circuit 1

Outage case 1742              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40091 BELL BPA 500.0 to   40090 BELL SO  230.0   circuit 1

Outage case 1743              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40088 BELL MI  230.0 to   40087 BELL BPA 115.0   circuit 1

Outage case 1744              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40145 BOUNDARY 230.0 to   40143 BOUNDARY 115.0   circuit 1

Outage case 1745              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 47126 BOX PS   115.0 to   47009 BOX CANY 115.0   circuit 1

Outage case 1746              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48059 CAB GORG 230.0 to   48057 CAB GORG 115.0   circuit 1

Outage case 1747              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40223 CHIEF J3 345.0 to   40231 CHIEF JO 230.0   circuit 1

Outage case 1748              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40225 CHIEF J4 345.0 to   40231 CHIEF JO 230.0   circuit 1

Outage case 1749              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40233 CHIEF JO 500.0 to   40231 CHIEF JO 230.0   circuit 1

Outage case 1750              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 41195 COL FAL2 230.0 to   40247 COL FALL 115.0   circuit 1

Outage case 1751              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40249 COL FALL 230.0 to   40247 COL FALL 115.0   circuit 1

Outage case 1752              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40261 COLUMBIA 230.0 to   40259 COLUMBIA 115.0   circuit 1

Outage case 1753              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40261 COLUMBIA 230.0 to   40259 COLUMBIA 115.0   circuit 2

Outage case 1754              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40285 COULEE   300.0 to   41357 COULEES2 230.0   circuit 1

Outage case 1755              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40287 COULEE   500.0 to   41357 COULEES2 230.0   circuit 1

Outage case 1756              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 41356 COULEES1 230.0 to   40281 COULEE   115.0   circuit 1

Outage case 1757              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 47031 DOUGLAS  230.0 to   47029 DOUGLAS  115.0   circuit 1

Outage case 1758              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40369 DWORSHAK 500.0 to   41201 DWOR     100.0   circuit 1

Outage case 1759              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT TRANSFORMER 40373 E OMAK   230.0 to   40371 E OMAK   115.0   circuit 1
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Outage case 1760              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40459 GARRISON 500.0 to   40457 GARRISON 230.0   circuit 1
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Outage case 1761              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40521 HATWAI   500.0 to   40519 HATWAI   230.0   circuit 1
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Outage case 1762              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40553 HOT SPR  500.0 to   40551 HOT SPR  230.0   circuit 1
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Outage case 1763              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40657 LIBBY    230.0 to   40655 LIBBY    115.0   circuit 1
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Outage case 1764              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48306 OTIS     230.0 to   48311 OTIS     115.0   circuit 1
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Outage case 1765              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48317 PINE CRK 230.0 to   48315 PINE CRK 115.0   circuit 1
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Outage case 1766              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48329 POST FLS 115.0 to   48331 POSTFL15   2.4   circuit 1
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Outage case 1767              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48329 POST FLS 115.0 to   48333 POSTFLS6   2.4   circuit 1
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Outage case 1768              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40851 POTHOLES 230.0 to   40849 POTHOLES 115.0   circuit 1
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Outage case 1769              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48357 RATHDRUM 230.0 to   48356 RATHDRME 115.0   circuit 1
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Outage case 1770              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48357 RATHDRUM 230.0 to   48355 RATHDRUM 115.0   circuit 1
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Outage case 1771              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 46821 ROCKY RH 115.0 to   46831 ROCKYRH1 230.0   circuit 1
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Outage case 1772              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 46821 ROCKY RH 115.0 to   46831 ROCKYRH1 230.0   circuit 2
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Outage case 1773              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40891 ROCKY RH 345.0 to   46832 ROCKYRH2 230.0   circuit 1
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Outage case 1774              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40909 SACHEEN  230.0 to   40907 SACHEEN  115.0   circuit 1
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Outage case 1775              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40973 SICKLER  500.0 to   47031 DOUGLAS  230.0   circuit 1
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Outage case 1776              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 47091 USK      230.0 to   47254 USK      115.0   circuit 1
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Outage case 1777              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 41113 VANTAGE  500.0 to   41111 VANTAGE  230.0   circuit 1
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Outage case 1778              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 41113 VANTAGE  500.0 to   41111 VANTAGE  230.0   circuit 2
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Outage case 1779              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 47101 WELLS    230.0 to   47099 WELLS    115.0   circuit 1
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Outage case 1780              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48463 WEST     230.0 to   48461 WEST     115.0   circuit 1
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Outage case 1781              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48463 WEST     230.0 to   48461 WEST     115.0   circuit 2
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Outage case 1782              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65075 ANTLOPE  230.0 to   65080 ANTLOPE  161.0   circuit 1
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Outage case 1783              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65080 ANTLOPE  161.0 to   65065 ANTLOP 1 138.0   circuit 1
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Outage case 1784              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65080 ANTLOPE  161.0 to   65070 ANTLOP 2 138.0   circuit 1
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Outage case 1785              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65135 BENLOMND 345.0 to   65140 BENLOMND 230.0   circuit 1
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Outage case 1786              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65135 BENLOMND 345.0 to   65145 BENLOMND 138.0   circuit 1
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Outage case 1787              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65135 BENLOMND 345.0 to   65190 BNLMD MP 100.0   circuit 2
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Outage case 1788              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65140 BENLOMND 230.0 to   65145 BENLOMND 138.0   circuit 1
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Outage case 1789              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65140 BENLOMND 230.0 to   65145 BENLOMND 138.0   circuit 2
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Outage case 1790              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65140 BENLOMND 230.0 to   65190 BNLMD MP 100.0   circuit 2
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Outage case 1791              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65193 BONANZA  345.0 to   65192 BONANZA  138.0   circuit 1
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Outage case 1792              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65260 CAMP WIL 345.0 to   65261 CAMP WIL 138.0   circuit 1
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Outage case 1793              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65300 CASPERPP 230.0 to   65305 CASPERPP 115.0   circuit 1
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Outage case 1794              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65395 CUTLER   138.0 to   65385 CTLR MP  100.0   circuit 1
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Outage case 1795              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65420 DAVEJOHN 230.0 to   65425 DAVEJOHN 115.0   circuit 1
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Outage case 1796              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65510 EMERY    345.0 to   65515 EMERY    138.0   circuit 1

Outage case 1797              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65510 EMERY    345.0 to   65515 EMERY    138.0   circuit 2

Outage case 1798              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65665 GOSHEN   345.0 to   65670 GOSHEN   161.0   circuit 1

Outage case 1799              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65665 GOSHEN   345.0 to   65685 GOSHN MP 100.0   circuit 2

Outage case 1800              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65670 GOSHEN   161.0 to   65675 GOSHEN   115.0   circuit 1

Outage case 1801              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65670 GOSHEN   161.0 to   65675 GOSHEN   115.0   circuit 2

Outage case 1802              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65670 GOSHEN   161.0 to   65685 GOSHN MP 100.0   circuit 2

Outage case 1803              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65690 GRACE    161.0 to   65695 GRACE    138.0   circuit 1

Outage case 1804              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65695 GRACE    138.0 to   65705 GRACE G3   6.6   circuit 1

Outage case 1805              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65695 GRACE    138.0 to   65710 GRACE G4   6.6   circuit 1

Outage case 1806              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65695 GRACE    138.0 to   65715 GRACE G5   6.6   circuit 1

Outage case 1807              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65805 HUNTNGTN 345.0 to   65810 HUNTNGTN 138.0   circuit 1

Outage case 1808              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65805 HUNTNGTN 345.0 to   65810 HUNTNGTN 138.0   circuit 2

Outage case 1809              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65860 JFRSNPHA 161.0 to   65850 JEFFERSN 161.0   circuit 1

Outage case 1810              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65945 MIDVALLY 345.0 to   66550 THIRTY S 138.0   circuit 1

Outage case 1811              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65945 MIDVALLY 345.0 to   66550 THIRTY S 138.0   circuit 2

Outage case 1812              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66020 MUSTANG  230.0 to   66025 MUSTANG  115.0   circuit 1

Outage case 1813              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66050 NAUGHTON 230.0 to   66040 NAUGHTN1 138.0   circuit 1

Outage case 1814              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66050 NAUGHTON 230.0 to   66045 NAUGHTN2 138.0   circuit 1

Outage case 1815              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66080 NINETY S 345.0 to   66085 NINETY S 138.0   circuit 1

Outage case 1816              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66080 NINETY S 345.0 to   66085 NINETY S 138.0   circuit 2

Outage case 1817              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66080 NINETY S 345.0 to   66085 NINETY S 138.0   circuit 3

Outage case 1818              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66080 NINETY S 345.0 to   66085 NINETY S 138.0   circuit 4

Outage case 1819              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66130 ONEIDA   138.0 to   66120 ONED G23   6.6   circuit 2

Outage case 1820              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66130 ONEIDA   138.0 to   66125 ONED G1    6.6   circuit 1

Outage case 1821              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66134 OQUIRRH  345.0 to   66135 OQUIRRH  138.0   circuit 1

Outage case 1822              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66226 PINT MP2 100.0   circuit 2

Outage case 1823              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66227 PINT MP3 100.0   circuit 3

Outage case 1824              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66230 PINTO    138.0   circuit 1

Outage case 1825              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66230 PINTO    138.0   circuit 2

Outage case 1826              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66235 PINTO PS 345.0   circuit 1

Outage case 1827              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66240 PLATTE   230.0 to   66245 PLATTE   115.0   circuit 1

Outage case 1828              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66270 RAILROAD 230.0 to   66275 RAILROAD 138.0   circuit 1

Outage case 1829              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66270 RAILROAD 230.0 to   66275 RAILROAD 138.0   circuit 2

Outage case 1830              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66385 SODA     138.0 to   66390 SODA G12   6.6   circuit 1

Outage case 1831              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66465 SWAN VAL 161.0 to   66470 SWAN VAL 115.0   circuit 1

Outage case 1832              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66510 TERMINAL 345.0 to   66520 TERMINAL 138.0   circuit 1
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Outage case 1833              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66510 TERMINAL 345.0 to   66520 TERMINAL 138.0   circuit 2

Outage case 1834              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66515 TERMINAL 230.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 1835              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66515 TERMINAL 230.0 to   66520 TERMINAL 138.0   circuit 2

Outage case 1836              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66540 THERPACE 115.0 to   66535 THERMOPL 230.0   circuit 1

Outage case 1837              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66565 TREASTON 230.0 to   66570 TREASTON 138.0   circuit 1

Outage case 1838              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66565 TREASTON 230.0 to   66580 TRSTN MP 100.0   circuit 2

Outage case 1839              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66570 TREASTON 138.0 to   66580 TRSTN MP 100.0   circuit 2

Outage case 1840              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66578 TRI CITY 345.0 to   66577 TRI CITY 138.0   circuit 1

Outage case 1841              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66750 YELOWTLP 230.0 to   66755 YELOWTLP 161.0   circuit 1

Outage case 1842              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70037 ARAPAHOB 115.0 to   70038 ARAPAHOE 230.0   circuit 1

Outage case 1843              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70071 CABINCRK 115.0 to   70072 CABINCRK 230.0   circuit 1

Outage case 1844              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70071 CABINCRK 115.0 to   70072 CABINCRK 230.0   circuit 2

Outage case 1845              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70109 CHEROKES 115.0 to   70107 CHEROKEE 230.0   circuit 1

Outage case 1846              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70109 CHEROKES 115.0 to   70107 CHEROKEE 230.0   circuit 2

Outage case 1847              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70138 DANIELPK 115.0 to   70139 DANIELPK 230.0   circuit 1

Outage case 1848              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70148 DENVTM   115.0 to   70149 DENVTM   230.0   circuit 1

Outage case 1849              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70191 FTLUPTON 115.0 to   70192 FTLUPTON 230.0   circuit 1

Outage case 1850              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70259 LEETSDAL 115.0 to   70260 LEETSDAL 230.0   circuit 1

Outage case 1851              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70265 LOOKOUT  115.0 to   70266 LOOKOUT  230.0   circuit 1

Outage case 1852              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70265 LOOKOUT  115.0 to   70266 LOOKOUT  230.0   circuit 2

Outage case 1853              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70354 RIDGE    115.0 to   70355 RIDGE    230.0   circuit 1

Outage case 1854              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70354 RIDGE    115.0 to   70355 RIDGE    230.0   circuit 2

Outage case 1855              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70395 SMOKYHIL 115.0 to   70396 SMOKYHIL 230.0   circuit 1

Outage case 1856              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70395 SMOKYHIL 115.0 to   70396 SMOKYHIL 230.0   circuit 2

Outage case 1857              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70444 VALMONT  115.0 to   70447 VALMONT  230.0   circuit 1

Outage case 1858              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70463 WATERTON 115.0 to   70464 WATERTON 230.0   circuit 1

Outage case 1859              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70463 WATERTON 115.0 to   70464 WATERTON 230.0   circuit 2

Outage case 1860              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70470 WELD  PS 115.0 to   70471 WELD  PS 230.0   circuit 2

Outage case 1861              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73004 ALCOVA   115.0 to   73332 ALCOVA1    6.6   circuit 1

Outage case 1862              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73004 ALCOVA   115.0 to   73438 ALCOVA2    6.6   circuit 1

Outage case 1863              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73009 ARCHER   230.0 to   73008 ARCHER   115.0   circuit 1

Outage case 1864              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73011 AULT     230.0 to   73012 AULT     345.0   circuit 1

Outage case 1865              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73011 AULT     230.0 to   73012 AULT     345.0   circuit 2

Outage case 1866              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73011 AULT     230.0 to   73012 AULT     345.0   circuit 3

Outage case 1867              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73013 B.CK PS  115.0 to   73014 B.CK PS  230.0   circuit 1

Outage case 1868              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73015 B.CK TRI 115.0 to   73016 B.CK TRI 230.0   circuit 1

Outage case 1869              ING COUNCIL, WAPA UGP, JUNE 2002
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    switched OUT TRANSFORMER 73017 B.SANDY  115.0 to   73018 B.SANDY  230.0   circuit 1
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Outage case 1870              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73027 BOYD     230.0 to   73026 BOYD     115.0   circuit 1
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Outage case 1871              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73028 BOYSEN   115.0 to   73333 BOYSEN1    4.2   circuit 1
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Outage case 1872              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73028 BOYSEN   115.0 to   73442 BOYSEN2    4.2   circuit 1
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Outage case 1873              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73035 BURLNGTN 115.0 to   73036 BURLNGTN 230.0   circuit 1
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Outage case 1874              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73035 BURLNGTN 115.0 to   73036 BURLNGTN 230.0   circuit 2
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Outage case 1875              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73056 ESTES    115.0 to   73306 ESTES1     6.9   circuit 1
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Outage case 1876              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73056 ESTES    115.0 to   73307 ESTES2     6.9   circuit 1
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Outage case 1877              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73056 ESTES    115.0 to   73308 ESTES3     6.9   circuit 1
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Outage case 1878              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73061 FRASER   138.0 to   73296 FRASER   115.0   circuit 1
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Outage case 1879              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73069 GLENDO   115.0 to   73351 GLENDO1    6.9   circuit 1
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Outage case 1880              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73069 GLENDO   115.0 to   73352 GLENDO2    6.9   circuit 1
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Outage case 1881              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73099 KORTES   115.0 to   73356 KORTES1    6.9   circuit 1
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Outage case 1882              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73099 KORTES   115.0 to   73357 KORTES2    6.9   circuit 1
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Outage case 1883              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73099 KORTES   115.0 to   73358 KORTES3    6.9   circuit 1
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Outage case 1884              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73106 LAPORTE  230.0 to   73105 LAPORTE  115.0   circuit 1
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Outage case 1885              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73107 LAR.RIVR 230.0 to   73108 LAR.RIVR 345.0   circuit 1
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Outage case 1886              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73116 LONGPEAK 230.0 to   73115 LONGPEAK 115.0   circuit 1
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Outage case 1887              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73116 LONGPEAK 230.0 to   73115 LONGPEAK 115.0   circuit 2
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Outage case 1888              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73142 N.YUMA   115.0 to   73143 N.YUMA   230.0   circuit 1
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Outage case 1889              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73176 SEMINOE  115.0 to   73363 SMNOE1-2   6.9   circuit 1
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Outage case 1890              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73176 SEMINOE  115.0 to   73441 SEMINOE3   6.9   circuit 1
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Outage case 1891              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73179 SIDNEY   115.0 to   73180 SIDNEY   230.0   circuit 1
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Outage case 1892              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73180 SIDNEY   230.0 to   73181 SIDNEYDC 230.0   circuit 1
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Outage case 1893              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73190 STEGALL  230.0 to   73189 STEGALL  115.0   circuit 1
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Outage case 1894              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73190 STEGALL  230.0 to   73189 STEGALL  115.0   circuit 2
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Outage case 1895              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73192 STORY    230.0 to   73193 STORY    345.0   circuit 1
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Outage case 1896              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73192 STORY    230.0 to   73193 STORY    345.0   circuit 2
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Outage case 1897              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73199 TIMBERLN 230.0 to   73198 TIMBERLN 115.0   circuit 1
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Outage case 1898              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73211 WELD  LM 115.0 to   73212 WELD  LM 230.0   circuit 1
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Outage case 1899              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73224 WRAY     230.0 to   73223 WRAY     115.0   circuit 1
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Outage case 1900              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73228 YELLOWBR 115.0 to   73229 YELLOWBR 230.0   circuit 1
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Outage case 1901              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73231 MARYLKPP 115.0 to   73319 MARYLKPP   6.9   circuit 1
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Outage case 1902              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73392 CTTNWD N 230.0 to   73391 CTTNWD N 115.0   circuit 1
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Outage case 1903              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73394 CTTNWD S 230.0 to   73393 CTTNWD S 115.0   circuit 1
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Outage case 1904              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73407 KELKER   230.0 to   73409 KELKER W 115.0   circuit 1
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Outage case 1905              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73413 MIDWAYBR 230.0 to   73412 MIDWAYBR 115.0   circuit 1
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Outage case 1906              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73419 RD NIXON 230.0 to   73417 RD NIXON 115.0   circuit 1
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Outage case 1907              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73477 FULLER   230.0 to   73481 FULLER   115.0   circuit 1
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Outage case 1908              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79014 CRAIG    345.0 to   79013 CRAIG    230.0   circuit 1
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Outage case 1909              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79014 CRAIG    345.0 to   79013 CRAIG    230.0   circuit 2
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Outage case 1910              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79021 CURECANT 230.0 to   79020 CURECANT 115.0   circuit 1
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Outage case 1911              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79039 HAYDEN   230.0 to   79038 HAYDEN   138.0   circuit 1
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Outage case 1912              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79039 HAYDEN   230.0 to   79038 HAYDEN   138.0   circuit 2
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Outage case 1913              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79045 LOSTCANY 230.0 to   79044 LOSTCANY 115.0   circuit 1
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Outage case 1914              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79049 MONTROSE 345.0 to   79048 MONTROSE 115.0   circuit 1
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Outage case 1915              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79070 NORTHFRK 230.0 to   79050 NORTHFRK 115.0   circuit 1
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Outage case 1916              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79070 NORTHFRK 230.0 to   79050 NORTHFRK 115.0   circuit 2
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Outage case 1917              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79072 HESPERUS 345.0 to   79071 HESPERUS 115.0   circuit 1
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Outage case 1918              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79122 TOWAOC   115.0 to   79164 TOWAOC     6.9   circuit 1
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Outage case 1919              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79174 MOLINA-L 115.0 to   79166 MOLINA-L   4.2   circuit 1
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Outage case 1920              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79175 MOLINA-U 115.0 to   79172 MOLINA-U   4.2   circuit 1
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Outage case 1921              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 63002 CRSOVRUM 230.0 to   63001 CROS PHA 230.0   circuit 1
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Outage case 1922              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 63008 HAVRE    161.0 to   63007 HAVRE    115.0   circuit 1
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Outage case 1923              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60192 LADD     230.0 to   40621 LAGRANDE 230.0   circuit 1
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Outage case 1924              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62009 RATTLE S 161.0 to   40867 RATTLE S 230.0   circuit 1
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Outage case 1925              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65565 FLAMGORG 230.0 to   79026 FLAMGORG 138.0   circuit 1
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Outage case 1926              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65565 FLAMGORG 230.0 to   79026 FLAMGORG 138.0   circuit 2
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Outage case 1927              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73170 RIVERTON 115.0 to   66305 RIVERTON 230.0   circuit 1
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Outage case 1928              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73197 THERMOPL 115.0 to   66535 THERMOPL 230.0   circuit 1
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Outage case 1929              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79033 GOREPASS 230.0 to   73072 GOREPASS 138.0   circuit 1
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Outage case 1930              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79060 SANJN PS 345.0 to   10292 SAN_JUAN 345.0   circuit 1
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Outage case 1931              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65220 BRIDGER  230.0 to   60085 BRIDGER  345.0   circuit 1
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Outage case 1932              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65220 BRIDGER  230.0 to   60085 BRIDGER  345.0   circuit 2
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Outage case 1933              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65220 BRIDGER  230.0 to   60085 BRIDGER  345.0   circuit 3
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Outage case 1934              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70205 GRANDJCT 230.0 to   79036 GRANDJCT 345.0   circuit 1
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Outage case 1935              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79061 SHIP PS  230.0 to   79063 SHIPROCK 230.0   circuit 1
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Outage case 1936              ING COUNCIL, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73551 W CANON  230.0 to   70550 W CANON  115.0   circuit 1
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                        SUMMARY OF CONTINGENCY (CNT) NUMBERS
                     FOR HSBS, SLCL1, DENL3, SLCL3, SLCL4, LBL4
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Outage case   1              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       90100 MTSCLSTP 500.0 to   62057 COLSTRP  500.0   circuit 1

Outage case   2              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       90100 MTSCLSTP 500.0 to   62057 COLSTRP  500.0   circuit 2

Outage case   3              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       90200 MTSDAVEJ 500.0 to   62057 COLSTRP  500.0   circuit 1

Outage case   4              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       90200 MTSDAVEJ 500.0 to   90300 MTSDAN   500.0   circuit 1

Outage case   5              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       90204 MTSFTPCK 230.0 to   62060 COLSTRP  230.0   circuit 1

Outage case   6              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       90400 MTSGFALL 500.0 to   90500 MTSLETHB 500.0   circuit 1

Outage case   7              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       90400 MTSGFALL 500.0 to   90600 MTSDILL  500.0   circuit 1

Outage case   8              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       90700 MTSKINP  500.0 to   90600 MTSDILL  500.0   circuit 1

Outage case   9              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       90700 MTSKINP  500.0 to   90800 MTSBENL  500.0   circuit 1

Outage case  10              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       40091 BELL BPA 500.0 to   40553 HOT SPR  500.0   circuit 1

Outage case  11              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       40459 GARRISON 500.0 to   40553 HOT SPR  500.0   circuit 1

Outage case  12              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       40459 GARRISON 500.0 to   62046 BROADVU  500.0   circuit 1

Outage case  13              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       62057 COLSTRP  500.0 to   62046 BROADVU  500.0   circuit 1

Outage case  14              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60005 ADEL TAP 345.0 to   60006 ADELAIDE 345.0   circuit 1

Outage case  15              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60005 ADEL TAP 345.0 to   60235 MIDPOINT 345.0   circuit 1

Outage case  16              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60006 ADELAIDE 345.0 to   60235 MIDPOINT 345.0   circuit 2

Outage case  17              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60010 ADELAIDE 138.0 to   60295 PLST VLY 138.0   circuit 1

Outage case  18              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60010 ADELAIDE 138.0 to   61810 MINIDOKA 138.0   circuit 1

Outage case  19              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60010 ADELAIDE 138.0 to   61850 HEYBURN  138.0   circuit 1

Outage case  20              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60016 ALMDA TP 138.0 to   60015 ALAMEDA  138.0   circuit 1

Outage case  21              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60016 ALMDA TP 138.0 to   60335 TERRY    138.0   circuit 1

Outage case  22              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60016 ALMDA TP 138.0 to   61640 HLND TAP 138.0   circuit 1

Outage case  23              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60020 AMFLS    138.0 to   60024 AMFLS PP 138.0   circuit 1

Outage case  24              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60020 AMFLS    138.0 to   60070 BRADY    138.0   circuit 1

Outage case  25              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60020 AMFLS    138.0 to   60295 PLST VLY 138.0   circuit 1

Outage case  26              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60020 AMFLS    138.0 to   61900 RAFT RVR 138.0   circuit 1

Outage case  27              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60035 BLISS    138.0 to   60175 KING     138.0   circuit 1

Outage case  28              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60040 BOISEBCH 138.0 to   60225 MICRON   138.0   circuit 1

Outage case  29              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60040 BOISEBCH 138.0 to   61225 DRY CRK  138.0   circuit 1

Outage case  30              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60040 BOISEBCH 138.0 to   61254 LOCUST   138.0   circuit 1

Outage case  31              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60040 BOISEBCH 138.0 to   61261 MORA     138.0   circuit 1

Outage case  32              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60045 BOISEBCH 230.0 to   60095 BROWNLEE 230.0   circuit 2

Outage case  33              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60045 BOISEBCH 230.0 to   60095 BROWNLEE 230.0   circuit 3

Outage case  34              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60045 BOISEBCH 230.0 to   60095 BROWNLEE 230.0   circuit 4

Outage case  35              Y, WAPA UGP, JUNE 2002
    switched OUT LINE       60045 BOISEBCH 230.0 to   60110 CALDWELL 230.0   circuit 1
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Outage case  36                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60045 BOISEBCH 230.0 to   60130 DRAM     230.0   circuit 1
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Outage case  37                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60045 BOISEBCH 230.0 to   60232 MIDPOINT 230.0   circuit 2
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Outage case  38                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60045 BOISEBCH 230.0 to   60232 MIDPOINT 230.0   circuit 3
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Outage case  39                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60060 BORAH    345.0 to   60005 ADEL TAP 345.0   circuit 1
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Outage case  40                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60060 BORAH    345.0 to   60006 ADELAIDE 345.0   circuit 2
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Outage case  41                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60062 BORAH    230.0 to   60073 BRADY    230.0   circuit 1
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Outage case  42                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60062 BORAH    230.0 to   60073 BRADY    230.0   circuit 2
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Outage case  43                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60065 BOWMONT  138.0 to   60330 SWANFALL 138.0   circuit 1
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Outage case  44                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60065 BOWMONT  138.0 to   61261 MORA     138.0   circuit 1
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Outage case  45                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60070 BRADY    138.0 to   60127 DON TAP  138.0   circuit 1
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Outage case  46                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60073 BRADY    230.0 to   60185 KINPORT  230.0   circuit 1
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Outage case  47                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60073 BRADY    230.0 to   60185 KINPORT  230.0   circuit 2
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Outage case  48                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60085 BRIDGER  345.0 to   60060 BORAH    345.0   circuit 1
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Outage case  49                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60085 BRIDGER  345.0 to   60190 KINPORT  345.0   circuit 1
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Outage case  50                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60095 BROWNLEE 230.0 to   60310 QUARTZTP 230.0   circuit 1
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Outage case  51                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60105 CALDWELL 138.0 to   60210 LOWELL   138.0   circuit 1
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Outage case  52                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60105 CALDWELL 138.0 to   60255 NAMPA    138.0   circuit 1
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Outage case  53                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60115 CLIFF    138.0 to   60345 TWINFALL 138.0   circuit 1
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Outage case  54                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60115 CLIFF    138.0 to   60350 TFALL TP 138.0   circuit 1
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Outage case  55                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60115 CLIFF    138.0 to   60360 U SALMON 138.0   circuit 1
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Outage case  56                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60120 DALE     138.0 to   60340 TFAL JCT 138.0   circuit 1
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Outage case  57                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60125 DON      138.0 to   60127 DON TAP  138.0   circuit 1
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Outage case  58                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60127 DON TAP  138.0 to   60145 FREMONT  138.0   circuit 1
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Outage case  59                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60130 DRAM     230.0 to   60232 MIDPOINT 230.0   circuit 1
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Outage case  60                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60135 EDEN     138.0 to   60245 MILNER   138.0   circuit 1
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Outage case  61                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60140 EMMETT   138.0 to   60220 MCCALL   138.0   circuit 1
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Outage case  62                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60150 HELLSCYN 230.0 to   60095 BROWNLEE 230.0   circuit 1
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Outage case  63                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60160 HUNT     138.0 to   60135 EDEN     138.0   circuit 1
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Outage case  64                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60160 HUNT     138.0 to   60247 MLNR JCT 138.0   circuit 1
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Outage case  65                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60160 HUNT     138.0 to   60285 PAUL     138.0   circuit 1
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Outage case  66                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60160 HUNT     138.0 to   60350 TFALL TP 138.0   circuit 1
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Outage case  67                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60170 HYBN JCT 138.0 to   60010 ADELAIDE 138.0   circuit 1
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Outage case  68                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60170 HYBN JCT 138.0 to   61850 HEYBURN  138.0   circuit 1
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Outage case  69                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60175 KING     138.0 to   60120 DALE     138.0   circuit 1
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Outage case  70                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60175 KING     138.0 to   60195 L MALAD  138.0   circuit 1
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Outage case  71                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60175 KING     138.0 to   60200 L SALMON 138.0   circuit 1
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Outage case  72                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         60175 KING     138.0 to   60200 L SALMON 138.0   circuit 2
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Outage case  73                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60175 KING     138.0 to   60360 U SALMON 138.0   circuit 1

Outage case  74                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60180 KINPORT  138.0 to   60125 DON      138.0   circuit 1

Outage case  75                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60180 KINPORT  138.0 to   60125 DON      138.0   circuit 2

Outage case  76                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60180 KINPORT  138.0 to   60315 SIPHON   138.0   circuit 1

Outage case  77                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60195 L MALAD  138.0 to   60250 MT HOME  138.0   circuit 1

Outage case  78                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60210 LOWELL   138.0 to   60065 BOWMONT  138.0   circuit 1

Outage case  79                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60210 LOWELL   138.0 to   60255 NAMPA    138.0   circuit 1

Outage case  80                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60215 LUCKY PK 138.0 to   60225 MICRON   138.0   circuit 1

Outage case  81                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60215 LUCKY PK 138.0 to   60250 MT HOME  138.0   circuit 1

Outage case  82                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60220 MCCALL   138.0 to   60370 WEISER   138.0   circuit 1

Outage case  83                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60230 MIDPOINT 138.0 to   60345 TWINFALL 138.0   circuit 1

Outage case  84                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60232 MIDPOINT 230.0 to   60165 HUNT     230.0   circuit 1

Outage case  85                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60235 MIDPOINT 345.0 to   60190 KINPORT  345.0   circuit 1

Outage case  86                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60245 MILNER   138.0 to   60248 MLNR PP  138.0   circuit 1

Outage case  87                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60247 MLNR JCT 138.0 to   60170 HYBN JCT 138.0   circuit 1

Outage case  88                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60247 MLNR JCT 138.0 to   60245 MILNER   138.0   circuit 1

Outage case  89                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60250 MT HOME  138.0 to   60360 U SALMON 138.0   circuit 1

Outage case  90                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60260 ONTARIO  138.0 to   60140 EMMETT   138.0   circuit 1

Outage case  91                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60270 OXBOW    138.0 to   60220 MCCALL   138.0   circuit 1

Outage case  92                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60275 OXBOW    230.0 to   60095 BROWNLEE 230.0   circuit 1

Outage case  93                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60285 PAUL     138.0 to   60010 ADELAIDE 138.0   circuit 1

Outage case  94                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60291 PINGREE  138.0 to   60031 BLACKFT  138.0   circuit 1

Outage case  95                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60291 PINGREE  138.0 to   60125 DON      138.0   circuit 1

Outage case  96                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60300 PORTNEUF 138.0 to   60145 FREMONT  138.0   circuit 1

Outage case  97                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60305 QUARTZ   138.0 to   61055 NELSN TP 138.0   circuit 1

Outage case  98                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60305 QUARTZ   138.0 to   61835 WJOHN DY 138.0   circuit 1

Outage case  99                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60310 QUARTZTP 230.0 to   60192 LADD     230.0   circuit 1

Outage case 100                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60310 QUARTZTP 230.0 to   60306 QUARTZ   230.0   circuit 1

Outage case 101                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60315 SIPHON   138.0 to   61640 HLND TAP 138.0   circuit 1

Outage case 102                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60320 STRIKE   138.0 to   60330 SWANFALL 138.0   circuit 1

Outage case 103                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60330 SWANFALL 138.0 to   60332 SWNFL PP 138.0   circuit 1

Outage case 104                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60335 TERRY    138.0 to   60300 PORTNEUF 138.0   circuit 1

Outage case 105                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60340 TFAL JCT 138.0 to   60160 HUNT     138.0   circuit 1

Outage case 106                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60340 TFAL JCT 138.0 to   60345 TWINFALL 138.0   circuit 1

Outage case 107                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60350 TFALL TP 138.0 to   60351 TFALL PP 138.0   circuit 1

Outage case 108                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60371 WEISR TP 138.0 to   60260 ONTARIO  138.0   circuit 1

Outage case 109                Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        60371 WEISR TP 138.0 to   60370 WEISER   138.0   circuit 1
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Outage case 110               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60375 WOOD RVR 138.0 to   60175 KING     138.0   circuit 1
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Outage case 111               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60375 WOOD RVR 138.0 to   60230 MIDPOINT 138.0   circuit 1
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Outage case 112               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61055 NELSN TP 138.0 to   60371 WEISR TP 138.0   circuit 1
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Outage case 113               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61225 DRY CRK  138.0 to   60140 EMMETT   138.0   circuit 1
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Outage case 114               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61225 DRY CRK  138.0 to   61254 LOCUST   138.0   circuit 1
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Outage case 115               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61254 LOCUST   138.0 to   61261 MORA     138.0   circuit 1
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Outage case 116               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61800 ANDERSN  115.0 to   61805 MT HOME  115.0   circuit 1
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Outage case 117               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61810 MINIDOKA 138.0 to   61900 RAFT RVR 138.0   circuit 1
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Outage case 118               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61810 MINIDOKA 138.0 to   61950 UNITY    138.0   circuit 1
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Outage case 119               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61835 WJOHN DY 138.0 to   61825 HINES    138.0   circuit 1
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Outage case 120               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61950 UNITY    138.0 to   61850 HEYBURN  138.0   circuit 1
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Outage case 121               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60095 BROWNLEE 230.0   circuit 1
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Outage case 122               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60095 BROWNLEE 230.0 to   60265 ONTARIO  230.0   circuit 1
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Outage case 123               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60110 CALDWELL 230.0 to   60265 ONTARIO  230.0   circuit 1
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Outage case 124               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60250 MT HOME  138.0 to   60390 DANSKIN  138.0   circuit 1
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Outage case 125               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60320 STRIKE   138.0 to   60390 DANSKIN  138.0   circuit 1
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Outage case 126               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60045 BOISEBCH 230.0 to   60207 LOCUST   230.0   circuit 1
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Outage case 127               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60275 OXBOW    230.0 to   60278 IMNAHA   230.0   circuit 1
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Outage case 128               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62004 ANACOND  230.0 to   62019 WILSALL  230.0   circuit 1
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Outage case 129               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62004 ANACOND  230.0 to   62030 PTRSNFLT 230.0   circuit 1
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Outage case 130               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62003 BONNERMT 161.0   circuit 1
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Outage case 131               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62009 RATTLE S 161.0   circuit 1
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Outage case 132               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62017 MT ASIMI 161.0   circuit 1
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Outage case 133               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62017 MT ASIMI 161.0   circuit 2
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Outage case 134               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62005 ANACOND  161.0 to   62084 DILLON S 161.0   circuit 1
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Outage case 135               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62006 TAFTAUTO 115.0 to   62085 CROWCR B 115.0   circuit 1
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Outage case 136               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62009 RATTLE S 161.0 to   62003 BONNERMT 161.0   circuit 1
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Outage case 137               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62009 RATTLE S 161.0 to   62007 KERR B   161.0   circuit 1
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Outage case 138               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62009 RATTLE S 161.0 to   62008 KERR A   161.0   circuit 1
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Outage case 139               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62009 RATTLE S 161.0 to   62078 RESERVST 161.0   circuit 1
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Outage case 140               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62014 BUTTEMHD 161.0 to   62017 MT ASIMI 161.0   circuit 1
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Outage case 141               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62031 CUTBANK  115.0 to   62027 SHELBY   115.0   circuit 1
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Outage case 142               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62034 BOLE     230.0 to   62035 CNRDWAPA 230.0   circuit 1
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Outage case 143               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62035 CNRDWAPA 230.0 to   62026 SHELBY   230.0   circuit 1
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Outage case 144               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62046 BROADVU  500.0 to   62012 TOWN2    500.0   circuit 2
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Outage case 145               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62046 BROADVU  500.0 to   62013 TOWN1    500.0   circuit 1
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Outage case 146              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62053 BROADV&2 500.0 to   62046 BROADVU  500.0   circuit 2
Outage case 147              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62053 BROADV&2 500.0 to   62046 BROADVU  500.0   circuit 4
Outage case 148              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62054 BROADV&1 500.0 to   62046 BROADVU  500.0   circuit 1
Outage case 149              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62054 BROADV&1 500.0 to   62046 BROADVU  500.0   circuit 3
Outage case 150              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62057 COLSTRP  500.0 to   62053 BROADV&2 500.0   circuit 2
Outage case 151              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62057 COLSTRP  500.0 to   62054 BROADV&1 500.0   circuit 1
Outage case 152              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62058 SHOREYRD 230.0 to   62019 WILSALL  230.0   circuit 1
Outage case 153              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62058 SHOREYRD 230.0 to   62052 ALKALI   230.0   circuit 1
Outage case 154              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62058 SHOREYRD 230.0 to   62055 BASELINE 230.0   circuit 1
Outage case 155              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62059 MONTANA1 115.0 to   62221 NICHOL-R 115.0   circuit 1
Outage case 156              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62060 COLSTRP  230.0 to   62051 HARDIN   230.0   circuit 1
Outage case 157              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62062 RIMROCK  161.0 to   62109 ALKALI   161.0   circuit 1
Outage case 158              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62065 ENNIS MT 161.0 to   62064 BRADLEYC 161.0   circuit 1
Outage case 159              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62066 KERR     115.0 to   62303 PLAINS   115.0   circuit 1
Outage case 160              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62066 KERR     115.0 to   62304 THFLPM T 115.0   circuit 1
Outage case 161              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62069 CNRDWAPA 115.0 to   62188 CNRD-SRA 115.0   circuit 1
Outage case 162              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62070 GT FALLS 115.0 to   62180 DUTTON   115.0   circuit 1
Outage case 163              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62071 GT FALLS 230.0 to   62034 BOLE     230.0   circuit 1
Outage case 164              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62071 GT FALLS 230.0 to   62036 JUDITHGP 230.0   circuit 1
Outage case 165              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62071 GT FALLS 230.0 to   62126 LANDRSFK 230.0   circuit 1
Outage case 166              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62076 TRIDENT  161.0 to   62108 CLYDE P  161.0   circuit 1
Outage case 167              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62077 BUTTE MT 161.0 to   62014 BUTTEMHD 161.0   circuit 1
Outage case 168              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62077 BUTTE MT 161.0 to   62017 MT ASIMI 161.0   circuit 1
Outage case 169              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62077 BUTTE MT 161.0 to   62159 GLDNSNLT 161.0   circuit 1
Outage case 170              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62079 MILLERCK 161.0 to   62003 BONNERMT 161.0   circuit 1
Outage case 171              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62079 MILLERCK 161.0 to   62311 HAMLTNMA 161.0   circuit 1
Outage case 172              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62079 MILLERCK 161.0 to   62312 HAMLTNMB 161.0   circuit 1
Outage case 173              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62081 COLSTRP  115.0 to   62059 MONTANA1 115.0   circuit 1
Outage case 174              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62081 COLSTRP  115.0 to   62210 ARMELLCR 115.0   circuit 1
Outage case 175              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62082 BILINGS  230.0 to   62052 ALKALI   230.0   circuit 1
Outage case 176              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62082 BILINGS  230.0 to   62056 HUNTLEY  230.0   circuit 1
Outage case 177              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62082 BILINGS  230.0 to   62125 BILINGSW 230.0   circuit 1
Outage case 178              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62084 DILLON S 161.0 to   62158 SHERDNMT 161.0   circuit 1
Outage case 179              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62086 THOMSON  115.0 to   62085 CROWCR B 115.0   circuit 1
Outage case 180              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62086 THOMSON  115.0 to   62305 TFALLCIT 115.0   circuit 1
Outage case 181              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62086 THOMSON  115.0 to   62306 TFALCITA 115.0   circuit 1
Outage case 182              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62087 CONRAD   115.0 to   62069 CNRDWAPA 115.0   circuit 1
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Outage case 183                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62087 CONRAD   115.0 to   62178 VAL-WILL 115.0   circuit 1

Outage case 184                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62088 CTBPUMP  115.0 to   62031 CUTBANK  115.0   circuit 1

Outage case 185                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62016 WILSALL  161.0   circuit 1

Outage case 186                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62249 EGALTN A 161.0   circuit 1

Outage case 187                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62250 BGTMBERA 161.0   circuit 99

Outage case 188                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62257 EMIGT AT 161.0   circuit 1

Outage case 189                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62108 CLYDE P  161.0 to   62258 EGALTN B 161.0   circuit 1

Outage case 190                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62125 BILINGSW 230.0 to   62223 BROADVU  230.0   circuit 1

Outage case 191                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62126 LANDRSFK 230.0 to   62072 OVANDO   230.0   circuit 1

Outage case 192                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62158 SHERDNMT 161.0 to   62065 ENNIS MT 161.0   circuit 1

Outage case 193                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62159 GLDNSNLT 161.0 to   62076 TRIDENT  161.0   circuit 1

Outage case 194                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62178 VAL-WILL 115.0 to   62088 CTBPUMP  115.0   circuit 1

Outage case 195                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62180 DUTTON   115.0 to   62069 CNRDWAPA 115.0   circuit 1

Outage case 196                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62205 COLRPLJE 161.0 to   62109 ALKALI   161.0   circuit 1

Outage case 197                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62205 COLRPLJE 161.0 to   62214 CLMBUSPM 161.0   circuit 1

Outage case 198                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62205 COLRPLJE 161.0 to   62250 BGTMBERA 161.0   circuit 1

Outage case 199                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62206 NICHOLPM 115.0 to   62221 NICHOL-R 115.0   circuit 1

Outage case 200                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62210 ARMELLCR 115.0 to   62211 CASTLERT 115.0   circuit 1

Outage case 201                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62211 CASTLERT 115.0 to   62212 CASTLERK 115.0   circuit 1

Outage case 202                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62211 CASTLERT 115.0 to   62219 SARPY AT 115.0   circuit 1

Outage case 203                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62219 SARPY AT 115.0 to   62080 HARDIN   115.0   circuit 1

Outage case 204                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62223 BROADVU  230.0 to   62036 JUDITHGP 230.0   circuit 1

Outage case 205                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62223 BROADVU  230.0 to   62052 ALKALI   230.0   circuit 1

Outage case 206                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62249 EGALTN A 161.0 to   62256 JACKRABT 161.0   circuit 1

Outage case 207                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62249 EGALTN A 161.0 to   62256 JACKRABT 161.0   circuit 99

Outage case 208                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62249 EGALTN A 161.0 to   62258 EGALTN B 161.0   circuit 1

Outage case 209                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62256 JACKRABT 161.0 to   62064 BRADLEYC 161.0   circuit 1

Outage case 210                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62256 JACKRABT 161.0 to   62258 EGALTN B 161.0   circuit 99

Outage case 211                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62303 PLAINS   115.0 to   62306 TFALCITA 115.0   circuit 1

Outage case 212                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62304 THFLPM T 115.0 to   62305 TFALLCIT 115.0   circuit 1

Outage case 213                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62304 THFLPM T 115.0 to   62310 THFALLPM 115.0   circuit 1

Outage case 214                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62305 TFALLCIT 115.0 to   62309 THFALL-R 115.0   circuit 1

Outage case 215                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62308 MISSLA 7 161.0 to   62078 RESERVST 161.0   circuit 1

Outage case 216                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62308 MISSLA 7 161.0 to   62079 MILLERCK 161.0   circuit 1

Outage case 217                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48001 4LAKE TP 115.0 to   40439 FOURLKS  115.0   circuit 1

Outage case 218                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48001 4LAKE TP 115.0 to   48145 HANGMAN  115.0   circuit 1

Outage case 219                Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        48005 4TH&HRTP 115.0 to   48003 4TH&HRLD 115.0   circuit 1
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Outage case 220               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48005 4TH&HRTP 115.0 to   48069 CHESTER  115.0   circuit 1
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Outage case 221               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48005 4TH&HRTP 115.0 to   48271 NINTHCNT 115.0   circuit 1
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Outage case 222               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40017 ADDY     115.0 to   48071 CHEWELAH 115.0   circuit 1
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Outage case 223               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40017 ADDY     115.0 to   40263 COLV BPA 115.0   circuit 1
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Outage case 224               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40017 ADDY     115.0 to   48135 GIFFORD  115.0   circuit 1
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Outage case 225               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40017 ADDY     115.0 to   48213 LOON LK  115.0   circuit 1
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Outage case 226               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40017 ADDY     115.0 to   48223 METCHIP  115.0   circuit 1
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Outage case 227               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40019 ADDY     230.0 to   40021 ADDY 2   230.0   circuit 1
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Outage case 228               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40019 ADDY     230.0 to   40319 CUSICK   230.0   circuit 1
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Outage case 229               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40021 ADDY 2   230.0 to   40090 BELL SO  230.0   circuit 1
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Outage case 230               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40021 ADDY 2   230.0 to   40145 BOUNDARY 230.0   circuit 1
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Outage case 231               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40023 AHSAHKA  115.0 to   40367 DWORSHAK 115.0   circuit 1
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Outage case 232               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48009 AIRWAYHT 115.0 to   48010 AIRWAYTP 115.0   circuit 1
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Outage case 233               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48009 AIRWAYHT 115.0 to   48103 DEVIL GP 115.0   circuit 1
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Outage case 234               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48009 AIRWAYHT 115.0 to   40397 FAIRCHLD 115.0   circuit 1
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Outage case 235               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48009 AIRWAYHT 115.0 to   48421 SUNSET   115.0   circuit 1
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Outage case 236               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48010 AIRWAYTP 115.0 to   48132 HAL&WHIT 115.0   circuit 1
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Outage case 237               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48010 AIRWAYTP 115.0 to   48387 SILVRLAK 115.0   circuit 1
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Outage case 238               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40029 ALBENI F 115.0 to   47027 DIAM LAK 115.0   circuit 1
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Outage case 239               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40029 ALBENI F 115.0 to   40779 NEWPORTB 115.0   circuit 1
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Outage case 240               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40029 ALBENI F 115.0 to   48347 PRIEST A 115.0   circuit 1
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Outage case 241               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46001 ANC LK T 230.0 to   40261 COLUMBIA 230.0   circuit 1
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Outage case 242               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46001 ANC LK T 230.0 to   41111 VANTAGE  230.0   circuit 1
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Outage case 243               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46801 ANDRS CN 115.0 to   46807 MCKENZIE 115.0   circuit 1
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Outage case 244               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46801 ANDRS CN 115.0 to   46807 MCKENZIE 115.0   circuit 2
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Outage case 245               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46801 ANDRS CN 115.0 to   46811 N WENATC 115.0   circuit 1
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Outage case 246               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46801 ANDRS CN 115.0 to   46827 SUMMIT   115.0   circuit 1
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Outage case 247               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48011 APPLETAP 115.0 to   48095 DALTON2T 115.0   circuit 1
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Outage case 248               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48013 APPLEWAY 115.0 to   48011 APPLETAP 115.0   circuit 1
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Outage case 249               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48015 ARDEN    115.0 to   48301 ORIN     115.0   circuit 1
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Outage case 250               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47501 ARMSTRNG 115.0 to   48415 SPULMNTP 115.0   circuit 1
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Outage case 251               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40061 ASHE     500.0 to   40683 LOW MON  500.0   circuit 1
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Outage case 252               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40067 ATHOL    115.0 to   48017 ATHOLTAP 115.0   circuit 1
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Outage case 253               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48017 ATHOLTAP 115.0 to   40953 SCARCELO 115.0   circuit 1
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Outage case 254               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48019 AVONDALE 115.0 to   48356 RATHDRME 115.0   circuit 1
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Outage case 255               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48021 BARKER   115.0 to   48311 OTIS     115.0   circuit 1
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Outage case 256              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48029 BEACON S 115.0   circuit 1
Outage case 257              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48271 NINTHCNT 115.0   circuit 1
Outage case 258              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48277 NORTHEAS 115.0   circuit 1
Outage case 259              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48312 OPORTUNW 115.0   circuit 1
Outage case 260              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48371 ROSSPARK 115.0   circuit 1
Outage case 261              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48023 BEACON N 115.0 to   48405 SPKINDPK 115.0   circuit 1
Outage case 262              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48025 BEACON N 230.0 to   48031 BEACON S 230.0   circuit 1
Outage case 263              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48025 BEACON N 230.0 to   40090 BELL SO  230.0   circuit 5
Outage case 264              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48025 BEACON N 230.0 to   48037 BENEWAH  230.0   circuit 1
Outage case 265              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   40087 BELL BPA 115.0   circuit 1
Outage case 266              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   48033 BELL TAP 115.0   circuit 1
Outage case 267              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   48237 MILLWOOD 115.0   circuit 1
Outage case 268              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   48271 NINTHCNT 115.0   circuit 1
Outage case 269              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48029 BEACON S 115.0 to   48271 NINTHCNT 115.0   circuit 2
Outage case 270              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48031 BEACON S 230.0 to   40090 BELL SO  230.0   circuit 4
Outage case 271              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48031 BEACON S 230.0 to   48357 RATHDRUM 230.0   circuit 1
Outage case 272              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   40113 BIGELOW  115.0   circuit 1
Outage case 273              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   40255 COLBERTT 115.0   circuit 1
Outage case 274              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   40281 COULEE   115.0   circuit 1
Outage case 275              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   47285 INLD EMP 115.0   circuit 1
Outage case 276              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   41015 SPRNGHIL 115.0   circuit 1
Outage case 277              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40087 BELL BPA 115.0 to   48449 WAIKIKIT 115.0   circuit 1
Outage case 278              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40091 BELL BPA 500.0 to   41057 TAFT     500.0   circuit 1
Outage case 279              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40088 BELL MI  230.0 to   40086 BELL NO  230.0   circuit 1
Outage case 280              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40088 BELL MI  230.0 to   40090 BELL SO  230.0   circuit 1
Outage case 281              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40088 BELL MI  230.0 to   41358 COULEES3 230.0   circuit 5
Outage case 282              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40088 BELL MI  230.0 to   47091 USK      230.0   circuit 1
Outage case 283              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40086 BELL NO  230.0 to   40909 SACHEEN  230.0   circuit 1
Outage case 284              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40086 BELL NO  230.0 to   41275 WESTBPA1 230.0   circuit 1
Outage case 285              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40090 BELL SO  230.0 to   41356 COULEES1 230.0   circuit 3
Outage case 286              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40090 BELL SO  230.0 to   40624 LANCASTR 230.0   circuit 1
Outage case 287              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48033 BELL TAP 115.0 to   40087 BELL BPA 115.0   circuit 1
Outage case 288              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48033 BELL TAP 115.0 to   48381 SEVENTAP 115.0   circuit 1
Outage case 289              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48035 BENEWAH  115.0 to   48323 PLUMMER  115.0   circuit 1
Outage case 290              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48037 BENEWAH  230.0 to   48317 PINE CRK 230.0   circuit 1
Outage case 291              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48041 BIGCREEK 115.0 to   48049 BUNKRHIL 115.0   circuit 1
Outage case 292              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40113 BIGELOW  115.0 to   40483 GREEN BL 115.0   circuit 1
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Outage case 293                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40113 BIGELOW  115.0 to   41089 TRENTWOD 115.0   circuit 1

Outage case 294                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46013 BKSAND T 115.0 to   40849 POTHOLES 115.0   circuit 1

Outage case 295                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48043 BLANCHRD 115.0 to   47505 HOODOO   115.0   circuit 1

Outage case 296                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48045 BLUECRK  115.0 to   48067 CDA      115.0   circuit 1

Outage case 297                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40133 BONNERS  115.0 to   41239 MOYIE T  115.0   circuit 1

Outage case 298                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40133 BONNERS  115.0 to   47194 MT HALL  115.0   circuit 1

Outage case 299                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40133 BONNERS  115.0 to   40927 SAMUELS  115.0   circuit 1

Outage case 300                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40143 BOUNDARY 115.0 to   40731 METALINE 115.0   circuit 1

Outage case 301                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40145 BOUNDARY 230.0 to   40319 CUSICK   230.0   circuit 1

Outage case 302                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40145 BOUNDARY 230.0 to   40909 SACHEEN  230.0   circuit 1

Outage case 303                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47009 BOX CANY 115.0 to   40317 CUSICK   115.0   circuit 1

Outage case 304                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47126 BOX PS   115.0 to   41190 BOX TAP  115.0   circuit 1

Outage case 305                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41190 BOX TAP  115.0 to   40731 METALINE 115.0   circuit 1

Outage case 306                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41190 BOX TAP  115.0 to   48399 SPIRIT   115.0   circuit 1

Outage case 307                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47127 BRAYS LD 115.0 to   46805 CHELAN   115.0   circuit 1

Outage case 308                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47127 BRAYS LD 115.0 to   47069 ORONDO   115.0   circuit 1

Outage case 309                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40147 BREWSTER 115.0 to   47129 BRIDGBAR 115.0   circuit 1

Outage case 310                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40147 BREWSTER 115.0 to   40801 OPHIR T  115.0   circuit 1

Outage case 311                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40147 BREWSTER 115.0 to   47209 PATEROS  115.0   circuit 1

Outage case 312                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47129 BRIDGBAR 115.0 to   47013 BRIDGPRT 115.0   circuit 1

Outage case 313                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47013 BRIDGPRT 115.0 to   47099 WELLS    115.0   circuit 1

Outage case 314                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40149 BRINKENS 115.0 to   48341 POTLAT A 115.0   circuit 1

Outage case 315                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48047 BRONX    115.0 to   48293 ODEN     115.0   circuit 1

Outage case 316                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48047 BRONX    115.0 to   48377 SANDPT A 115.0   circuit 1

Outage case 317                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48049 BUNKRHIL 115.0 to   48315 PINE CRK 115.0   circuit 1

Outage case 318                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48051 BURKE    115.0 to   48053 BURKAVAA 115.0   circuit 1

Outage case 319                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48051 BURKE    115.0 to   48055 BURKAVAB 115.0   circuit 1

Outage case 320                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48051 BURKE    115.0 to   48151 HECLA    115.0   circuit 1

Outage case 321                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48051 BURKE    115.0 to   48217 LUCKYFTP 115.0   circuit 1

Outage case 322                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48057 CAB GORG 115.0 to   48065 CABINETG 115.0   circuit 1

Outage case 323                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48059 CAB GORG 230.0 to   48179 LAKEVIEW 230.0   circuit 1

Outage case 324                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48059 CAB GORG 230.0 to   48281 NOXON    230.0   circuit 1

Outage case 325                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48065 CABINETG 115.0 to   48077 CLRKFORK 115.0   circuit 1

Outage case 326                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        42312 CASCADEP 230.0 to   46831 ROCKYRH1 230.0   circuit 1

Outage case 327                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48067 CDA      115.0 to   48097 DALTONT  115.0   circuit 1

Outage case 328                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48067 CDA      115.0 to   48349 RAMSEY   115.0   circuit 1

Outage case 329                Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        46805 CHELAN   115.0 to   48149 HEADWORK 115.0   circuit 1
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Outage case 330               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46805 CHELAN   115.0 to   46821 ROCKY RH 115.0   circuit 1
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Outage case 331               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40215 CHENEY   115.0 to   40439 FOURLKS  115.0   circuit 1
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Outage case 332               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48069 CHESTER  115.0 to   48299 OPPORTUN 115.0   circuit 1
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Outage case 333               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48071 CHEWELAH 115.0 to   48441 VALLEY A 115.0   circuit 1
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Outage case 334               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40223 CHIEF J3 345.0 to   40993 SNOHOMS3 345.0   circuit 3
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Outage case 335               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40225 CHIEF J4 345.0 to   40994 SNOHOMS4 345.0   circuit 4
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Outage case 336               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40231 CHIEF JO 230.0 to   41358 COULEES3 230.0   circuit 1
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Outage case 337               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40231 CHIEF JO 230.0 to   41358 COULEES3 230.0   circuit 2
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Outage case 338               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40231 CHIEF JO 230.0 to   40373 E OMAK   230.0   circuit 1
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Outage case 339               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40233 CHIEF JO 500.0 to   40287 COULEE   500.0   circuit 1
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Outage case 340               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40233 CHIEF JO 500.0 to   40749 MONROE   500.0   circuit 1
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Outage case 341               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40233 CHIEF JO 500.0 to   40973 SICKLER  500.0   circuit 1
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Outage case 342               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48073 CHMBRSTP 115.0 to   47503 CHAMBERS 115.0   circuit 1
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Outage case 343               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40239 CLARKSTN 115.0 to   48253 N LEWIST 115.0   circuit 1
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Outage case 344               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40239 CLARKSTN 115.0 to   40835 POMEROY  115.0   circuit 1
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Outage case 345               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40245 CLAYTON  115.0 to   40337 DEER PRK 115.0   circuit 1
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Outage case 346               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40245 CLAYTON  115.0 to   48213 LOON LK  115.0   circuit 1
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Outage case 347               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41753 CLE10_13 230.0 to   41357 COULEES2 230.0   circuit 1
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Outage case 348               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41754 CLE14_18 230.0 to   41358 COULEES3 230.0   circuit 1
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Outage case 349               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48075 CLEARWTR 115.0 to   48195 LOLO     115.0   circuit 1
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Outage case 350               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48075 CLEARWTR 115.0 to   48429 TENTHSTW 115.0   circuit 1
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Outage case 351               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48075 CLEARWTR 115.0 to   48464 WHEATLND 115.0   circuit 1
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Outage case 352               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48077 CLRKFORK 115.0 to   48293 ODEN     115.0   circuit 1
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Outage case 353               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41194 COL FAL1 230.0 to   41195 COL FAL2 230.0   circuit 1
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Outage case 354               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41194 COL FAL1 230.0 to   40267 CONKELLY 230.0   circuit 1
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Outage case 355               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41194 COL FAL1 230.0 to   40557 HUNGRY H 230.0   circuit 1
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Outage case 356               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41196 COL FAL3 230.0 to   40249 COL FALL 230.0   circuit 1
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Outage case 357               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41196 COL FAL3 230.0 to   40267 CONKELLY 230.0   circuit 1
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Outage case 358               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41196 COL FAL3 230.0 to   40557 HUNGRY H 230.0   circuit 1
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Outage case 359               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40247 COL FALL 115.0 to   40589 KALISPEL 115.0   circuit 1
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Outage case 360               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40247 COL FALL 115.0 to   41039 STILLWTR 115.0   circuit 1
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Outage case 361               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40249 COL FALL 230.0 to   40421 FLATHEAD 230.0   circuit 1
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Outage case 362               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48079 COLBERT  115.0 to   40255 COLBERTT 115.0   circuit 1
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Outage case 363               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40255 COLBERTT 115.0 to   40495 HALFMOON 115.0   circuit 1
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Outage case 364               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48081 COLLWALN 115.0 to   48129 FTWRIGHT 115.0   circuit 1
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Outage case 365               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48081 COLLWALN 115.0 to   48339 POSTSTRT 115.0   circuit 1
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Outage case 366                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40259 COLUMBIA 115.0 to   46033 GB55     115.0   circuit 1
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Outage case 367                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40259 COLUMBIA 115.0 to   40579 JENKINS  115.0   circuit 1
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Outage case 368                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40259 COLUMBIA 115.0 to   47071 PALISADS 115.0   circuit 1
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Outage case 369                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40259 COLUMBIA 115.0 to   41105 VALHALLA 115.0   circuit 1
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Outage case 370                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40259 COLUMBIA 115.0 to   41105 VALHALLA 115.0   circuit 2
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Outage case 371                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40261 COLUMBIA 230.0 to   41356 COULEES1 230.0   circuit 1
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Outage case 372                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40261 COLUMBIA 230.0 to   41358 COULEES3 230.0   circuit 3
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Outage case 373                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40261 COLUMBIA 230.0 to   40303 COVINGTN 230.0   circuit 1
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Outage case 374                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40261 COLUMBIA 230.0 to   46809 MCKENZIE 230.0   circuit 1
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Outage case 375                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40261 COLUMBIA 230.0 to   46832 ROCKYRH2 230.0   circuit 1
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Outage case 376                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40261 COLUMBIA 230.0 to   41111 VANTAGE  230.0   circuit 1
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Outage case 377                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         48083 COLV AVA 115.0 to   48143 GREENWDA 115.0   circuit 1
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Outage case 378                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40263 COLV BPA 115.0 to   40607 KETTLE T 115.0   circuit 1
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Outage case 379                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40263 COLV BPA 115.0 to   48399 SPIRIT   115.0   circuit 1
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Outage case 380                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40267 CONKELLY 230.0 to   45305 TRUMB CR 230.0   circuit 1
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Outage case 381                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40275 COOK M T 115.0 to   40607 KETTLE T 115.0   circuit 1
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Outage case 382                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40275 COOK M T 115.0 to   40879 REPUBLIC 115.0   circuit 1
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Outage case 383                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         46150 COUL2GPD 115.0 to   40281 COULEE   115.0   circuit 1
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Outage case 384                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         46150 COUL2GPD 115.0 to   41127 WAGNERLT 115.0   circuit 1
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Outage case 385                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         41751 COULE1_5 230.0 to   41356 COULEES1 230.0   circuit 1
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Outage case 386                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         41752 COULE6_9 230.0 to   41357 COULEES2 230.0   circuit 1
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Outage case 387                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40281 COULEE   115.0 to   41222 KELLER T 115.0   circuit 1
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Outage case 388                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40281 COULEE   115.0 to   47067 NILLES C 115.0   circuit 1
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Outage case 389                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40285 COULEE   300.0 to   40795 OLYMPIA  300.0   circuit 1
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Outage case 390                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40287 COULEE   500.0 to   40499 HANFORD  500.0   circuit 1
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Outage case 391                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40287 COULEE   500.0 to   40957 SCHULTZ  500.0   circuit 1
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Outage case 392                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40287 COULEE   500.0 to   40957 SCHULTZ  500.0   circuit 2
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Outage case 393                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         41356 COULEES1 230.0 to   41357 COULEES2 230.0   circuit 1
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Outage case 394                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         41356 COULEES1 230.0 to   40851 POTHOLES 230.0   circuit 1
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Outage case 395                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         41357 COULEES2 230.0 to   41358 COULEES3 230.0   circuit 1
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Outage case 396                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         41357 COULEES2 230.0 to   46156 ROCKYFD  230.0   circuit 1
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Outage case 397                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         41357 COULEES2 230.0 to   41276 WESTBPA2 230.0   circuit 1
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Outage case 398                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40311 CRESTN   115.0 to   40637 LARENE   115.0   circuit 1
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Outage case 399                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40311 CRESTN   115.0 to   41127 WAGNERLT 115.0   circuit 1
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Outage case 400                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40317 CUSICK   115.0 to   47254 USK      115.0   circuit 1
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Outage case 401                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         40319 CUSICK   230.0 to   47091 USK      230.0   circuit 1
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Outage case 402                Y, WAPA UGP, JUNE 2002
    switched OUT LINE         48095 DALTON2T 115.0 to   48019 AVONDALE 115.0   circuit 1
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Outage case 403                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48097 DALTONT  115.0 to   48093 DALTON A 115.0   circuit 1

Outage case 404                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48097 DALTONT  115.0 to   48356 RATHDRME 115.0   circuit 1

Outage case 405                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40337 DEER PRK 115.0 to   48235 MILAN TP 115.0   circuit 1

Outage case 406                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47025 DELIGHT  115.0 to   48457 WASHTUNA 115.0   circuit 1

Outage case 407                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48103 DEVIL GP 115.0 to   48269 NINEMILE 115.0   circuit 1

Outage case 408                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47027 DIAM LAK 115.0 to   40907 SACHEEN  115.0   circuit 1

Outage case 409                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40348 DIXON    230.0 to   40551 HOT SPR  230.0   circuit 1

Outage case 410                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40348 DIXON    230.0 to   40867 RATTLE S 230.0   circuit 1

Outage case 411                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47029 DOUGLAS  115.0 to   47089 TERRY T  115.0   circuit 1

Outage case 412                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47031 DOUGLAS  230.0 to   46833 ROCKYRH3 230.0   circuit 1

Outage case 413                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47031 DOUGLAS  230.0 to   47101 WELLS    230.0   circuit 1

Outage case 414                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47031 DOUGLAS  230.0 to   47101 WELLS    230.0   circuit 2

Outage case 415                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47033 DOWER RD 115.0 to   48111 DOWERRDT 115.0   circuit 1

Outage case 416                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48111 DOWERRDT 115.0 to   48329 POST FLS 115.0   circuit 1

Outage case 417                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40369 DWORSHAK 500.0 to   40521 HATWAI   500.0   circuit 1

Outage case 418                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40369 DWORSHAK 500.0 to   41057 TAFT     500.0   circuit 1

Outage case 419                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41202 E ELLNSB 115.0 to   40385 ELLENGTP 115.0   circuit 1

Outage case 420                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   40437 FOSTER C 115.0   circuit 1

Outage case 421                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   40789 OKANOGAN 115.0   circuit 1

Outage case 422                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   40799 OMAK     115.0   circuit 1

Outage case 423                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   41085 TONASKET 115.0   circuit 1

Outage case 424                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40371 E OMAK   115.0 to   41151 WHITESTN 115.0   circuit 1

Outage case 425                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48117 EASTFARM 115.0 to   48329 POST FLS 115.0   circuit 1

Outage case 426                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47037 EASTMONT 115.0 to   47051 HANNA    115.0   circuit 1

Outage case 427                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47037 EASTMONT 115.0 to   47085 SO NILE  115.0   circuit 1

Outage case 428                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47037 EASTMONT 115.0 to   47089 TERRY T  115.0   circuit 1

Outage case 429                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48119 EGRANTAP 115.0 to   40383 EGRANVIL 115.0   circuit 1

Outage case 430                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40385 ELLENGTP 115.0 to   40387 ELLENSBG 115.0   circuit 1

Outage case 431                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40385 ELLENGTP 115.0 to   40579 JENKINS  115.0   circuit 1

Outage case 432                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40387 ELLENSBG 115.0 to   40755 MOXEE    115.0   circuit 1

Outage case 433                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40389 ELLISFRD 115.0 to   40807 OROVILLE 115.0   circuit 1

Outage case 434                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40389 ELLISFRD 115.0 to   41151 WHITESTN 115.0   circuit 1

Outage case 435                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40391 ELMO     115.0 to   40589 KALISPEL 115.0   circuit 1

Outage case 436                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40421 FLATHEAD 230.0 to   45175 LION MTN 230.0   circuit 1

Outage case 437                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40437 FOSTER C 115.0 to   47067 NILLES C 115.0   circuit 1

Outage case 438                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48125 FOURLBPA 115.0 to   40439 FOURLKS  115.0   circuit 1

Outage case 439                Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        48125 FOURLBPA 115.0 to   48132 HAL&WHIT 115.0   circuit 1
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Outage case 440               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48125 FOURLBPA 115.0 to   40525 HAYFORD  115.0   circuit 1
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Outage case 441               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48125 FOURLBPA 115.0 to   48387 SILVRLAK 115.0   circuit 1
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Outage case 442               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48127 FRANCEDR 115.0 to   48219 LYONSTND 115.0   circuit 1
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Outage case 443               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48127 FRANCEDR 115.0 to   48279 NORTHWES 115.0   circuit 1
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Outage case 444               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48129 FTWRIGHT 115.0 to   48461 WEST     115.0   circuit 1
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Outage case 445               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40449 GAFFNEY  115.0 to   48411 SPRAGUE  115.0   circuit 1
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Outage case 446               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40451 GAR1EAST 500.0 to   40459 GARRISON 500.0   circuit 1
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Outage case 447               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40453 GAR2EAST 500.0 to   40459 GARRISON 500.0   circuit 1
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Outage case 448               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48131 GARDENSP 115.0 to   40525 HAYFORD  115.0   circuit 1
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Outage case 449               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48131 GARDENSP 115.0 to   48409 SPKWASTE 115.0   circuit 1
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Outage case 450               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40457 GARRISON 230.0 to   40867 RATTLE S 230.0   circuit 1
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Outage case 451               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40459 GARRISON 500.0 to   41057 TAFT     500.0   circuit 1
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Outage case 452               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40459 GARRISON 500.0 to   41057 TAFT     500.0   circuit 2
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Outage case 453               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48139 GLENTAP  115.0 to   48137 GLENROSE 115.0   circuit 1
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Outage case 454               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48139 GLENTAP  115.0 to   48395 SOUTHEAS 115.0   circuit 1
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Outage case 455               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40479 GOOSE LK 115.0 to   40777 NESPELEM 115.0   circuit 1
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Outage case 456               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40479 GOOSE LK 115.0 to   40789 OKANOGAN 115.0   circuit 1
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Outage case 457               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48143 GREENWDA 115.0 to   48175 KETTLEAV 115.0   circuit 1
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Outage case 458               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48132 HAL&WHIT 115.0 to   48387 SILVRLAK 115.0   circuit 1
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Outage case 459               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40495 HALFMOON 115.0 to   41099 TUM TUM  115.0   circuit 1
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Outage case 460               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40499 HANFORD  500.0 to   40683 LOW MON  500.0   circuit 1
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Outage case 461               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40499 HANFORD  500.0 to   41113 VANTAGE  500.0   circuit 1
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Outage case 462               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47051 HANNA    115.0 to   41105 VALHALLA 115.0   circuit 1
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Outage case 463               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40513 HASKILL  230.0 to   40657 LIBBY    230.0   circuit 1
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Outage case 464               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40513 HASKILL  230.0 to   45305 TRUMB CR 230.0   circuit 1
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Outage case 465               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40519 HATWAI   230.0 to   48197 LOLO     230.0   circuit 1
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Outage case 466               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40519 HATWAI   230.0 to   48197 LOLO     230.0   circuit 2
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Outage case 467               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40519 HATWAI   230.0 to   48249 MOSCOW   230.0   circuit 1
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Outage case 468               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40519 HATWAI   230.0 to   48255 N LEWIST 230.0   circuit 1
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Outage case 469               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40521 HATWAI   500.0 to   40679 LOW GRAN 500.0   circuit 1
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Outage case 470               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48151 HECLA    115.0 to   48453 WALLACE  115.0   circuit 1
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Outage case 471               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48153 HECLAT   115.0 to   48041 BIGCREEK 115.0   circuit 1
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Outage case 472               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48155 HERN     115.0 to   48159 HUETTER  115.0   circuit 1
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Outage case 473               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47505 HOODOO   115.0 to   48403 SPIRITLT 115.0   circuit 1
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Outage case 474               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47507 HOPKINSB 115.0 to   48271 NINTHCNT 115.0   circuit 1
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Outage case 475               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40551 HOT SPR  230.0 to   45175 LION MTN 230.0   circuit 1
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Outage case 476              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40551 HOT SPR  230.0 to   48281 NOXON    230.0   circuit 2
Outage case 477              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40551 HOT SPR  230.0 to   41091 TROUT CR 230.0   circuit 1
Outage case 478              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40553 HOT SPR  500.0 to   41057 TAFT     500.0   circuit 1
Outage case 479              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48159 HUETTER  115.0 to   48355 RATHDRUM 115.0   circuit 1
Outage case 480              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47285 INLD EMP 115.0 to   41089 TRENTWOD 115.0   circuit 1
Outage case 481              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48165 IRVIN    115.0 to   48299 OPPORTUN 115.0   circuit 1
Outage case 482              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48165 IRVIN    115.0 to   48311 OTIS     115.0   circuit 1
Outage case 483              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40587 JOSO TAP 115.0 to   41340 NINEMI T 115.0   circuit 1
Outage case 484              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40603 KELLER   115.0 to   41222 KELLER T 115.0   circuit 1
Outage case 485              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41222 KELLER T 115.0 to   40777 NESPELEM 115.0   circuit 1
Outage case 486              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40607 KETTLE T 115.0 to   48175 KETTLEAV 115.0   circuit 1
Outage case 487              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48177 KOOSKIA  115.0 to   48379 SCOTPAPR 115.0   circuit 1
Outage case 488              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40617 LACLEDE  115.0 to   40857 PRIEST   115.0   circuit 1
Outage case 489              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40617 LACLEDE  115.0 to   40933 SANDPONT 115.0   circuit 1
Outage case 490              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40621 LAGRANDE 230.0 to   40905 ROUNDUP  230.0   circuit 1
Outage case 491              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48179 LAKEVIEW 230.0 to   48357 RATHDRUM 230.0   circuit 1
Outage case 492              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40624 LANCASTR 230.0 to   40787 NOXONBPA 230.0   circuit 1
Outage case 493              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40637 LARENE   115.0 to   41015 SPRNGHIL 115.0   circuit 1
Outage case 494              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40655 LIBBY    115.0 to   47278 LIBBYFEC 115.0   circuit 1
Outage case 495              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40657 LIBBY    230.0 to   40787 NOXONBPA 230.0   circuit 1
Outage case 496              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47278 LIBBYFEC 115.0 to   41097 TROY     115.0   circuit 1
Outage case 497              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48185 LIBTYLK  115.0 to   48299 OPPORTUN 115.0   circuit 1
Outage case 498              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48185 LIBTYLK  115.0 to   48311 OTIS     115.0   circuit 1
Outage case 499              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48187 LIND     115.0 to   47025 DELIGHT  115.0   circuit 1
Outage case 500              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48187 LIND     115.0 to   47073 RALSTONB 115.0   circuit 1
Outage case 501              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40665 LIT GOOS 500.0 to   40679 LOW GRAN 500.0   circuit 1
Outage case 502              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40665 LIT GOOS 500.0 to   40679 LOW GRAN 500.0   circuit 2
Outage case 503              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40665 LIT GOOS 500.0 to   40683 LOW MON  500.0   circuit 1
Outage case 504              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40665 LIT GOOS 500.0 to   40683 LOW MON  500.0   circuit 2
Outage case 505              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40683 LOW MON  500.0 to   40917 SACJWA T 500.0   circuit 1
Outage case 506              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48217 LUCKYFTP 115.0 to   48153 HECLAT   115.0   circuit 1
Outage case 507              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48217 LUCKYFTP 115.0 to   48215 LUCKY F  115.0   circuit 1
Outage case 508              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48219 LYONSTND 115.0 to   48371 ROSSPARK 115.0   circuit 1
Outage case 509              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46043 MAE VL T 230.0 to   40851 POTHOLES 230.0   circuit 1
Outage case 510              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47185 MALOTT   115.0 to   40789 OKANOGAN 115.0   circuit 1
Outage case 511              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47185 MALOTT   115.0 to   41157 WINTHR T 115.0   circuit 1
Outage case 512              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40691 MAPLE VL 345.0 to   40891 ROCKY RH 345.0   circuit 1
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Outage case 513                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48221 MARENGO  115.0 to   47073 RALSTONB 115.0   circuit 1

Outage case 514                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46045 MATTAWA  230.0 to   41111 VANTAGE  230.0   circuit 1

Outage case 515                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46807 MCKENZIE 115.0 to   46817 ROCK IS2 115.0   circuit 1

Outage case 516                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46807 MCKENZIE 115.0 to   41105 VALHALLA 115.0   circuit 1

Outage case 517                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46807 MCKENZIE 115.0 to   46829 WENATCHE 115.0   circuit 1

Outage case 518                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46807 MCKENZIE 115.0 to   46829 WENATCHE 115.0   circuit 2

Outage case 519                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46809 MCKENZIE 230.0 to   46831 ROCKYRH1 230.0   circuit 1

Outage case 520                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41351 MCNRY S1 230.0 to   40905 ROUNDUP  230.0   circuit 1

Outage case 521                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48223 METCHIP  115.0 to   48015 ARDEN    115.0   circuit 1

Outage case 522                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48225 METRO    115.0 to   48339 POSTSTRT 115.0   circuit 1

Outage case 523                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48225 METRO    115.0 to   48421 SUNSET   115.0   circuit 1

Outage case 524                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47509 MICA     115.0 to   48231 MICA TAP 115.0   circuit 1

Outage case 525                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48231 MICA TAP 115.0 to   47507 HOPKINSB 115.0   circuit 1

Outage case 526                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41346 MIDWAYB1 230.0 to   40851 POTHOLES 230.0   circuit 1

Outage case 527                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41347 MIDWAYB2 230.0 to   41111 VANTAGE  230.0   circuit 1

Outage case 528                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48235 MILAN TP 115.0 to   41099 TUM TUM  115.0   circuit 1

Outage case 529                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48237 MILLWOOD 115.0 to   48163 I.E.PAPR 115.0   circuit 1

Outage case 530                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48237 MILLWOOD 115.0 to   48165 IRVIN    115.0   circuit 1

Outage case 531                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48237 MILLWOOD 115.0 to   48312 OPORTUNW 115.0   circuit 1

Outage case 532                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48239 MISSION  115.0 to   48045 BLUECRK  115.0   circuit 1

Outage case 533                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47511 MOAB     115.0 to   48310 OPORTUNE 115.0   circuit 1

Outage case 534                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47511 MOAB     115.0 to   48319 PLEASANT 115.0   circuit 1

Outage case 535                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41239 MOYIE T  115.0 to   41240 MOYIE TX 115.0   circuit 1

Outage case 536                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41239 MOYIE T  115.0 to   41169 YAAK     115.0   circuit 1

Outage case 537                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41240 MOYIE TX 115.0 to   41241 N BENCH  115.0   circuit 1

Outage case 538                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47194 MT HALL  115.0 to   41299 SMITHFLS 115.0   circuit 1

Outage case 539                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48253 N LEWIST 115.0 to   48075 CLEARWTR 115.0   circuit 1

Outage case 540                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46811 N WENATC 115.0 to   46821 ROCKY RH 115.0   circuit 1

Outage case 541                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46811 N WENATC 115.0 to   46829 WENATCHE 115.0   circuit 1

Outage case 542                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40779 NEWPORTB 115.0 to   47086 PINE ST  115.0   circuit 1

Outage case 543                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48258 NEWPORTT 115.0 to   48043 BLANCHRD 115.0   circuit 1

Outage case 544                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48258 NEWPORTT 115.0 to   48259 NEWPORTA 115.0   circuit 1

Outage case 545                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48258 NEWPORTT 115.0 to   47086 PINE ST  115.0   circuit 1

Outage case 546                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41340 NINEMI T 115.0 to   41131 WALAWALA 115.0   circuit 1

Outage case 547                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47574 NINEMIF1 115.0 to   41340 NINEMI T 115.0   circuit 1

Outage case 548                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47572 NINEMIF2 230.0 to   45331 WALLULA  230.0   circuit 1

Outage case 549                Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        48269 NINEMILE 115.0 to   48461 WEST     115.0   circuit 1
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Outage case 550               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48271 NINTHCNT 115.0 to   48139 GLENTAP  115.0   circuit 1
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Outage case 551               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48271 NINTHCNT 115.0 to   48431 THIRHACH 115.0   circuit 1
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Outage case 552               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48277 NORTHEAS 115.0 to   48224 MEAD     115.0   circuit 1
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Outage case 553               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48279 NORTHWES 115.0 to   48461 WEST     115.0   circuit 1
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Outage case 554               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48281 NOXON    230.0 to   40787 NOXONBPA 230.0   circuit 1
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Outage case 555               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48281 NOXON    230.0 to   48317 PINE CRK 230.0   circuit 1
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Outage case 556               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40787 NOXONBPA 230.0 to   48289 NOXONCON 230.0   circuit 1
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Outage case 557               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48289 NOXONCON 230.0 to   41091 TROUT CR 230.0   circuit 1
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Outage case 558               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48295 ODESSA   115.0 to   40577 IRBY     115.0   circuit 1
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Outage case 559               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48297 OGARA    115.0 to   48315 PINE CRK 115.0   circuit 1
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Outage case 560               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40789 OKANOGAN 115.0 to   40801 OPHIR T  115.0   circuit 1
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Outage case 561               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48310 OPORTUNE 115.0 to   48312 OPORTUNW 115.0   circuit 1
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Outage case 562               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48310 OPORTUNE 115.0 to   48299 OPPORTUN 115.0   circuit 1
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Outage case 563               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48301 ORIN     115.0 to   48083 COLV AVA 115.0   circuit 1
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Outage case 564               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48303 OROFINO  115.0 to   40023 AHSAHKA  115.0   circuit 1
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Outage case 565               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47069 ORONDO   115.0 to   46821 ROCKY RH 115.0   circuit 1
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Outage case 566               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48305 OSBURN   115.0 to   48315 PINE CRK 115.0   circuit 1
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Outage case 567               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48311 OTIS     115.0 to   48117 EASTFARM 115.0   circuit 1
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Outage case 568               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48311 OTIS     115.0 to   47511 MOAB     115.0   circuit 1
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Outage case 569               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48306 OTIS     230.0 to   48031 BEACON S 230.0   circuit 1
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Outage case 570               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48306 OTIS     230.0 to   48357 RATHDRUM 230.0   circuit 1
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Outage case 571               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48306 OTIS     230.0 to   48357 RATHDRUM 230.0   circuit 2
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Outage case 572               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47071 PALISADS 115.0 to   46075 QUINCY T 115.0   circuit 1
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Outage case 573               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47209 PATEROS  115.0 to   47251 TWISP    115.0   circuit 1
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Outage case 574               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48315 PINE CRK 115.0 to   48473 YELOWSTN 115.0   circuit 1
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Outage case 575               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47086 PINE ST  115.0 to   47254 USK      115.0   circuit 1
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Outage case 576               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48319 PLEASANT 115.0 to   48355 RATHDRUM 115.0   circuit 1
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Outage case 577               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48323 PLUMMER  115.0 to   48297 OGARA    115.0   circuit 1
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Outage case 578               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40835 POMEROY  115.0 to   41131 WALAWALA 115.0   circuit 1
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Outage case 579               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        45245 POMONA   230.0 to   41111 VANTAGE  230.0   circuit 1
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Outage case 580               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48329 POST FLS 115.0 to   40855 PRAIRIEB 115.0   circuit 1
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Outage case 581               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48339 POSTSTRT 115.0 to   48431 THIRHACH 115.0   circuit 1
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Outage case 582               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40849 POTHOLES 115.0 to   46095 SEEP TP  115.0   circuit 1
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Outage case 583               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40855 PRAIRIEB 115.0 to   48349 RAMSEY   115.0   circuit 1
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Outage case 584               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40857 PRIEST   115.0 to   48347 PRIEST A 115.0   circuit 1
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Outage case 585               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48349 RAMSEY   115.0 to   48011 APPLETAP 115.0   circuit 1
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Outage case 586              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48349 RAMSEY   115.0 to   48155 HERN     115.0   circuit 1
Outage case 587              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48351 RATHBUS1 115.0 to   48355 RATHDRUM 115.0   circuit 1
Outage case 588              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48353 RATHBUS2 115.0 to   48356 RATHDRME 115.0   circuit 1
Outage case 589              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48356 RATHDRME 115.0 to   48355 RATHDRUM 115.0   circuit 1
Outage case 590              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48356 RATHDRME 115.0 to   40953 SCARCELO 115.0   circuit 1
Outage case 591              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40869 RAVER    500.0 to   40957 SCHULTZ  500.0   circuit 1
Outage case 592              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40869 RAVER    500.0 to   40957 SCHULTZ  500.0   circuit 2
Outage case 593              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40869 RAVER    500.0 to   40957 SCHULTZ  500.0   circuit 3
Outage case 594              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40869 RAVER    500.0 to   40957 SCHULTZ  500.0   circuit 4
Outage case 595              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48363 REARDAN  115.0 to   40449 GAFFNEY  115.0   circuit 1
Outage case 596              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46817 ROCK IS2 115.0 to   41105 VALHALLA 115.0   circuit 1
Outage case 597              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48367 ROCKFORD 115.0 to   48231 MICA TAP 115.0   circuit 1
Outage case 598              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46821 ROCKY RH 115.0 to   46829 WENATCHE 115.0   circuit 1
Outage case 599              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46831 ROCKYRH1 230.0 to   46832 ROCKYRH2 230.0   circuit 1
Outage case 600              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        46832 ROCKYRH2 230.0 to   46833 ROCKYRH3 230.0   circuit 1
Outage case 601              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48371 ROSSPARK 115.0 to   48431 THIRHACH 115.0   circuit 1
Outage case 602              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40927 SAMUELS  115.0 to   40965 SELLE    115.0   circuit 1
Outage case 603              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40929 SAND CRK 115.0 to   40931 SAND TP  115.0   circuit 1
Outage case 604              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40929 SAND CRK 115.0 to   48377 SANDPT A 115.0   circuit 1
Outage case 605              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40929 SAND CRK 115.0 to   40965 SELLE    115.0   circuit 1
Outage case 606              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40931 SAND TP  115.0 to   40933 SANDPONT 115.0   circuit 1
Outage case 607              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        42448 SCENIC   115.0 to   46827 SUMMIT   115.0   circuit 1
Outage case 608              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40955 SCHRAG   115.0 to   46091 SCHRAG T 115.0   circuit 1
Outage case 609              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40957 SCHULTZ  500.0 to   40973 SICKLER  500.0   circuit 1
Outage case 610              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40957 SCHULTZ  500.0 to   41113 VANTAGE  500.0   circuit 1
Outage case 611              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48379 SCOTPAPR 115.0 to   48171 KAMIAH   115.0   circuit 1
Outage case 612              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48381 SEVENTAP 115.0 to   48127 FRANCEDR 115.0   circuit 1
Outage case 613              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48383 SHAWNEE  115.0 to   47501 ARMSTRNG 115.0   circuit 1
Outage case 614              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48395 SOUTHEAS 115.0 to   48421 SUNSET   115.0   circuit 1
Outage case 615              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48397 SPANGLE  115.0 to   48001 4LAKE TP 115.0   circuit 1
Outage case 616              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48403 SPIRITLT 115.0 to   48017 ATHOLTAP 115.0   circuit 1
Outage case 617              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48403 SPIRITLT 115.0 to   48401 SPIRITLK 115.0   circuit 1
Outage case 618              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48405 SPKINDPK 115.0 to   48021 BARKER   115.0   circuit 1
Outage case 619              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48405 SPKINDPK 115.0 to   48299 OPPORTUN 115.0   circuit 1
Outage case 620              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48409 SPKWASTE 115.0 to   48461 WEST     115.0   circuit 1
Outage case 621              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41039 STILLWTR 115.0 to   41087 TREGO    115.0   circuit 1
Outage case 622              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48417 STMARIES 115.0 to   48297 OGARA    115.0   circuit 1
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Outage case 623                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48419 STRATFRD 115.0 to   46447 SUMERFAL 115.0   circuit 1

Outage case 624                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41260 SULLIVNB 115.0 to   41115 VERA     115.0   circuit 1

Outage case 625                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41260 SULLIVNB 115.0 to   41117 VERA TAP 115.0   circuit 1

Outage case 626                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48421 SUNSET   115.0 to   48131 GARDENSP 115.0   circuit 1

Outage case 627                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48421 SUNSET   115.0 to   48145 HANGMAN  115.0   circuit 1

Outage case 628                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41089 TRENTWOD 115.0 to   41117 VERA TAP 115.0   circuit 1

Outage case 629                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41097 TROY     115.0 to   41169 YAAK     115.0   circuit 1

Outage case 630                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        47251 TWISP    115.0 to   41157 WINTHR T 115.0   circuit 1

Outage case 631                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48441 VALLEY A 115.0 to   48123 FORD     115.0   circuit 1

Outage case 632                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41107 VALY WAY 115.0 to   41117 VERA TAP 115.0   circuit 1

Outage case 633                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48443 VANT AVA 230.0 to   41111 VANTAGE  230.0   circuit 1

Outage case 634                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48445 VIOLA    115.0 to   40149 BRINKENS 115.0   circuit 1

Outage case 635                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41125 WAGNERLK 115.0 to   48469 WILBURT  115.0   circuit 1

Outage case 636                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41127 WAGNERLT 115.0 to   48469 WILBURT  115.0   circuit 1

Outage case 637                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48449 WAIKIKIT 115.0 to   48277 NORTHEAS 115.0   circuit 1

Outage case 638                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48449 WAIKIKIT 115.0 to   48447 WAIKIKI  115.0   circuit 1

Outage case 639                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48453 WALLACE  115.0 to   48305 OSBURN   115.0   circuit 1

Outage case 640                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48463 WEST     230.0 to   41275 WESTBPA1 230.0   circuit 1

Outage case 641                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48463 WEST     230.0 to   41276 WESTBPA2 230.0   circuit 1

Outage case 642                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48471 WILSNCKT 115.0 to   40577 IRBY     115.0   circuit 1

Outage case 643                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        41157 WINTHR T 115.0 to   41159 WINTHROP 115.0   circuit 1

Outage case 644                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        48473 YELOWSTN 115.0 to   48239 MISSION  115.0   circuit 1

Outage case 645                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65000 5TH WEST 138.0 to   65865 JORDAN   138.0   circuit 1

Outage case 646                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65000 5TH WEST 138.0 to   66012 MORT CRT 138.0   circuit 1

Outage case 647                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65010 AEC IPC  138.0 to   65015 AEC SCOV 138.0   circuit 1

Outage case 648                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65015 AEC SCOV 138.0 to   65065 ANTLOP 1 138.0   circuit 1

Outage case 649                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65015 AEC SCOV 138.0 to   65070 ANTLOP 2 138.0   circuit 1

Outage case 650                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65020 AMAX     138.0 to   65790 HORSSHOE 138.0   circuit 1

Outage case 651                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65025 AMPS     230.0 to   65075 ANTLOPE  230.0   circuit 1

Outage case 652                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65030 ANACONDA 138.0 to   65345 CNTRATOR 138.0   circuit 1

Outage case 653                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65030 ANACONDA 138.0 to   66560 TOOELE   138.0   circuit 1

Outage case 654                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65040 ANGEL    138.0 to   65050 ANGEL ST 138.0   circuit 1

Outage case 655                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65045 ANGEL NT 138.0 to   66480 SYRACUSE 138.0   circuit 1

Outage case 656                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65050 ANGEL ST 138.0 to   65873 JCT STR  138.0   circuit 1

Outage case 657                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65050 ANGEL ST 138.0 to   66480 SYRACUSE 138.0   circuit 1

Outage case 658                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65055 ANSCHUTZ 138.0 to   66545 THIEF TP 138.0   circuit 1

Outage case 659                Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        65060 ANT MINE 230.0 to   66745 YELLOWCK 230.0   circuit 1
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Outage case 660               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65075 ANTLOPE  230.0 to   65910 LOST RIV 230.0   circuit 1
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Outage case 661               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65080 ANTLOPE  161.0 to   65670 GOSHEN   161.0   circuit 1
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Outage case 662               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65085 ASHLEY   138.0 to   66590 UPALCO   138.0   circuit 1
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Outage case 663               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65090 ATLANTIC 230.0 to   66315 ROCKSPGS 230.0   circuit 1
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Outage case 664               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65090 ATLANTIC 230.0 to   66740 WYOPO    230.0   circuit 1
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Outage case 665               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65095 BADWATER 230.0 to   66410 SPENCE   230.0   circuit 1
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Outage case 666               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65095 BADWATER 230.0 to   66535 THERMOPL 230.0   circuit 1
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Outage case 667               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65100 BAIROIL  115.0 to   65730 GREATDIV 115.0   circuit 1
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Outage case 668               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65100 BAIROIL  115.0 to   66685 WHISKEYP 115.0   circuit 1
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Outage case 669               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65105 BAR-X    230.0 to   66240 PLATTE   230.0   circuit 1
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Outage case 670               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65105 BAR-X    230.0 to   66250 PT ROCKS 230.0   circuit 1
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Outage case 671               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65110 BARNEY   138.0 to   65345 CNTRATOR 138.0   circuit 1
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Outage case 672               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65110 BARNEY   138.0 to   66135 OQUIRRH  138.0   circuit 1
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Outage case 673               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65125 BEKER IN 138.0 to   65360 CONDATAP 138.0   circuit 1
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Outage case 674               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65135 BENLOMND 345.0 to   66134 OQUIRRH  345.0   circuit 1
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Outage case 675               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65135 BENLOMND 345.0 to   66510 TERMINAL 345.0   circuit 1
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Outage case 676               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65140 BENLOMND 230.0 to   65160 BIRCH CK 230.0   circuit 1
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Outage case 677               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65140 BENLOMND 230.0 to   66050 NAUGHTON 230.0   circuit 1
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Outage case 678               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65140 BENLOMND 230.0 to   66475 SYRACUSE 230.0   circuit 1
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Outage case 679               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   65225 BRIGHAM  138.0   circuit 1
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Outage case 680               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   65505 EL MONTE 138.0   circuit 1
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Outage case 681               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   65505 EL MONTE 138.0   circuit 2
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Outage case 682               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   65785 HONEYVIL 138.0   circuit 1
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Outage case 683               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66480 SYRACUSE 138.0   circuit 1
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Outage case 684               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66640 W OGDEN  138.0   circuit 1
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Outage case 685               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66650 WARREN   138.0   circuit 1
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Outage case 686               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66675 WESTZIRC 138.0   circuit 1
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Outage case 687               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65145 BENLOMND 138.0 to   66680 WHEELON  138.0   circuit 1
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Outage case 688               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65155 BIGGRASS 161.0 to   65860 JFRSNPHA 161.0   circuit 1
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Outage case 689               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65160 BIRCH CK 230.0 to   66050 NAUGHTON 230.0   circuit 1
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Outage case 690               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65160 BIRCH CK 230.0 to   66270 RAILROAD 230.0   circuit 1
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Outage case 691               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65165 BLACKSFK 230.0 to   66010 MONUMENT 230.0   circuit 1
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Outage case 692               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65165 BLACKSFK 230.0 to   66670 WESTVACO 230.0   circuit 1
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Outage case 693               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65175 BLUE RIM 230.0 to   65215 BRDGR PP 230.0   circuit 1
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Outage case 694               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65175 BLUE RIM 230.0 to   66325 S. TRONA 230.0   circuit 1
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Outage case 695               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65180 BANGERTR 138.0 to   65255 CAMP TAP 138.0   circuit 1
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Outage case 696              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65180 BANGERTR 138.0 to   66135 OQUIRRH  138.0   circuit 1
Outage case 697              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65192 BONANZA  138.0 to   65457 DG UPLCO 138.0   circuit 1
Outage case 698              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65192 BONANZA  138.0 to   66278 RANGELY  138.0   circuit 1
Outage case 699              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65193 BONANZA  345.0 to   65995 MONA     345.0   circuit 1
Outage case 700              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65195 BONNEVIL 161.0 to   65485 EAGLE RK 161.0   circuit 1
Outage case 701              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65205 BOUNTIFL 138.0 to   66205 PARRISH  138.0   circuit 1
Outage case 702              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65210 BPA RIGB 161.0 to   66295 RIGBY    161.0   circuit 1
Outage case 703              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65215 BRDGR PP 230.0 to   65555 FIREHOLE 230.0   circuit 1
Outage case 704              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65220 BRIDGER  230.0 to   66020 MUSTANG  230.0   circuit 1
Outage case 705              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65220 BRIDGER  230.0 to   66250 PT ROCKS 230.0   circuit 1
Outage case 706              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65220 BRIDGER  230.0 to   66315 ROCKSPGS 230.0   circuit 1
Outage case 707              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65225 BRIGHAM  138.0 to   66680 WHEELON  138.0   circuit 1
Outage case 708              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65235 BUFFALO  230.0 to   65293 CARR DRA 230.0   circuit 1
Outage case 709              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65235 BUFFALO  230.0 to   65875 KAYCEE   230.0   circuit 1
Outage case 710              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65235 BUFFALO  230.0 to   66335 SHERIDAN 230.0   circuit 1
Outage case 711              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65240 BUTVILLE 138.0 to   65750 HAMMER   138.0   circuit 1
Outage case 712              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65240 BUTVILLE 138.0 to   66085 NINETY S 138.0   circuit 1
Outage case 713              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65255 CAMP TAP 138.0 to   66577 TRI CITY 138.0   circuit 1
Outage case 714              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   65805 HUNTNGTN 345.0   circuit 1
Outage case 715              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   65945 MIDVALLY 345.0   circuit 1
Outage case 716              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   65995 MONA     345.0   circuit 1
Outage case 717              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   65995 MONA     345.0   circuit 2
Outage case 718              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66080 NINETY S 345.0   circuit 1
Outage case 719              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66134 OQUIRRH  345.0   circuit 1
Outage case 720              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66400 SPAN FRK 345.0   circuit 1
Outage case 721              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66510 TERMINAL 345.0   circuit 1
Outage case 722              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65260 CAMP WIL 345.0 to   66578 TRI CITY 345.0   circuit 1
Outage case 723              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65261 CAMP WIL 138.0 to   65906 LONEPEK2 138.0   circuit 1
Outage case 724              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   65755 HELPER   138.0   circuit 1
Outage case 725              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   65760 HELPER T 138.0   circuit 1
Outage case 726              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   66183 PANTHER  138.0   circuit 1
Outage case 727              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   66395 SPAN F&1 138.0   circuit 1
Outage case 728              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65280 CARBON   138.0 to   66405 SPAN FRK 138.0   circuit 2
Outage case 729              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65285 CARIBO 1 138.0 to   65360 CONDATAP 138.0   circuit 1
Outage case 730              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65285 CARIBO 1 138.0 to   66000 MONSANT1 138.0   circuit 1
Outage case 731              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65285 CARIBO 1 138.0 to   66385 SODA     138.0   circuit 1
Outage case 732              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65290 CARIBO 2 138.0 to   65695 GRACE    138.0   circuit 1
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Outage case 733                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65290 CARIBO 2 138.0 to   66005 MONSANT2 138.0   circuit 2

Outage case 734                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65293 CARR DRA 230.0 to   66725 WYODAK   230.0   circuit 1

Outage case 735                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65295 CARTER   138.0 to   66365 SKULL TP 138.0   circuit 1

Outage case 736                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65300 CASPERPP 230.0 to   65420 DAVEJOHN 230.0   circuit 1

Outage case 737                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65300 CASPERPP 230.0 to   65955 MIDWEST  230.0   circuit 1

Outage case 738                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65300 CASPERPP 230.0 to   66305 RIVERTON 230.0   circuit 1

Outage case 739                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65310 CENTENAL 138.0 to   65455 DECKLAKE 138.0   circuit 1

Outage case 740                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65310 CENTENAL 138.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 741                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65320 CHAPPELC 230.0 to   66132 OPAL TAP 230.0   circuit 1

Outage case 742                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65340 CLINTON  138.0 to   66310 RIVRDALE 138.0   circuit 1

Outage case 743                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65340 CLINTON  138.0 to   66480 SYRACUSE 138.0   circuit 1

Outage case 744                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65345 CNTRATOR 138.0 to   66135 OQUIRRH  138.0   circuit 1

Outage case 745                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65355 COLUMBIA 138.0 to   66015 MOUND SW 138.0   circuit 1

Outage case 746                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65355 COLUMBIA 138.0 to   66450 SUNNYSID 138.0   circuit 1

Outage case 747                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65365 COTTONWD 138.0 to   65750 HAMMER   138.0   circuit 1

Outage case 748                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65365 COTTONWD 138.0 to   65930 MCCELAND 138.0   circuit 1

Outage case 749                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65365 COTTONWD 138.0 to   66386 SNYDERTP 138.0   circuit 1

Outage case 750                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65365 COTTONWD 138.0 to   66550 THIRTY S 138.0   circuit 1

Outage case 751                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65380 CRYSTALX 115.0 to   65480 E JACKSN 115.0   circuit 1

Outage case 752                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65380 CRYSTALX 115.0 to   66530 TETON    115.0   circuit 1

Outage case 753                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65390 CUDAHY   138.0 to   65740 GROW     138.0   circuit 1

Outage case 754                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65390 CUDAHY   138.0 to   66205 PARRISH  138.0   circuit 1

Outage case 755                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65390 CUDAHY   138.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 756                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65395 CUTLER   138.0 to   66680 WHEELON  138.0   circuit 1

Outage case 757                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65415 DAVEJO&1 230.0 to   65420 DAVEJOHN 230.0   circuit 1

Outage case 758                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65415 DAVEJO&1 230.0 to   66410 SPENCE   230.0   circuit 1

Outage case 759                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65420 DAVEJOHN 230.0 to   65460 DIFICULT 230.0   circuit 1

Outage case 760                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65420 DAVEJOHN 230.0 to   66745 YELLOWCK 230.0   circuit 1

Outage case 761                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65450 DECKER   230.0 to   65660 GOOSE CK 230.0   circuit 1

Outage case 762                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65450 DECKER   230.0 to   66735 WYOMONT  230.0   circuit 1

Outage case 763                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65454 DIMP DEL 138.0 to   65475 DUMAS    138.0   circuit 1

Outage case 764                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65454 DIMP DEL 138.0 to   66256 QUARRY   138.0   circuit 1

Outage case 765                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65455 DECKLAKE 138.0 to   66190 PARKWAY  138.0   circuit 1

Outage case 766                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65457 DG UPLCO 138.0 to   66590 UPALCO   138.0   circuit 1

Outage case 767                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65460 DIFICULT 230.0 to   65975 MINERS   230.0   circuit 1

Outage case 768                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65470 DRUMMOND 115.0 to   65675 GOSHEN   115.0   circuit 1

Outage case 769                Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        65470 DRUMMOND 115.0 to   65915 MACKS IN 115.0   circuit 1
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Outage case 770               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65470 DRUMMOND 115.0 to   66495 TARGHEE  115.0   circuit 1
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Outage case 771               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65475 DUMAS    138.0 to   66085 NINETY S 138.0   circuit 1
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Outage case 772               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65475 DUMAS    138.0 to   66391 SOUTH MT 138.0   circuit 1
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Outage case 773               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65480 E JACKSN 115.0 to   65845 JACKSONJ 115.0   circuit 1
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Outage case 774               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65485 EAGLE RK 161.0 to   65670 GOSHEN   161.0   circuit 1
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Outage case 775               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65485 EAGLE RK 161.0 to   66695 WIDFALLS 161.0   circuit 1
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Outage case 776               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65510 EMERY    345.0 to   65805 HUNTNGTN 345.0   circuit 1
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Outage case 777               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65510 EMERY    345.0 to   66340 SIGURD   345.0   circuit 1
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Outage case 778               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65510 EMERY    345.0 to   66340 SIGURD   345.0   circuit 2
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Outage case 779               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65510 EMERY    345.0 to   66401 SPAN TAP 345.0   circuit 1
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Outage case 780               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65520 EMMAPARK 138.0 to   66183 PANTHER  138.0   circuit 1
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Outage case 781               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65520 EMMAPARK 138.0 to   66590 UPALCO   138.0   circuit 1
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Outage case 782               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65535 ETNA     115.0 to   66380 SNAKE RV 115.0   circuit 1
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Outage case 783               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65540 EVANSTON 138.0 to   66275 RAILROAD 138.0   circuit 1
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Outage case 784               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65540 EVANSTON 138.0 to   66545 THIEF TP 138.0   circuit 1
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Outage case 785               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65545 EXXON WY 230.0 to   66010 MONUMENT 230.0   circuit 1
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Outage case 786               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65555 FIREHOLE 230.0 to   65895 LITTLEMT 230.0   circuit 1
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Outage case 787               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65555 FIREHOLE 230.0 to   66315 ROCKSPGS 230.0   circuit 1
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Outage case 788               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65560 FISHCREK 161.0 to   65670 GOSHEN   161.0   circuit 1
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Outage case 789               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65560 FISHCREK 161.0 to   65690 GRACE    161.0   circuit 1
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Outage case 790               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65565 FLAMGORG 230.0 to   65895 LITTLEMT 230.0   circuit 1
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Outage case 791               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65570 FRANKLIN 138.0 to   65725 GRCYN TP 138.0   circuit 1
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Outage case 792               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65570 FRANKLIN 138.0 to   66570 TREASTON 138.0   circuit 1
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Outage case 793               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65575 FRANNIE  230.0 to   65620 GARLAND  230.0   circuit 1
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Outage case 794               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65575 FRANNIE  230.0 to   66750 YELOWTLP 230.0   circuit 1
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Outage case 795               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65580 FT CREEK 230.0 to   65975 MINERS   230.0   circuit 1
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Outage case 796               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65590 GADSBY   138.0 to   65611 GAD GAST 138.0   circuit 1
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Outage case 797               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65590 GADSBY   138.0 to   65865 JORDAN   138.0   circuit 1
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Outage case 798               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65590 GADSBY   138.0 to   66520 TERMINAL 138.0   circuit 2
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Outage case 799               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65620 GARLAND  230.0 to   66145 OREBASIN 230.0   circuit 1
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Outage case 800               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65630 GEMST TP 161.0 to   65635 GEMSTATE 161.0   circuit 1
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Outage case 801               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65630 GEMST TP 161.0 to   66392 SOUTEAST 161.0   circuit 1
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Outage case 802               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65630 GEMST TP 161.0 to   66695 WIDFALLS 161.0   circuit 1
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Outage case 803               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65655 GLENCO J 138.0 to   66045 NAUGHTN2 138.0   circuit 1
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Outage case 804               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65655 GLENCO J 138.0 to   66425 STR 204  138.0   circuit 1
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Outage case 805               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65660 GOOSE CK 230.0 to   66335 SHERIDAN 230.0   circuit 1
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Outage case 806              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65660 GOOSE CK 230.0 to   66750 YELOWTLP 230.0   circuit 1

Outage case 807              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   65840 IONA     161.0   circuit 1

Outage case 808              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   65850 JEFFERSN 161.0   circuit 1

Outage case 809              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   66295 RIGBY    161.0   circuit 1

Outage case 810              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   66430 SUGARMIL 161.0   circuit 1

Outage case 811              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65670 GOSHEN   161.0 to   66465 SWAN VAL 161.0   circuit 1

Outage case 812              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65675 GOSHEN   115.0 to   66185 PALISADE 115.0   circuit 1

Outage case 813              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65695 GRACE    138.0 to   66130 ONEIDA   138.0   circuit 1

Outage case 814              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65695 GRACE    138.0 to   66385 SODA     138.0   circuit 1

Outage case 815              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65695 GRACE    138.0 to   66570 TREASTON 138.0   circuit 1

Outage case 816              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65695 GRACE    138.0 to   66570 TREASTON 138.0   circuit 2

Outage case 817              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65720 GRASS CK 230.0 to   66145 OREBASIN 230.0   circuit 1

Outage case 818              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65720 GRASS CK 230.0 to   66535 THERMOPL 230.0   circuit 1

Outage case 819              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65725 GRCYN TP 138.0 to   65735 GREENCYN 138.0   circuit 1

Outage case 820              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65725 GRCYN TP 138.0 to   66375 SMITHFLD 138.0   circuit 1

Outage case 821              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65730 GREATDIV 115.0 to   66025 MUSTANG  115.0   circuit 1

Outage case 822              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65735 GREENCYN 138.0 to   65900 LOGAN    138.0   circuit 1

Outage case 823              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65735 GREENCYN 138.0 to   66370 SMFLD TP 138.0   circuit 1

Outage case 824              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65740 GROW     138.0 to   65873 JCT STR  138.0   circuit 1

Outage case 825              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65740 GROW     138.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 826              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65760 HELPER T 138.0 to   66015 MOUND SW 138.0   circuit 1

Outage case 827              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65770 HIGHLD T 138.0 to   65905 LONEPEK1 138.0   circuit 1

Outage case 828              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65775 HOBACK   115.0 to   66265 RAFTER J 115.0   circuit 1

Outage case 829              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65775 HOBACK   115.0 to   66380 SNAKE RV 115.0   circuit 1

Outage case 830              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65780 HOGGARD  138.0 to   66135 OQUIRRH  138.0   circuit 1

Outage case 831              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65780 HOGGARD  138.0 to   66642 W VAL    138.0   circuit 1

Outage case 832              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65785 HONEYVIL 138.0 to   65890 LAMPO    138.0   circuit 1

Outage case 833              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65785 HONEYVIL 138.0 to   66680 WHEELON  138.0   circuit 1

Outage case 834              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65790 HORSSHOE 138.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 835              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65805 HUNTNGTN 345.0 to   66225 PINTO    345.0   circuit 1

Outage case 836              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65805 HUNTNGTN 345.0 to   66400 SPAN FRK 345.0   circuit 1

Outage case 837              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65810 HUNTNGTN 138.0 to   65935 MCFADDEN 138.0   circuit 1

Outage case 838              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65840 IONA     161.0 to   66295 RIGBY    161.0   circuit 1

Outage case 839              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65845 JACKSONJ 115.0 to   66265 RAFTER J 115.0   circuit 1

Outage case 840              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65845 JACKSONJ 115.0 to   66710 WILSON   115.0   circuit 1

Outage case 841              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65850 JEFFERSN 161.0 to   66295 RIGBY    161.0   circuit 1

Outage case 842              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65865 JORDAN   138.0 to   66520 TERMINAL 138.0   circuit 1
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Outage case 843                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65870 JOSPH TP 138.0 to   66110 NUCORS F 138.0   circuit 1

Outage case 844                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65870 JOSPH TP 138.0 to   66680 WHEELON  138.0   circuit 1

Outage case 845                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65873 JCT STR  138.0 to   66205 PARRISH  138.0   circuit 1

Outage case 846                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65875 KAYCEE   230.0 to   65955 MIDWEST  230.0   circuit 1

Outage case 847                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65880 KIM CLRK 138.0 to   66650 WARREN   138.0   circuit 1

Outage case 848                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65885 LAKEPARK 138.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 849                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65885 LAKEPARK 138.0 to   66642 W VAL    138.0   circuit 1

Outage case 850                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65905 LONEPEK1 138.0 to   65906 LONEPEK2 138.0   circuit 1

Outage case 851                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65905 LONEPEK1 138.0 to   66391 SOUTH MT 138.0   circuit 1

Outage case 852                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65915 MACKS IN 115.0 to   66665 WEST YEL 115.0   circuit 1

Outage case 853                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65920 MALAD    138.0 to   66105 NUCOR TP 138.0   circuit 1

Outage case 854                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65925 MART MAR 138.0 to   66070 NEBO     138.0   circuit 1

Outage case 855                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65930 MCCELAND 138.0 to   66012 MORT CRT 138.0   circuit 1

Outage case 856                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65930 MCCELAND 138.0 to   66550 THIRTY S 138.0   circuit 1

Outage case 857                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65937 MEADOWBR 138.0 to   66500 TAYLORSV 138.0   circuit 1

Outage case 858                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65937 MEADOWBR 138.0 to   66550 THIRTY S 138.0   circuit 1

Outage case 859                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65945 MIDVALLY 345.0 to   66510 TERMINAL 345.0   circuit 1

Outage case 860                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65950 MIDWAY   138.0 to   66360 SILVR CR 138.0   circuit 1

Outage case 861                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65975 MINERS   230.0 to   66240 PLATTE   230.0   circuit 1

Outage case 862                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65995 MONA     345.0 to   66340 SIGURD   345.0   circuit 1

Outage case 863                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65995 MONA     345.0 to   66340 SIGURD   345.0   circuit 2

Outage case 864                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66010 MONUMENT 230.0 to   66050 NAUGHTON 230.0   circuit 1

Outage case 865                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66010 MONUMENT 230.0 to   66325 S. TRONA 230.0   circuit 1

Outage case 866                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66015 MOUND SW 138.0 to   66415 SPHINX T 138.0   circuit 1

Outage case 867                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66020 MUSTANG  230.0 to   66410 SPENCE   230.0   circuit 1

Outage case 868                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66035 NAT SM T 138.0 to   66085 NINETY S 138.0   circuit 1

Outage case 869                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66035 NAT SM T 138.0 to   66135 OQUIRRH  138.0   circuit 1

Outage case 870                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66040 NAUGHTN1 138.0 to   66365 SKULL TP 138.0   circuit 1

Outage case 871                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66050 NAUGHTON 230.0 to   66132 OPAL TAP 230.0   circuit 1

Outage case 872                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66050 NAUGHTON 230.0 to   66565 TREASTON 230.0   circuit 1

Outage case 873                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66080 NINETY S 345.0 to   66510 TERMINAL 345.0   circuit 1

Outage case 874                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66085 NINETY S 138.0 to   66256 QUARRY   138.0   circuit 1

Outage case 875                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66085 NINETY S 138.0 to   66285 RIDING R 138.0   circuit 1

Outage case 876                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66085 NINETY S 138.0 to   66326 SANDYX   138.0   circuit 1

Outage case 877                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66085 NINETY S 138.0 to   66660 WEST JOR 138.0   circuit 1

Outage case 878                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66105 NUCOR TP 138.0 to   66115 NUCORS O 138.0   circuit 1

Outage case 879                Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        66105 NUCOR TP 138.0 to   66680 WHEELON  138.0   circuit 1
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Outage case 880               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66110 NUCORS F 138.0 to   66115 NUCORS O 138.0   circuit 1
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Outage case 881               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66130 ONEIDA   138.0 to   66150 OVID     138.0   circuit 1
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Outage case 882               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66130 ONEIDA   138.0 to   66570 TREASTON 138.0   circuit 1
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Outage case 883               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66135 OQUIRRH  138.0 to   66455 SW RK 2  138.0   circuit 1
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Outage case 884               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66155 PAINTER  138.0 to   66275 RAILROAD 138.0   circuit 1
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Outage case 885               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66155 PAINTER  138.0 to   66425 STR 204  138.0   circuit 1
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Outage case 886               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66180 PALISADE 230.0 to   66266 RAVEN    230.0   circuit 1
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Outage case 887               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66180 PALISADE 230.0 to   66315 ROCKSPGS 230.0   circuit 1
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Outage case 888               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66183 PANTHER  138.0 to   66707 WILLOW C 138.0   circuit 1
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Outage case 889               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66185 PALISADE 115.0 to   66380 SNAKE RV 115.0   circuit 1
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Outage case 890               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66185 PALISADE 115.0 to   66470 SWAN VAL 115.0   circuit 1
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Outage case 891               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66190 PARKWAY  138.0 to   66550 THIRTY S 138.0   circuit 1
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Outage case 892               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66205 PARRISH  138.0 to   66520 TERMINAL 138.0   circuit 1
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Outage case 893               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66205 PARRISH  138.0 to   66520 TERMINAL 138.0   circuit 2
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Outage case 894               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66215 PEPCON   138.0 to   66220 PEPCON I 138.0   circuit 1
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Outage case 895               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66215 PEPCON   138.0 to   66635 W CEDAR  138.0   circuit 1
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Outage case 896               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66222 PINE CYN 138.0 to   66560 TOOELE   138.0   circuit 1
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Outage case 897               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66222 PINE CYN 138.0 to   66585 U CARB T 138.0   circuit 1
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Outage case 898               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66245 PLATTE   115.0 to   66685 WHISKEYP 115.0   circuit 1
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Outage case 899               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66266 RAVEN    230.0 to   66670 WESTVACO 230.0   circuit 1
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Outage case 900               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66275 RAILROAD 138.0 to   66690 WHITNEY  138.0   circuit 1
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Outage case 901               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66285 RIDING R 138.0 to   66550 THIRTY S 138.0   circuit 1
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Outage case 902               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66290 RIDGLD T 138.0 to   66520 TERMINAL 138.0   circuit 1
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Outage case 903               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66290 RIDGLD T 138.0 to   66550 THIRTY S 138.0   circuit 1
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Outage case 904               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66295 RIGBY    161.0 to   66430 SUGARMIL 161.0   circuit 1
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Outage case 905               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66305 RIVERTON 230.0 to   66535 THERMOPL 230.0   circuit 1
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Outage case 906               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66305 RIVERTON 230.0 to   66740 WYOPO    230.0   circuit 1
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Outage case 907               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66310 RIVRDALE 138.0 to   66640 W OGDEN  138.0   circuit 1
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Outage case 908               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66320 RYCMN TP 138.0 to   66425 STR 204  138.0   circuit 1
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Outage case 909               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66325 S. TRONA 230.0 to   66715 WOLD     230.0   circuit 1
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Outage case 910               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66360 SILVR CR 138.0 to   66386 SNYDERTP 138.0   circuit 1
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Outage case 911               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66370 SMFLD TP 138.0 to   66375 SMITHFLD 138.0   circuit 1
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Outage case 912               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66370 SMFLD TP 138.0 to   66680 WHEELON  138.0   circuit 1
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Outage case 913               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66386 SNYDERTP 138.0 to   66387 SNYDERVL 138.0   circuit 1
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Outage case 914               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66392 SOUTEAST 161.0 to   66430 SUGARMIL 161.0   circuit 1
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Outage case 915               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66395 SPAN F&1 138.0 to   66405 SPAN FRK 138.0   circuit 1
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Outage case 916              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66401 SPAN TAP 345.0 to   66578 TRI CITY 345.0   circuit 1

Outage case 917              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66470 SWAN VAL 115.0 to   66490 TARGHE T 115.0   circuit 1

Outage case 918              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66475 SYRACUSE 230.0 to   66515 TERMINAL 230.0   circuit 1

Outage case 919              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66480 SYRACUSE 138.0 to   66650 WARREN   138.0   circuit 1

Outage case 920              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66490 TARGHE T 115.0 to   66495 TARGHEE  115.0   circuit 1

Outage case 921              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66490 TARGHE T 115.0 to   66530 TETON    115.0   circuit 1

Outage case 922              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66500 TAYLORSV 138.0 to   66660 WEST JOR 138.0   circuit 1

Outage case 923              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66520 TERMINAL 138.0 to   66585 U CARB T 138.0   circuit 1

Outage case 924              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66520 TERMINAL 138.0 to   66595 UPP      138.0   circuit 1

Outage case 925              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66530 TETON    115.0 to   66710 WILSON   115.0   circuit 1

Outage case 926              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66540 THERPACE 115.0 to   66720 WORLAND  115.0   circuit 1

Outage case 927              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66570 TREASTON 138.0 to   66680 WHEELON  138.0   circuit 1

Outage case 928              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66570 TREASTON 138.0 to   66680 WHEELON  138.0   circuit 2

Outage case 929              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66570 TREASTON 138.0 to   66680 WHEELON  138.0   circuit 3

Outage case 930              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70021 ROCKYTMP 115.0 to   70322 PLAINVW  115.0   circuit 1

Outage case 931              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70023 ALLISON  115.0 to   70242 KENDRICK 115.0   circuit 1

Outage case 932              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70036 ARAPAHOA 115.0 to   70037 ARAPAHOB 115.0   circuit 1

Outage case 933              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70036 ARAPAHOA 115.0 to   70384 SHERIDAN 115.0   circuit 1

Outage case 934              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70036 ARAPAHOA 115.0 to   70531 AIR LIQ  115.0   circuit 1

Outage case 935              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70037 ARAPAHOB 115.0 to   70165 ENGLE3TP 115.0   circuit 1

Outage case 936              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70038 ARAPAHOE 230.0 to   70527 SANTEFE  230.0   circuit 1

Outage case 937              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70040 ARSENAL  115.0 to   70217 HAVANA2  115.0   circuit 1

Outage case 938              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70046 BUCKLEY2 230.0 to   70491 TOLGATE  230.0   circuit 1

Outage case 939              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70048 GREENVAL 230.0 to   70047 BARRLAKE 230.0   circuit 1

Outage case 940              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70048 GREENVAL 230.0 to   70392 SKYRANCH 230.0   circuit 1

Outage case 941              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70048 GREENVAL 230.0 to   70393 SKYRANCT 230.0   circuit 1

Outage case 942              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70058 BO HYDRO 115.0 to   70295 NCAR     115.0   circuit 1

Outage case 943              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70058 BO HYDRO 115.0 to   70424 SUNSHTAP 115.0   circuit 1

Outage case 944              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70059 BO TERM  115.0 to   70424 SUNSHTAP 115.0   circuit 1

Outage case 945              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70059 BO TERM  115.0 to   70444 VALMONT  115.0   circuit 1

Outage case 946              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70065 BROMFLD1 115.0 to   70066 BROMFLD2 115.0   circuit 1

Outage case 947              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70067 BUCKLEY1 230.0 to   70512 JEWELL1  230.0   circuit 1

Outage case 948              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70071 CABINCRK 115.0 to   70197 GEORGETN 115.0   circuit 1

Outage case 949              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70073 CALIFOR1 115.0 to   70075 CALIFOR3 115.0   circuit 1

Outage case 950              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70073 CALIFOR1 115.0 to   70299 NORTH542 115.0   circuit 1

Outage case 951              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70074 CALIFOR2 115.0 to   70215 HARRISPS 115.0   circuit 1

Outage case 952              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70075 CALIFOR3 115.0 to   70074 CALIFOR2 115.0   circuit 1
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Outage case 953                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70087 CAPHILL1 115.0 to   70088 CAPHILL2 115.0   circuit 1

Outage case 954                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70087 CAPHILL1 115.0 to   70300 NORTH547 115.0   circuit 1

Outage case 955                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70088 CAPHILL2 115.0 to   70148 DENVTM   115.0   circuit 1

Outage case 956                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70088 CAPHILL2 115.0 to   70215 HARRISPS 115.0   circuit 1

Outage case 957                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70091 CASTLRCK 115.0 to   70138 DANIELPK 115.0   circuit 1

Outage case 958                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70107 CHEROKEE 230.0 to   70047 BARRLAKE 230.0   circuit 1

Outage case 959                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70107 CHEROKEE 230.0 to   70324 LACOMBE  230.0   circuit 1

Outage case 960                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70107 CHEROKEE 230.0 to   70355 RIDGE    230.0   circuit 1

Outage case 961                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70107 CHEROKEE 230.0 to   70362 RIVERDAL 230.0   circuit 1

Outage case 962                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70108 CHEROKEN 115.0 to   70153 DERBY 1  115.0   circuit 1

Outage case 963                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70108 CHEROKEN 115.0 to   70154 DERBY 2  115.0   circuit 1

Outage case 964                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70108 CHEROKEN 115.0 to   70175 FEDERHT2 115.0   circuit 2

Outage case 965                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70108 CHEROKEN 115.0 to   70307 P.VALLEY 115.0   circuit 1

Outage case 966                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70039 ARGO     115.0   circuit 1

Outage case 967                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70041 ARVADA   115.0   circuit 1

Outage case 968                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70108 CHEROKEN 115.0   circuit 1

Outage case 969                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70126 CONOCO   115.0   circuit 1

Outage case 970                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70174 FEDERHT1 115.0   circuit 1

Outage case 971                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70276 MAPLETO1 115.0   circuit 1

Outage case 972                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70277 MAPLETO2 115.0   circuit 1

Outage case 973                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70298 NORTH PS 115.0   circuit 1

Outage case 974                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70109 CHEROKES 115.0 to   70299 NORTH542 115.0   circuit 2

Outage case 975                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70112 CLARK    230.0 to   70241 JORDAN   230.0   circuit 1

Outage case 976                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70124 CONIFER  115.0 to   70429 TINYTOWN 115.0   circuit 1

Outage case 977                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70127 COORSREC 115.0 to   70194 FULTONTS 115.0   circuit 1

Outage case 978                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70137 DAKOTA   115.0 to   70036 ARAPAHOA 115.0   circuit 1

Outage case 979                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70212 GREENWD  230.0   circuit 1

Outage case 980                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70278 MARCY    230.0   circuit 1

Outage case 981                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70284 SURREYRG 230.0   circuit 1

Outage case 982                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70286 MIDWAYPS 230.0   circuit 1

Outage case 983                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70139 DANIELPK 230.0 to   70331 PRAIRIE  230.0   circuit 1

Outage case 984                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70142 DEERCREK 115.0 to   70463 WATERTON 115.0   circuit 1

Outage case 985                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70153 DERBY 1  115.0 to   70040 ARSENAL  115.0   circuit 1

Outage case 986                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70154 DERBY 2  115.0 to   70216 HAVANA1  115.0   circuit 1

Outage case 987                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70156 DILLON   230.0 to   70072 CABINCRK 230.0   circuit 1

Outage case 988                Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70162 EAST     115.0 to   70430 TOLGATE1 115.0   circuit 1

Outage case 989                Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        70162 EAST     115.0 to   70431 TOLGATE2 115.0   circuit 1
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Outage case 990               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70163 ELATI1   230.0 to   70149 DENVTM   230.0   circuit 1
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Outage case 991               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70163 ELATI1   230.0 to   70170 ELATI2   230.0   circuit 1
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Outage case 992               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70164 ELDORADO 115.0 to   70295 NCAR     115.0   circuit 1
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Outage case 993               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70164 ELDORADO 115.0 to   70322 PLAINVW  115.0   circuit 1
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Outage case 994               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70164 ELDORADO 115.0 to   70365 ROCKYFLA 115.0   circuit 1
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Outage case 995               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70164 ELDORADO 115.0 to   70444 VALMONT  115.0   circuit 1
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Outage case 996               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70165 ENGLE3TP 115.0 to   70168 ENGLEWD3 115.0   circuit 1
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Outage case 997               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70165 ENGLE3TP 115.0 to   70263 LITTLET1 115.0   circuit 1
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Outage case 998               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70166 ENGLEWD1 115.0 to   70384 SHERIDAN 115.0   circuit 1
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Outage case 999               Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70167 ENGLEWD2 115.0 to   70037 ARAPAHOB 115.0   circuit 1
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Outage case 1000              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70169 ENNIS    115.0 to   70234 HUDSON   115.0   circuit 1
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Outage case 1001              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70172 FED CNTR 115.0 to   70173 FEDCTRTP 115.0   circuit 1
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Outage case 1002              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70173 FEDCTRTP 115.0 to   70148 DENVTM   115.0   circuit 1
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Outage case 1003              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70175 FEDERHT2 115.0 to   70066 BROMFLD2 115.0   circuit 1
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Outage case 1004              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70191 FTLUPTON 115.0 to   70127 COORSREC 115.0   circuit 1
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Outage case 1005              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70191 FTLUPTON 115.0 to   70234 HUDSON   115.0   circuit 1
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Outage case 1006              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70191 FTLUPTON 115.0 to   70450 VASQUEZ  115.0   circuit 1
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Outage case 1007              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70192 FTLUPTON 230.0 to   70048 GREENVAL 230.0   circuit 1
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Outage case 1008              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70192 FTLUPTON 230.0 to   70311 PAWNEE   230.0   circuit 1
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Outage case 1009              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70192 FTLUPTON 230.0 to   70362 RIVERDAL 230.0   circuit 1
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Outage case 1010              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70192 FTLUPTON 230.0 to   70461 WASHINGT 230.0   circuit 1
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Outage case 1011              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70194 FULTONTS 115.0 to   70171 ERIETAP  115.0   circuit 1
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Outage case 1012              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70197 GEORGETN 115.0 to   70218 HENDERPS 115.0   circuit 1
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Outage case 1013              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70198 GILCREST 115.0 to   70450 VASQUEZ  115.0   circuit 1
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Outage case 1014              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70200 GLENN PS 230.0 to   70107 CHEROKEE 230.0   circuit 1
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Outage case 1015              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70200 GLENN PS 230.0 to   70461 WASHINGT 230.0   circuit 1
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Outage case 1016              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70202 GODFRETP 115.0 to   70198 GILCREST 115.0   circuit 1
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Outage case 1017              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70202 GODFRETP 115.0 to   70209 GREELEY  115.0   circuit 1
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Outage case 1018              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70202 GODFRETP 115.0 to   70240 JOHNSTN  115.0   circuit 1
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Outage case 1019              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70208 GRAY ST  115.0 to   70045 BANCROFT 115.0   circuit 1
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Outage case 1020              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70208 GRAY ST  115.0 to   70148 DENVTM   115.0   circuit 1
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Outage case 1021              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70208 GRAY ST  115.0 to   70402 SOUTH 2  115.0   circuit 1
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Outage case 1022              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70209 GREELEY  115.0 to   70290 MONFORT  115.0   circuit 1
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Outage case 1023              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70209 GREELEY  115.0 to   70470 WELD  PS 115.0   circuit 1
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Outage case 1024              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70212 GREENWD  230.0 to   70112 CLARK    230.0   circuit 1
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Outage case 1025              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70212 GREENWD  230.0 to   70331 PRAIRIE  230.0   circuit 1
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Outage case 1026              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70212 GREENWD  230.0 to   70428 TECH CTR 230.0   circuit 1
Outage case 1027              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70216 HAVANA1  115.0 to   70537 FITZSMNS 115.0   circuit 1
Outage case 1028              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70217 HAVANA2  115.0 to   70162 EAST     115.0   circuit 1
Outage case 1029              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70224 HOGBACK  115.0 to   70050 BERGENPK 115.0   circuit 1
Outage case 1030              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70224 HOGBACK  115.0 to   70400 SODALAKE 115.0   circuit 1
Outage case 1031              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70237 IDAHOSPG 230.0 to   70072 CABINCRK 230.0   circuit 1
Outage case 1032              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70239 JEWELL2  230.0 to   70260 LEETSDAL 230.0   circuit 1
Outage case 1033              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70241 JORDAN   230.0 to   70283 MEADOWHL 230.0   circuit 1
Outage case 1034              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70242 KENDRICK 115.0 to   70045 BANCROFT 115.0   circuit 1
Outage case 1035              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70244 LAFAYETT 115.0 to   70171 ERIETAP  115.0   circuit 1
Outage case 1036              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70251 LAKEWOD1 115.0 to   70208 GRAY ST  115.0   circuit 1
Outage case 1037              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70252 LAKEWOD2 115.0 to   70208 GRAY ST  115.0   circuit 1
Outage case 1038              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70259 LEETSDAL 115.0 to   70215 HARRISPS 115.0   circuit 1
Outage case 1039              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70259 LEETSDAL 115.0 to   70443 UNIVRSTP 115.0   circuit 1
Outage case 1040              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70260 LEETSDAL 230.0 to   70530 MONACO   230.0   circuit 1
Outage case 1041              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70261 LEGGETT  230.0 to   70297 NIWOT    230.0   circuit 1
Outage case 1042              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70262 LEYDEN   115.0 to   70322 PLAINVW  115.0   circuit 1
Outage case 1043              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70262 LEYDEN   115.0 to   70340 QUAKER1  115.0   circuit 1
Outage case 1044              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70263 LITTLET1 115.0 to   70264 LITTLET2 115.0   circuit 1
Outage case 1045              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70264 LITTLET2 115.0 to   70463 WATERTON 115.0   circuit 1
Outage case 1046              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70265 LOOKOUT  115.0 to   70224 HOGBACK  115.0   circuit 1
Outage case 1047              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70265 LOOKOUT  115.0 to   70342 QUAKERTP 115.0   circuit 1
Outage case 1048              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70072 CABINCRK 230.0   circuit 2
Outage case 1049              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70100 CHATFLD  230.0   circuit 1
Outage case 1050              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70237 IDAHOSPG 230.0   circuit 1
Outage case 1051              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70261 LEGGETT  230.0   circuit 1
Outage case 1052              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70355 RIDGE    230.0   circuit 1
Outage case 1053              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70480 WESTPS   230.0   circuit 1
Outage case 1054              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70266 LOOKOUT  230.0 to   70570 INDIANA  230.0   circuit 1
Outage case 1055              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70269 LOUISVIL 115.0 to   70066 BROMFLD2 115.0   circuit 1
Outage case 1056              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70276 MAPLETO1 115.0 to   70300 NORTH547 115.0   circuit 1
Outage case 1057              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70279 MARTIN 1 115.0 to   70463 WATERTON 115.0   circuit 1
Outage case 1058              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70280 MARTIN 2 115.0 to   70463 WATERTON 115.0   circuit 1
Outage case 1059              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70284 SURREYRG 230.0 to   70551 MURPHY   230.0   circuit 1
Outage case 1060              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70291 MONROEPS 230.0 to   70170 ELATI2   230.0   circuit 1
Outage case 1061              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70291 MONROEPS 230.0 to   70260 LEETSDAL 230.0   circuit 1
Outage case 1062              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70297 NIWOT    230.0 to   70213 GUNBARRE 230.0   circuit 1
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Outage case 1063              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70298 NORTH PS 115.0 to   70377 SANDOWN  115.0   circuit 1

Outage case 1064              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70307 P.VALLEY 115.0 to   70191 FTLUPTON 115.0   circuit 1

Outage case 1065              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70311 PAWNEE   230.0 to   70139 DANIELPK 230.0   circuit 1

Outage case 1066              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70311 PAWNEE   230.0 to   70343 QUINCY   230.0   circuit 1

Outage case 1067              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70323 PLATTEPS 115.0 to   70039 ARGO     115.0   circuit 1

Outage case 1068              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70323 PLATTEPS 115.0 to   70148 DENVTM   115.0   circuit 1

Outage case 1069              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70324 LACOMBE  230.0 to   70149 DENVTM   230.0   circuit 1

Outage case 1070              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70328 PORTAL   115.0 to   70218 HENDERPS 115.0   circuit 1

Outage case 1071              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70340 QUAKER1  115.0 to   70341 QUAKER2  115.0   circuit 1

Outage case 1072              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70342 QUAKERTP 115.0 to   70173 FEDCTRTP 115.0   circuit 1

Outage case 1073              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70342 QUAKERTP 115.0 to   70341 QUAKER2  115.0   circuit 1

Outage case 1074              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70343 QUINCY   230.0 to   70396 SMOKYHIL 230.0   circuit 1

Outage case 1075              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70345 RALSTON1 115.0 to   70354 RIDGE    115.0   circuit 1

Outage case 1076              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70346 RALSTON2 115.0 to   70365 ROCKYFLA 115.0   circuit 1

Outage case 1077              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70251 LAKEWOD1 115.0   circuit 1

Outage case 1078              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70252 LAKEWOD2 115.0   circuit 1

Outage case 1079              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70262 LEYDEN   115.0   circuit 1

Outage case 1080              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70346 RALSTON2 115.0   circuit 1

Outage case 1081              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70354 RIDGE    115.0 to   70369 RUSSELL  115.0   circuit 1

Outage case 1082              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70368 ROSEDALE 115.0 to   70439 UNC      115.0   circuit 1

Outage case 1083              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70368 ROSEDALE 115.0 to   70470 WELD  PS 115.0   circuit 1

Outage case 1084              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70369 RUSSELL  115.0 to   70041 ARVADA   115.0   circuit 1

Outage case 1085              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70377 SANDOWN  115.0 to   70277 MAPLETO2 115.0   circuit 1

Outage case 1086              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70382 SEMPER   115.0 to   70065 BROMFLD1 115.0   circuit 1

Outage case 1087              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70382 SEMPER   115.0 to   70174 FEDERHT1 115.0   circuit 1

Outage case 1088              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70392 SKYRANCH 230.0 to   70432 TOWER    230.0   circuit 1

Outage case 1089              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70393 SKYRANCT 230.0 to   70396 SMOKYHIL 230.0   circuit 1

Outage case 1090              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70395 SMOKYHIL 115.0 to   70416 STRASBRG 115.0   circuit 1

Outage case 1091              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70395 SMOKYHIL 115.0 to   70430 TOLGATE1 115.0   circuit 1

Outage case 1092              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70395 SMOKYHIL 115.0 to   70431 TOLGATE2 115.0   circuit 1

Outage case 1093              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70395 SMOKYHIL 115.0 to   70521 PEAKVIEW 115.0   circuit 1

Outage case 1094              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70396 SMOKYHIL 230.0 to   70046 BUCKLEY2 230.0   circuit 1

Outage case 1095              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70396 SMOKYHIL 230.0 to   70067 BUCKLEY1 230.0   circuit 1

Outage case 1096              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70396 SMOKYHIL 230.0 to   70283 MEADOWHL 230.0   circuit 1

Outage case 1097              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70398 SOUTH1TP 115.0 to   70037 ARAPAHOB 115.0   circuit 1

Outage case 1098              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70398 SOUTH1TP 115.0 to   70045 BANCROFT 115.0   circuit 1

Outage case 1099              Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        70400 SODALAKE 115.0 to   70023 ALLISON  115.0   circuit 1
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Outage case 1100              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70400 SODALAKE 115.0 to   70142 DEERCREK 115.0   circuit 1
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Outage case 1101              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70400 SODALAKE 115.0 to   70429 TINYTOWN 115.0   circuit 1
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Outage case 1102              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70401 SOUTH 1  115.0 to   70398 SOUTH1TP 115.0   circuit 1
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Outage case 1103              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   70048 GREENVAL 230.0   circuit 1
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Outage case 1104              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   70192 FTLUPTON 230.0   circuit 1
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Outage case 1105              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   70192 FTLUPTON 230.0   circuit 2
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Outage case 1106              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   70297 NIWOT    230.0   circuit 1
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Outage case 1107              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   70474 WINDSOR  230.0   circuit 1
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Outage case 1108              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70424 SUNSHTAP 115.0 to   70423 SUNSHINE 115.0   circuit 1
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Outage case 1109              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70427 TARRYALL 230.0 to   70139 DANIELPK 230.0   circuit 1
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Outage case 1110              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70428 TECH CTR 230.0 to   70417 SULLIVN  230.0   circuit 1
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Outage case 1111              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70432 TOWER    230.0 to   70396 SMOKYHIL 230.0   circuit 1
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Outage case 1112              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70439 UNC      115.0 to   70290 MONFORT  115.0   circuit 1
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Outage case 1113              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70441 UNIVERS1 115.0 to   70442 UNIVERS2 115.0   circuit 1
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Outage case 1114              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70441 UNIVERS1 115.0 to   70443 UNIVRSTP 115.0   circuit 1
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Outage case 1115              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70442 UNIVERS2 115.0 to   70036 ARAPAHOA 115.0   circuit 1
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Outage case 1116              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70059 BO TERM  115.0   circuit 2
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Outage case 1117              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70065 BROMFLD1 115.0   circuit 1
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Outage case 1118              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70244 LAFAYETT 115.0   circuit 1
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Outage case 1119              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70269 LOUISVIL 115.0   circuit 1
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Outage case 1120              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70444 VALMONT  115.0 to   70345 RALSTON1 115.0   circuit 1
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Outage case 1121              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70447 VALMONT  230.0 to   70410 ST.VRAIN 230.0   circuit 1
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Outage case 1122              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70447 VALMONT  230.0 to   70543 SIMMS    230.0   circuit 1
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Outage case 1123              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70463 WATERTON 115.0 to   70522 ROXBOROU 115.0   circuit 1
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Outage case 1124              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70464 WATERTON 230.0 to   70100 CHATFLD  230.0   circuit 1
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Outage case 1125              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70464 WATERTON 230.0 to   70278 MARCY    230.0   circuit 1
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Outage case 1126              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70470 WELD  PS 115.0 to   70240 JOHNSTN  115.0   circuit 1
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Outage case 1127              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70471 WELD  PS 230.0 to   70410 ST.VRAIN 230.0   circuit 1
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Outage case 1128              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70480 WESTPS   230.0 to   70149 DENVTM   230.0   circuit 1
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Outage case 1129              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70491 TOLGATE  230.0 to   70239 JEWELL2  230.0   circuit 1
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Outage case 1130              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70512 JEWELL1  230.0 to   70417 SULLIVN  230.0   circuit 1
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Outage case 1131              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70527 SANTEFE  230.0 to   70139 DANIELPK 230.0   circuit 1
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Outage case 1132              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70530 MONACO   230.0 to   70212 GREENWD  230.0   circuit 1
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Outage case 1133              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70531 AIR LIQ  115.0 to   70402 SOUTH 2  115.0   circuit 1
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Outage case 1134              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70537 FITZSMNS 115.0 to   70162 EAST     115.0   circuit 1
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Outage case 1135              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70543 SIMMS    230.0 to   70570 INDIANA  230.0   circuit 1
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Outage case 1136              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70551 MURPHY   230.0 to   70396 SMOKYHIL 230.0   circuit 1
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Outage case 1137              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73002 AIRPORT  115.0 to   73026 BOYD     115.0   circuit 1
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Outage case 1138              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73002 AIRPORT  115.0 to   73432 KODAKWTP 115.0   circuit 1
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Outage case 1139              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73003 AKRON    115.0 to   73020 BEAVERCK 115.0   circuit 1
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Outage case 1140              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73003 AKRON    115.0 to   73372 OTIS LM  115.0   circuit 1
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Outage case 1141              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73042 CASPERLM 115.0   circuit 1
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Outage case 1142              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73042 CASPERLM 115.0   circuit 2
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Outage case 1143              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73062 FREMONT  115.0   circuit 1
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Outage case 1144              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73137 MIRACLEM 115.0   circuit 1
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Outage case 1145              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73137 MIRACLEM 115.0   circuit 2
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Outage case 1146              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73004 ALCOVA   115.0 to   73162 RADERVIL 115.0   circuit 1
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Outage case 1147              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73005 ALVIN    115.0 to   73175 SANDHILL 115.0   circuit 1
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Outage case 1148              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73005 ALVIN    115.0 to   73210 WAUNETA  115.0   circuit 1
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Outage case 1149              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73005 ALVIN    115.0 to   73304 CRETESWT 115.0   circuit 1
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Outage case 1150              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73006 ANTON    115.0 to   73010 ARICKARE 115.0   circuit 1
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Outage case 1151              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73006 ANTON    115.0 to   73125 LSCHANCE 115.0   circuit 1
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Outage case 1152              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73007 ARAPASUB 115.0 to   73207 WAANIBE  115.0   circuit 1
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Outage case 1153              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73043 CHEYENNE 115.0   circuit 1
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Outage case 1154              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73140 MYERS TP 115.0   circuit 1
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Outage case 1155              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73152 PINEBLUF 115.0   circuit 1
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Outage case 1156              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73183 SKYLINE  115.0   circuit 1
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Outage case 1157              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73008 ARCHER   115.0 to   73480 CROWCRK  115.0   circuit 1
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Outage case 1158              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73009 ARCHER   230.0 to   73011 AULT     230.0   circuit 1
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Outage case 1159              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73009 ARCHER   230.0 to   73190 STEGALL  230.0   circuit 1
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Outage case 1160              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73009 ARCHER   230.0 to   79039 HAYDEN   230.0   circuit 1
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Outage case 1161              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73010 ARICKARE 115.0 to   73094 JOES     115.0   circuit 1
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Outage case 1162              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   73165 RAWHIDE  230.0   circuit 1
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Outage case 1163              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   73199 TIMBERLN 230.0   circuit 1
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Outage case 1164              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   73212 WELD  LM 230.0   circuit 1
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Outage case 1165              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   73212 WELD  LM 230.0   circuit 2
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Outage case 1166              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73012 AULT     345.0 to   73108 LAR.RIVR 345.0   circuit 1
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Outage case 1167              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73012 AULT     345.0 to   79014 CRAIG    345.0   circuit 1
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Outage case 1168              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73013 B.CK PS  115.0 to   73020 BEAVERCK 115.0   circuit 1
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Outage case 1169              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73014 B.CK PS  230.0 to   73192 STORY    230.0   circuit 1
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Outage case 1170              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73015 B.CK TRI 115.0 to   73020 BEAVERCK 115.0   circuit 1
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Outage case 1171              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73016 B.CK TRI 230.0 to   73192 STORY    230.0   circuit 1
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Outage case 1172              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73017 B.SANDY  115.0 to   73125 LSCHANCE 115.0   circuit 1
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Outage case 1173              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73017 B.SANDY  115.0 to   73318 LIMON    115.0   circuit 1

Outage case 1174              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73018 B.SANDY  230.0 to   73036 BURLNGTN 230.0   circuit 1

Outage case 1175              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73018 B.SANDY  230.0 to   73531 LINCOLNT 230.0   circuit 1

Outage case 1176              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73019 BASIN    115.0 to   73075 GREYBULL 115.0   circuit 1

Outage case 1177              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73019 BASIN    115.0 to   73222 WORLANTP 115.0   circuit 1

Outage case 1178              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73020 BEAVERCK 115.0 to   73031 BRUSHTAP 115.0   circuit 1

Outage case 1179              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73020 BEAVERCK 115.0 to   73065 GARY     115.0   circuit 1

Outage case 1180              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73020 BEAVERCK 115.0 to   73136 MESSEX   115.0   circuit 1

Outage case 1181              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73020 BEAVERCK 115.0 to   73464 ADENA    115.0   circuit 1

Outage case 1182              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73022 BGEORGE  115.0 to   73123 LOVELL   115.0   circuit 1

Outage case 1183              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73022 BGEORGE  115.0 to   73534 MEETSETP 115.0   circuit 1

Outage case 1184              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73023 BIJOUTAP 115.0 to   73097 KIOWA CK 115.0   circuit 1

Outage case 1185              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73023 BIJOUTAP 115.0 to   73379 FMWEST   115.0   circuit 1

Outage case 1186              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73024 BLKHLWTP 115.0 to   73044 COBBLKTP 115.0   circuit 1

Outage case 1187              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73024 BLKHLWTP 115.0 to   73145 NUNN     115.0   circuit 1

Outage case 1188              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73025 BONNY CK 115.0 to   73035 BURLNGTN 115.0   circuit 1

Outage case 1189              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73025 BONNY CK 115.0 to   73185 SO. FORK 115.0   circuit 1

Outage case 1190              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73026 BOYD     115.0 to   73050 DERBYHIL 115.0   circuit 1

Outage case 1191              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73026 BOYD     115.0 to   73114 LONETREE 115.0   circuit 1

Outage case 1192              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73026 BOYD     115.0 to   73118 LOVE E   115.0   circuit 1

Outage case 1193              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73027 BOYD     230.0 to   73078 HARMONY  230.0   circuit 1

Outage case 1194              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73027 BOYD     230.0 to   73116 LONGPEAK 230.0   circuit 1

Outage case 1195              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73028 BOYSEN   115.0 to   73045 COPPERMT 115.0   circuit 1

Outage case 1196              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73028 BOYSEN   115.0 to   73197 THERMOPL 115.0   circuit 1

Outage case 1197              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73028 BOYSEN   115.0 to   73479 HARRSBRG 115.0   circuit 1

Outage case 1198              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73029 BRIDGEPT 115.0 to   73131 MCGREW   115.0   circuit 1

Outage case 1199              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73029 BRIDGEPT 115.0 to   73236 GREENWOD 115.0   circuit 1

Outage case 1200              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73030 BRIGHTNW 115.0 to   73493 SANDCRK  115.0   circuit 1

Outage case 1201              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73030 BRIGHTNW 115.0 to   73503 ERIE TAP 115.0   circuit 1

Outage case 1202              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73031 BRUSHTAP 115.0 to   73305 EFMORGTP 115.0   circuit 1

Outage case 1203              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73034 BURL PSC 115.0 to   73209 WANIBETP 115.0   circuit 1

Outage case 1204              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73034 BURL PSC 115.0 to   73485 BURL KC  115.0   circuit 1

Outage case 1205              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73035 BURLNGTN 115.0 to   73485 BURL KC  115.0   circuit 1

Outage case 1206              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73037 BUSHNELL 115.0 to   73038 BUSHNLTP 115.0   circuit 1

Outage case 1207              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73038 BUSHNLTP 115.0 to   73096 KIMBALL  115.0   circuit 1

Outage case 1208              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73038 BUSHNLTP 115.0 to   73152 PINEBLUF 115.0   circuit 1

Outage case 1209              Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        73039 CARTERLK 115.0 to   73058 FLATIRON 115.0   circuit 1
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Outage case 1210              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73039 CARTERLK 115.0 to   73124 LOVEWTAP 115.0   circuit 1
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Outage case 1211              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73041 CARTERMT 115.0 to   73197 THERMOPL 115.0   circuit 1
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Outage case 1212              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73041 CARTERMT 115.0 to   73534 MEETSETP 115.0   circuit 1
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Outage case 1213              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73042 CASPERLM 115.0 to   73070 GLENRCKN 115.0   circuit 1
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Outage case 1214              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73043 CHEYENNE 115.0 to   73077 HAPPYJCK 115.0   circuit 1
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Outage case 1215              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73043 CHEYENNE 115.0 to   73109 LARAMIE  115.0   circuit 1
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Outage case 1216              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73043 CHEYENNE 115.0 to   73480 CROWCRK  115.0   circuit 1
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Outage case 1217              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73043 CHEYENNE 115.0 to   73504 PONNEQUI 115.0   circuit 1
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Outage case 1218              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73044 COBBLKTP 115.0 to   73201 TIMNTHTP 115.0   circuit 1
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Outage case 1219              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73045 COPPERMT 115.0 to   73162 RADERVIL 115.0   circuit 1
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Outage case 1220              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73046 DALTON   115.0 to   73179 SIDNEY   115.0   circuit 1
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Outage case 1221              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73046 DALTON   115.0 to   73236 GREENWOD 115.0   circuit 1
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Outage case 1222              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73047 DEERINGL 115.0 to   73053 ECKLEY   115.0   circuit 1
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Outage case 1223              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73047 DEERINGL 115.0 to   73142 N.YUMA   115.0   circuit 1
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Outage case 1224              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73047 DEERINGL 115.0 to   73230 YUMA     115.0   circuit 1
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Outage case 1225              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73047 DEERINGL 115.0 to   73372 OTIS LM  115.0   circuit 1
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Outage case 1226              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73048 DEL CTAP 115.0 to   73049 DELCAMIN 115.0   circuit 1
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Outage case 1227              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73048 DEL CTAP 115.0 to   73115 LONGPEAK 115.0   circuit 1
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Outage case 1228              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73048 DEL CTAP 115.0 to   73133 MEADOW   115.0   circuit 1
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Outage case 1229              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73049 DELCAMIN 115.0 to   73501 RINNVALL 115.0   circuit 1
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Outage case 1230              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73050 DERBYHIL 115.0 to   73373 VALLEYLM 115.0   circuit 1
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Outage case 1231              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73051 DIXON CK 115.0 to   73052 DRAKE RD 115.0   circuit 1
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Outage case 1232              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73051 DIXON CK 115.0 to   73089 HRSTHTAP 115.0   circuit 1
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Outage case 1233              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73051 DIXON CK 115.0 to   73149 OVERLAND 115.0   circuit 1
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Outage case 1234              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73052 DRAKE RD 115.0 to   73198 TIMBERLN 115.0   circuit 1
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Outage case 1235              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73053 ECKLEY   115.0 to   73225 WRAY TAP 115.0   circuit 1
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Outage case 1236              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73053 ECKLEY   115.0 to   73326 ROBB     115.0   circuit 1
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Outage case 1237              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73053 ECKLEY   115.0 to   73371 BETHELLM 115.0   circuit 1
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Outage case 1238              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73056 ESTES    115.0 to   73127 LYONS    115.0   circuit 1
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Outage case 1239              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73056 ESTES    115.0 to   73155 POLEHILL 115.0   circuit 1
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Outage case 1240              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73056 ESTES    115.0 to   73232 MARYLKSB 115.0   circuit 1
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Outage case 1241              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73056 ESTES    115.0 to   73233 MARYLKTP 115.0   circuit 1
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Outage case 1242              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73058 FLATIRON 115.0 to   73089 HRSTHTAP 115.0   circuit 1
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Outage case 1243              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73058 FLATIRON 115.0 to   73155 POLEHILL 115.0   circuit 1
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Outage case 1244              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73059 FLEMING  115.0 to   73080 HAXTUN   115.0   circuit 1
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Outage case 1245              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73059 FLEMING  115.0 to   73478 GALIEN   115.0   circuit 1
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Outage case 1246              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73060 FORDHAM  115.0 to   73113 LNGMNTNW 115.0   circuit 1

Outage case 1247              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73060 FORDHAM  115.0 to   73196 TERRY    115.0   circuit 1

Outage case 1248              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73060 FORDHAM  115.0 to   73437 ROGERSRD 115.0   circuit 1

Outage case 1249              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73061 FRASER   138.0 to   73220 WINDYGAP 138.0   circuit 1

Outage case 1250              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73063 FRENCHCK 115.0 to   73080 HAXTUN   115.0   circuit 1

Outage case 1251              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73063 FRENCHCK 115.0 to   73210 WAUNETA  115.0   circuit 1

Outage case 1252              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73065 GARY     115.0 to   73221 WOODROW  115.0   circuit 1

Outage case 1253              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73066 GEMCTYTP 115.0 to   73077 HAPPYJCK 115.0   circuit 1

Outage case 1254              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73066 GEMCTYTP 115.0 to   73146 OASISTAP 115.0   circuit 1

Outage case 1255              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73066 GEMCTYTP 115.0 to   73187 SPRINGCK 115.0   circuit 1

Outage case 1256              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73067 GERING   115.0 to   73131 MCGREW   115.0   circuit 1

Outage case 1257              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73067 GERING   115.0 to   73189 STEGALL  115.0   circuit 1

Outage case 1258              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73067 GERING   115.0 to   73365 EMIGRANT 115.0   circuit 1

Outage case 1259              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73070 GLENRCKN 115.0   circuit 1

Outage case 1260              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73076 GUERNTAP 115.0   circuit 1

Outage case 1261              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73153 PODOLAK  115.0   circuit 1

Outage case 1262              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73255 LINGLETP 115.0   circuit 1

Outage case 1263              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73069 GLENDO   115.0 to   73366 WAGNHNDS 115.0   circuit 1

Outage case 1264              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73071 GLENRCKS 115.0 to   73167 REFNRYTP 115.0   circuit 1

Outage case 1265              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73071 GLENRCKS 115.0 to   73366 WAGNHNDS 115.0   circuit 1

Outage case 1266              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73072 GOREPASS 138.0 to   73102 KREMLING 138.0   circuit 1

Outage case 1267              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73072 GOREPASS 138.0 to   73220 WINDYGAP 138.0   circuit 1

Outage case 1268              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73072 GOREPASS 138.0 to   79038 HAYDEN   138.0   circuit 1

Outage case 1269              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73075 GREYBULL 115.0 to   73123 LOVELL   115.0   circuit 1

Outage case 1270              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73075 GREYBULL 115.0 to   73340 NAHNEJEN 115.0   circuit 1

Outage case 1271              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73076 GUERNTAP 115.0 to   73189 STEGALL  115.0   circuit 1

Outage case 1272              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73076 GUERNTAP 115.0 to   73359 LIMESTON 115.0   circuit 1

Outage case 1273              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73076 GUERNTAP 115.0 to   73368 GUERNRRL 115.0   circuit 1

Outage case 1274              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73077 HAPPYJCK 115.0 to   73348 CORLETT  115.0   circuit 1

Outage case 1275              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73078 HARMONY  230.0 to   73199 TIMBERLN 230.0   circuit 1

Outage case 1276              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73079 HARVARD  115.0 to   73113 LNGMNTNW 115.0   circuit 1

Outage case 1277              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73081 HDOME    115.0 to   73234 JIMRDYTP 115.0   circuit 1

Outage case 1278              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73083 HELL CK  115.0 to   73084 HELL TAP 115.0   circuit 1

Outage case 1279              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73083 HELL CK  115.0 to   73174 SAGEBRSH 115.0   circuit 1

Outage case 1280              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73084 HELL TAP 115.0 to   73110 LIBERTY  115.0   circuit 1

Outage case 1281              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73084 HELL TAP 115.0 to   73185 SO. FORK 115.0   circuit 1

Outage case 1282              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73086 HORSESHO 115.0 to   73120 LOVE W   115.0   circuit 1
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Outage case 1283              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73086 HORSESHO 115.0 to   73499 BOYDLAKE 115.0   circuit 1

Outage case 1284              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73087 WESTHILL 230.0 to   73148 OSAGE    230.0   circuit 1

Outage case 1285              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73087 WESTHILL 230.0 to   73164 LANGE    230.0   circuit 1

Outage case 1286              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73088 HOYT     115.0 to   73103 L.MEADOW 115.0   circuit 1

Outage case 1287              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73088 HOYT     115.0 to   73464 ADENA    115.0   circuit 1

Outage case 1288              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73088 HOYT     115.0 to   73493 SANDCRK  115.0   circuit 1

Outage case 1289              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73089 HRSTHTAP 115.0 to   73203 TRILBY   115.0   circuit 1

Outage case 1290              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73089 HRSTHTAP 115.0 to   73235 MASONVIL 115.0   circuit 1

Outage case 1291              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73090 HYGIENE  115.0 to   73113 LNGMNTNW 115.0   circuit 1

Outage case 1292              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73090 HYGIENE  115.0 to   73127 LYONS    115.0   circuit 1

Outage case 1293              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73091 IDALIA   115.0 to   73185 SO. FORK 115.0   circuit 1

Outage case 1294              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73091 IDALIA   115.0 to   73206 VERNONTP 115.0   circuit 1

Outage case 1295              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73092 JACINTO  115.0 to   73096 KIMBALL  115.0   circuit 1

Outage case 1296              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73092 JACINTO  115.0 to   73179 SIDNEY   115.0   circuit 1

Outage case 1297              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73093 JIMREADY 115.0 to   73234 JIMRDYTP 115.0   circuit 1

Outage case 1298              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73095 KERSEYTP 115.0 to   73158 PROSPEC  115.0   circuit 1

Outage case 1299              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73095 KERSEYTP 115.0 to   73211 WELD  LM 115.0   circuit 1

Outage case 1300              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73096 KIMBALL  115.0 to   73355 KIMBALLC 115.0   circuit 1

Outage case 1301              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73097 KIOWA CK 115.0 to   73147 ORCHARD  115.0   circuit 1

Outage case 1302              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73097 KIOWA CK 115.0 to   73158 PROSPEC  115.0   circuit 1

Outage case 1303              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73097 KIOWA CK 115.0 to   73213 WIGGINS  115.0   circuit 1

Outage case 1304              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73098 KODAK    115.0 to   73369 KODAKETP 115.0   circuit 1

Outage case 1305              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73098 KODAK    115.0 to   73432 KODAKWTP 115.0   circuit 1

Outage case 1306              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73099 KORTES   115.0 to   73100 KORTESTP 115.0   circuit 1

Outage case 1307              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73099 KORTES   115.0 to   73137 MIRACLEM 115.0   circuit 1

Outage case 1308              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73100 KORTESTP 115.0 to   73137 MIRACLEM 115.0   circuit 1

Outage case 1309              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73100 KORTESTP 115.0 to   73176 SEMINOE  115.0   circuit 1

Outage case 1310              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73102 KREMLING 138.0 to   73204 TROUBLE  138.0   circuit 1

Outage case 1311              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73103 L.MEADOW 115.0 to   73213 WIGGINS  115.0   circuit 1

Outage case 1312              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73104 LAGRANGE 115.0 to   73173 ROUNDTOP 115.0   circuit 1

Outage case 1313              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73104 LAGRANGE 115.0 to   73189 STEGALL  115.0   circuit 1

Outage case 1314              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73105 LAPORTE  115.0 to   73298 BELLVUTP 115.0   circuit 1

Outage case 1315              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73105 LAPORTE  115.0 to   73506 LAPORTAP 115.0   circuit 1

Outage case 1316              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73106 LAPORTE  230.0 to   73165 RAWHIDE  230.0   circuit 1

Outage case 1317              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73107 LAR.RIVR 230.0 to   73190 STEGALL  230.0   circuit 1

Outage case 1318              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73108 LAR.RIVR 345.0 to   73193 STORY    345.0   circuit 1

Outage case 1319              Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        73109 LARAMIE  115.0 to   73362 MEDBOWTP 115.0   circuit 1
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Outage case 1320              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73111 LINDEN   115.0 to   73156 POUDRE   115.0   circuit 1
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Outage case 1321              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73111 LINDEN   115.0 to   73198 TIMBERLN 115.0   circuit 1
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Outage case 1322              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73112 LINGLE   115.0 to   73255 LINGLETP 115.0   circuit 1
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Outage case 1323              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73113 LNGMNTNW 115.0 to   73133 MEADOW   115.0   circuit 1
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Outage case 1324              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73115 LONGPEAK 115.0 to   73196 TERRY    115.0   circuit 1
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Outage case 1325              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73117 LOST CK  115.0 to   73370 LOSTCKTP 115.0   circuit 1
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Outage case 1326              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73118 LOVE E   115.0 to   73499 BOYDLAKE 115.0   circuit 1
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Outage case 1327              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73120 LOVE W   115.0 to   73124 LOVEWTAP 115.0   circuit 1
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Outage case 1328              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73123 LOVELL   115.0 to   73228 YELLOWBR 115.0   circuit 1
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Outage case 1329              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73123 LOVELL   115.0 to   73228 YELLOWBR 115.0   circuit 2
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Outage case 1330              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73124 LOVEWTAP 115.0 to   73373 VALLEYLM 115.0   circuit 1
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Outage case 1331              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73125 LSCHANCE 115.0 to   73194 SWOODROW 115.0   circuit 1
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Outage case 1332              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73126 LYMAN    115.0 to   73202 TORRNGTN 115.0   circuit 1
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Outage case 1333              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73126 LYMAN    115.0 to   73256 LYMANTP  115.0   circuit 1
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Outage case 1334              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73127 LYONS    115.0 to   73171 ROCKMTCM 115.0   circuit 1
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Outage case 1335              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73128 MAY      115.0 to   73146 OASISTAP 115.0   circuit 1
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Outage case 1336              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73134 MED BOW  115.0 to   73362 MEDBOWTP 115.0   circuit 1
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Outage case 1337              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73136 MESSEX   115.0 to   73191 STERLING 115.0   circuit 1
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Outage case 1338              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73137 MIRACLEM 115.0 to   73146 OASISTAP 115.0   circuit 1
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Outage case 1339              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73137 MIRACLEM 115.0 to   73177 SEMINOTP 115.0   circuit 1
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Outage case 1340              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73137 MIRACLEM 115.0 to   73362 MEDBOWTP 115.0   circuit 1
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Outage case 1341              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73139 MYERS    115.0 to   73140 MYERS TP 115.0   circuit 1
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Outage case 1342              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73140 MYERS TP 115.0 to   73154 POLE CK  115.0   circuit 1
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Outage case 1343              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73142 N.YUMA   115.0 to   73166 REDWILLW 115.0   circuit 1
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Outage case 1344              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73143 N.YUMA   230.0 to   73180 SIDNEY   230.0   circuit 1
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Outage case 1345              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73143 N.YUMA   230.0 to   73192 STORY    230.0   circuit 1
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Outage case 1346              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73143 N.YUMA   230.0 to   73224 WRAY     230.0   circuit 1
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Outage case 1347              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73144 NCWCD    138.0 to   73220 WINDYGAP 138.0   circuit 1
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Outage case 1348              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73145 NUNN     115.0 to   73172 ROCKPRTP 115.0   circuit 1
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Outage case 1349              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73148 OSAGE    230.0 to   73283 YELOWCRK 230.0   circuit 1
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Outage case 1350              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73149 OVERLAND 115.0 to   73506 LAPORTAP 115.0   circuit 1
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Outage case 1351              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73150 PEETZ    115.0 to   73179 SIDNEY   115.0   circuit 1
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Outage case 1352              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73150 PEETZ    115.0 to   73191 STERLING 115.0   circuit 1
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Outage case 1353              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73151 PILOT BU 115.0 to   73217 WINDRIVT 115.0   circuit 1
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Outage case 1354              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73151 PILOT BU 115.0 to   73479 HARRSBRG 115.0   circuit 1
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Outage case 1355              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73154 POLE CK  115.0 to   73161 QUALLS   115.0   circuit 1
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Outage case 1356              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73154 POLE CK  115.0 to   73173 ROUNDTOP 115.0   circuit 1
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Outage case 1357              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73156 POUDRE   115.0 to   73169 RICHARDS 115.0   circuit 1
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Outage case 1358              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73156 POUDRE   115.0 to   73506 LAPORTAP 115.0   circuit 1
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Outage case 1359              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73158 PROSPEC  115.0 to   73370 LOSTCKTP 115.0   circuit 1
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Outage case 1360              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73159 PROSPVAL 115.0 to   73493 SANDCRK  115.0   circuit 1
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Outage case 1361              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73162 RADERVIL 115.0 to   73336 ERVAYBAS 115.0   circuit 1
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Outage case 1362              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73164 LANGE    230.0 to   73186 LOOKOUT  230.0   circuit 1
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Outage case 1363              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73165 RAWHIDE  230.0 to   73199 TIMBERLN 230.0   circuit 1
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Outage case 1364              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73165 RAWHIDE  230.0 to   73199 TIMBERLN 230.0   circuit 2
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Outage case 1365              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73166 REDWILLW 115.0 to   73208 WAGES    115.0   circuit 1
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Outage case 1366              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73168 RENO     230.0 to   73276 TEKLA    230.0   circuit 1
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Outage case 1367              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73169 RICHARDS 115.0 to   73201 TIMNTHTP 115.0   circuit 1
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Outage case 1368              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73170 RIVERTON 115.0 to   73217 WINDRIVT 115.0   circuit 1
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Outage case 1369              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73172 ROCKPRTP 115.0 to   73504 PONNEQUI 115.0   circuit 1
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Outage case 1370              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73173 ROUNDTOP 115.0 to   73178 SENTINEL 115.0   circuit 1
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Outage case 1371              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73175 SANDHILL 115.0 to   73223 WRAY     115.0   circuit 1
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Outage case 1372              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73176 SEMINOE  115.0 to   73177 SEMINOTP 115.0   circuit 1
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Outage case 1373              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73177 SEMINOTP 115.0 to   73182 SINCLAIR 115.0   circuit 1
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Outage case 1374              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73180 SIDNEY   230.0 to   73190 STEGALL  230.0   circuit 1
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Outage case 1375              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73182 SINCLAIR 115.0 to   73205 TROWBRDG 115.0   circuit 1
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Outage case 1376              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73183 SKYLINE  115.0 to   73375 WARRENLM 115.0   circuit 1
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Outage case 1377              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73184 SMOKYHLW 115.0 to   73209 WANIBETP 115.0   circuit 1
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Outage case 1378              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73186 LOOKOUT  230.0 to   73283 YELOWCRK 230.0   circuit 1
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Outage case 1379              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73186 LOOKOUT  230.0 to   73294 HUGHES   230.0   circuit 1
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Outage case 1380              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73187 SPRINGCK 115.0 to   73367 FTSANDER 115.0   circuit 1
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Outage case 1381              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73188 STEGALDC 230.0 to   73190 STEGALL  230.0   circuit 1
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Outage case 1382              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73189 STEGALL  115.0 to   73256 LYMANTP  115.0   circuit 1
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Outage case 1383              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73189 STEGALL  115.0 to   73365 EMIGRANT 115.0   circuit 1
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Outage case 1384              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73190 STEGALL  230.0 to   73087 WESTHILL 230.0   circuit 1
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Outage case 1385              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73191 STERLING 115.0 to   73478 GALIEN   115.0   circuit 1
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Outage case 1386              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73194 SWOODROW 115.0 to   73221 WOODROW  115.0   circuit 1
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Outage case 1387              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73195 TCAPS    115.0 to   73197 THERMOPL 115.0   circuit 1
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Outage case 1388              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73195 TCAPS    115.0 to   73234 JIMRDYTP 115.0   circuit 1
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Outage case 1389              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73196 TERRY    115.0 to   73437 ROGERSRD 115.0   circuit 1
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Outage case 1390              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73196 TERRY    115.0 to   73503 ERIE TAP 115.0   circuit 1
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Outage case 1391              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73197 THERMOPL 115.0 to   73222 WORLANTP 115.0   circuit 1
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Outage case 1392              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73200 TIMNATH  115.0 to   73201 TIMNTHTP 115.0   circuit 1
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Outage case 1393              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73204 TROUBLE  138.0 to   73220 WINDYGAP 138.0   circuit 1

Outage case 1394              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73206 VERNONTP 115.0 to   73223 WRAY     115.0   circuit 1

Outage case 1395              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73207 WAANIBE  115.0 to   73209 WANIBETP 115.0   circuit 1

Outage case 1396              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73208 WAGES    115.0 to   73210 WAUNETA  115.0   circuit 1

Outage case 1397              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73211 WELD  LM 115.0 to   73369 KODAKETP 115.0   circuit 1

Outage case 1398              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73214 WILDCAT  115.0 to   73365 EMIGRANT 115.0   circuit 1

Outage case 1399              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73216 WINDRIVR 115.0 to   73217 WINDRIVT 115.0   circuit 1

Outage case 1400              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73218 WINDSOR  115.0 to   73369 KODAKETP 115.0   circuit 1

Outage case 1401              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73223 WRAY     115.0 to   73225 WRAY TAP 115.0   circuit 1

Outage case 1402              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73225 WRAY TAP 115.0 to   73331 WRAYWAPA 115.0   circuit 1

Outage case 1403              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73231 MARYLKPP 115.0 to   73233 MARYLKTP 115.0   circuit 1

Outage case 1404              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73232 MARYLKSB 115.0 to   73233 MARYLKTP 115.0   circuit 1

Outage case 1405              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73255 LINGLETP 115.0 to   73256 LYMANTP  115.0   circuit 1

Outage case 1406              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73297 BELLEVUE 115.0 to   73298 BELLVUTP 115.0   circuit 1

Outage case 1407              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73298 BELLVUTP 115.0 to   73325 RIPPLE   115.0   circuit 1

Outage case 1408              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73305 EFMORGTP 115.0 to   73310 FME      115.0   circuit 1

Outage case 1409              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73305 EFMORGTP 115.0 to   73378 FMN      115.0   circuit 1

Outage case 1410              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73305 EFMORGTP 115.0 to   73379 FMWEST   115.0   circuit 1

Outage case 1411              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73311 FMS      115.0 to   73377 EXCEL    115.0   circuit 1

Outage case 1412              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73311 FMS      115.0 to   73379 FMWEST   115.0   circuit 1

Outage case 1413              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73335 DUTONBAS 115.0 to   73336 ERVAYBAS 115.0   circuit 1

Outage case 1414              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73348 CORLETT  115.0 to   73375 WARRENLM 115.0   circuit 1

Outage case 1415              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73354 JACKLOPE 115.0 to   73364 WARMSPGS 115.0   circuit 1

Outage case 1416              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73361 MEDBOWHS 115.0 to   73362 MEDBOWTP 115.0   circuit 1

Outage case 1417              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73364 WARMSPGS 115.0 to   73366 WAGNHNDS 115.0   circuit 1

Outage case 1418              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73371 BETHELLM 115.0 to   73374 VERNONLM 115.0   circuit 1

Outage case 1419              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73380 ARIES    230.0 to   73419 RD NIXON 230.0   circuit 1

Outage case 1420              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73380 ARIES    230.0 to   73421 STETSON  230.0   circuit 1

Outage case 1421              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73384 BIRDSALE 115.0 to   73387 BIRDSALW 115.0   circuit 1

Outage case 1422              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73384 BIRDSALE 115.0 to   73422 TEMPLTON 115.0   circuit 1

Outage case 1423              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73387 BIRDSALW 115.0 to   73411 MESA12KV 115.0   circuit 1

Outage case 1424              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73387 BIRDSALW 115.0 to   73425 WOODMEN  115.0   circuit 1

Outage case 1425              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73388 BRADLEY  115.0 to   73404 FOUNTAIN 115.0   circuit 1

Outage case 1426              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73388 BRADLEY  115.0 to   73409 KELKER W 115.0   circuit 1

Outage case 1427              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73389 BRIARGAT 115.0 to   73391 CTTNWD N 115.0   circuit 1

Outage case 1428              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73389 BRIARGAT 115.0 to   73410 KETTLECK 115.0   circuit 1

Outage case 1429              Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        73390 CSOC     115.0 to   73405 GEESEN   115.0   circuit 1
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Outage case 1430              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73391 CTTNWD N 115.0 to   73410 KETTLECK 115.0   circuit 1
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Outage case 1431              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73392 CTTNWD N 230.0 to   73394 CTTNWD S 230.0   circuit 1
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Outage case 1432              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73392 CTTNWD N 230.0 to   73477 FULLER   230.0   circuit 1
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Outage case 1433              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73393 CTTNWD S 115.0 to   73406 IND PARK 115.0   circuit 1
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Outage case 1434              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73393 CTTNWD S 115.0 to   73422 TEMPLTON 115.0   circuit 1
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Outage case 1435              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73393 CTTNWD S 115.0 to   73425 WOODMEN  115.0   circuit 1
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Outage case 1436              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73393 CTTNWD S 115.0 to   73490 RAMPART  115.0   circuit 1
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Outage case 1437              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73394 CTTNWD S 230.0 to   73421 STETSON  230.0   circuit 1
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Outage case 1438              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73397 DRAKE N  115.0 to   73398 DRAKE S  115.0   circuit 1
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Outage case 1439              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73397 DRAKE N  115.0 to   73430 FAIRVWCS 115.0   circuit 1
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Outage case 1440              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73397 DRAKE N  115.0 to   73494 ATMELDTP 115.0   circuit 1
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Outage case 1441              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73398 DRAKE S  115.0 to   73409 KELKER W 115.0   circuit 1
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Outage case 1442              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73398 DRAKE S  115.0 to   73490 RAMPART  115.0   circuit 1
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Outage case 1443              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73400 EMIL AND 115.0 to   73414 MONUMENT 115.0   circuit 1
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Outage case 1444              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73402 FALCONMV 115.0 to   73405 GEESEN   115.0   circuit 1
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Outage case 1445              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73402 FALCONMV 115.0 to   73481 FULLER   115.0   circuit 1
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Outage case 1446              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73404 FOUNTAIN 115.0 to   73417 RD NIXON 115.0   circuit 1
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Outage case 1447              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73405 GEESEN   115.0 to   73416 RANCHO   115.0   circuit 1
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Outage case 1448              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73407 KELKER   230.0 to   73419 RD NIXON 230.0   circuit 1
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Outage case 1449              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73408 KELKER E 115.0 to   73409 KELKER W 115.0   circuit 1
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Outage case 1450              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73408 KELKER E 115.0 to   73422 TEMPLTON 115.0   circuit 1
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Outage case 1451              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73408 KELKER E 115.0 to   73495 ATMELKTP 115.0   circuit 1
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Outage case 1452              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73409 KELKER W 115.0 to   73420 ROCKISLD 115.0   circuit 1
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Outage case 1453              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73410 KETTLECK 115.0 to   73414 MONUMENT 115.0   circuit 1
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Outage case 1454              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73411 MESA12KV 115.0 to   73430 FAIRVWCS 115.0   circuit 1
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Outage case 1455              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73412 MIDWAYBR 115.0 to   73416 RANCHO   115.0   circuit 1
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Outage case 1456              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73412 MIDWAYBR 115.0 to   73417 RD NIXON 115.0   circuit 1
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Outage case 1457              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73413 MIDWAYBR 230.0 to   73419 RD NIXON 230.0   circuit 1
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Outage case 1458              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73419 RD NIXON 230.0 to   73477 FULLER   230.0   circuit 1
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Outage case 1459              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73420 ROCKISLD 115.0 to   73422 TEMPLTON 115.0   circuit 1
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Outage case 1460              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73432 KODAKWTP 115.0 to   73433 WINDSOR1 115.0   circuit 1
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Outage case 1461              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73494 ATMELDTP 115.0 to   73496 ATMELSUB 115.0   circuit 1
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Outage case 1462              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73495 ATMELKTP 115.0 to   73496 ATMELSUB 115.0   circuit 1
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Outage case 1463              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73501 RINNVALL 115.0 to   73502 DACONO   115.0   circuit 1
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Outage case 1464              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73502 DACONO   115.0 to   73503 ERIE TAP 115.0   circuit 1
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Outage case 1465              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73531 LINCOLNT 230.0 to   73413 MIDWAYBR 230.0   circuit 1
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Outage case 1466              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73551 W CANON  230.0 to   73413 MIDWAYBR 230.0   circuit 1
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Outage case 1467              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79001 ARTESIA  138.0 to   79038 HAYDEN   138.0   circuit 1
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Outage case 1468              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79001 ARTESIA  138.0 to   79067 VERNAL   138.0   circuit 1
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Outage case 1469              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79002 AXIAL    138.0 to   79038 HAYDEN   138.0   circuit 1
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Outage case 1470              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79002 AXIAL    138.0 to   79046 MEEKER   138.0   circuit 1
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Outage case 1471              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79005 BEARS    345.0 to   79014 CRAIG    345.0   circuit 1
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Outage case 1472              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79007 BLUEMESA 115.0 to   79020 CURECANT 115.0   circuit 1
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Outage case 1473              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79007 BLUEMESA 115.0 to   79084 LAKECITY 115.0   circuit 1
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Outage case 1474              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79007 BLUEMESA 115.0 to   79090 SKITO    115.0   circuit 1
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Outage case 1475              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79011 CAHONE   115.0 to   79052 NUCLA    115.0   circuit 1
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Outage case 1476              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79011 CAHONE   115.0 to   79117 Y.JACK 2 115.0   circuit 1
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Outage case 1477              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79011 CAHONE   115.0 to   79180 GRCUT TP 115.0   circuit 1
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Outage case 1478              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79012 CORTEZ   115.0 to   79073 BLUEDOOR 115.0   circuit 1
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Outage case 1479              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79012 CORTEZ   115.0 to   79075 EMPIRETS 115.0   circuit 1
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Outage case 1480              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79013 CRAIG    230.0 to   79039 HAYDEN   230.0   circuit 1
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Outage case 1481              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79013 CRAIG    230.0 to   79039 HAYDEN   230.0   circuit 2
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Outage case 1482              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79013 CRAIG    230.0 to   79059 RIFLE WA 230.0   circuit 1
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Outage case 1483              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79020 CURECANT 115.0 to   79192 SOCANAL  115.0   circuit 1
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Outage case 1484              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79020 CURECANT 115.0 to   79253 CRYSTAL  115.0   circuit 1
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Outage case 1485              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79021 CURECANT 230.0 to   79045 LOSTCANY 230.0   circuit 1
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Outage case 1486              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79021 CURECANT 230.0 to   79054 PONCHABR 230.0   circuit 1
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Outage case 1487              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79021 CURECANT 230.0 to   79070 NORTHFRK 230.0   circuit 1
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Outage case 1488              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79021 CURECANT 230.0 to   79163 MORROWPT 230.0   circuit 1
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Outage case 1489              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79023 DURANGO  115.0 to   79077 BAYFIELD 115.0   circuit 1
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Outage case 1490              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79023 DURANGO  115.0 to   79078 BODO     115.0   circuit 1
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Outage case 1491              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79023 DURANGO  115.0 to   79089 SHENDOAH 115.0   circuit 1
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Outage case 1492              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79023 DURANGO  115.0 to   79191 COYOTE G 115.0   circuit 1
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Outage case 1493              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79026 FLAMGORG 138.0 to   79067 VERNAL   138.0   circuit 1
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Outage case 1494              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79026 FLAMGORG 138.0 to   79067 VERNAL   138.0   circuit 2
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Outage case 1495              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79036 GRANDJCT 345.0 to   79049 MONTROSE 345.0   circuit 1
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Outage case 1496              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79037 GUNNISON 115.0 to   79090 SKITO    115.0   circuit 1
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Outage case 1497              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79042 HOTCHKIS 115.0 to   79050 NORTHFRK 115.0   circuit 1
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Outage case 1498              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79042 HOTCHKIS 115.0 to   79104 GARNETAP 115.0   circuit 1
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Outage case 1499              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79044 LOSTCANY 115.0 to   79074 E.CORTEZ 115.0   circuit 1
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Outage case 1500              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79044 LOSTCANY 115.0 to   79075 EMPIRETS 115.0   circuit 1
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Outage case 1501              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79044 LOSTCANY 115.0 to   79111 MANCOSTP 115.0   circuit 1
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Outage case 1502              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79044 LOSTCANY 115.0 to   79122 TOWAOC   115.0   circuit 1
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Outage case 1503              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79045 LOSTCANY 230.0 to   79061 SHIP PS  230.0   circuit 1

Outage case 1504              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79048 MONTROSE 115.0 to   79052 NUCLA    115.0   circuit 1

Outage case 1505              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79048 MONTROSE 115.0 to   79082 HAPPYCAN 115.0   circuit 1

Outage case 1506              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79048 MONTROSE 115.0 to   79115 SPRCKTAP 115.0   circuit 1

Outage case 1507              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79048 MONTROSE 115.0 to   79192 SOCANAL  115.0   circuit 1

Outage case 1508              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79049 MONTROSE 345.0 to   79072 HESPERUS 345.0   circuit 1

Outage case 1509              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79050 NORTHFRK 115.0 to   79083 JUANITA  115.0   circuit 1

Outage case 1510              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79052 NUCLA    115.0 to   79187 NORWOOD  115.0   circuit 1

Outage case 1511              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79054 PONCHABR 230.0 to   73551 W CANON  230.0   circuit 1

Outage case 1512              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79059 RIFLE WA 230.0 to   79070 NORTHFRK 230.0   circuit 1

Outage case 1513              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79060 SANJN PS 345.0 to   79072 HESPERUS 345.0   circuit 1

Outage case 1514              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79071 HESPERUS 115.0 to   79078 BODO     115.0   circuit 1

Outage case 1515              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79071 HESPERUS 115.0 to   79088 ROCKWOOD 115.0   circuit 1

Outage case 1516              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79071 HESPERUS 115.0 to   79099 FLOR.RIV 115.0   circuit 1

Outage case 1517              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79073 BLUEDOOR 115.0 to   79074 E.CORTEZ 115.0   circuit 1

Outage case 1518              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79075 EMPIRETS 115.0 to   79180 GRCUT TP 115.0   circuit 1

Outage case 1519              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79076 AM EAST  115.0 to   79077 BAYFIELD 115.0   circuit 1

Outage case 1520              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79076 AM EAST  115.0 to   79099 FLOR.RIV 115.0   circuit 1

Outage case 1521              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79077 BAYFIELD 115.0 to   79086 PAGOSA   115.0   circuit 1

Outage case 1522              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79079 BULLOCK  115.0 to   79082 HAPPYCAN 115.0   circuit 1

Outage case 1523              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79079 BULLOCK  115.0 to   79115 SPRCKTAP 115.0   circuit 1

Outage case 1524              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79080 CASCADEL 115.0 to   79088 ROCKWOOD 115.0   circuit 1

Outage case 1525              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79080 CASCADEL 115.0 to   79256 SILVERTN 115.0   circuit 1

Outage case 1526              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79081 CRSTBUTT 115.0 to   79090 SKITO    115.0   circuit 1

Outage case 1527              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79085 NORTHMSA 115.0 to   79104 GARNETAP 115.0   circuit 1

Outage case 1528              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79085 NORTHMSA 115.0 to   79115 SPRCKTAP 115.0   circuit 1

Outage case 1529              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79089 SHENDOAH 115.0 to   79111 MANCOSTP 115.0   circuit 1

Outage case 1530              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79103 GARNET M 115.0 to   79104 GARNETAP 115.0   circuit 1

Outage case 1531              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79107 HOVEN NO 115.0 to   79117 Y.JACK 2 115.0   circuit 1

Outage case 1532              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79108 HOVENWEP 115.0 to   79121 SANDCANY 115.0   circuit 1

Outage case 1533              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79110 MAIN  CO 115.0 to   79118 Y.JACK W 115.0   circuit 1

Outage case 1534              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79110 MAIN  CO 115.0 to   79120 MOQUI C  115.0   circuit 1

Outage case 1535              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79110 MAIN  CO 115.0 to   79121 SANDCANY 115.0   circuit 1

Outage case 1536              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79110 MAIN  CO 115.0 to   79262 CEMNT CK 115.0   circuit 1

Outage case 1537              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79117 Y.JACK 2 115.0 to   79118 Y.JACK W 115.0   circuit 1

Outage case 1538              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79122 TOWAOC   115.0 to   79262 CEMNT CK 115.0   circuit 1

Outage case 1539              Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        79174 MOLINA-L 115.0 to   79175 MOLINA-U 115.0   circuit 1
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Outage case 1540              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79179 GRT CUT  115.0 to   79180 GRCUT TP 115.0   circuit 1
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Outage case 1541              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79187 NORWOOD  115.0 to   79189 SUNSH SM 115.0   circuit 1
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Outage case 1542              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79188 TELLURID 115.0 to   79189 SUNSH SM 115.0   circuit 1
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Outage case 1543              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79189 SUNSH SM 115.0 to   79257 AMES     115.0   circuit 1
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Outage case 1544              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79190 DALLASCR 115.0 to   79193 MCKENZIX 115.0   circuit 1
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Outage case 1545              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79191 COYOTE G 115.0 to   79260 ELPASOTP 115.0   circuit 1
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Outage case 1546              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79192 SOCANAL  115.0 to   79193 MCKENZIX 115.0   circuit 1
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Outage case 1547              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79194 BURROBDG 115.0 to   79256 SILVERTN 115.0   circuit 1
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Outage case 1548              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79194 BURROBDG 115.0 to   79257 AMES     115.0   circuit 1
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Outage case 1549              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63003 CUSTER   230.0 to   63002 CRSOVRUM 230.0   circuit 1
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Outage case 1550              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63003 CUSTER   230.0 to   63012 ROSEBUD  230.0   circuit 1
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Outage case 1551              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63004 FT PECK  161.0 to   63011 RICHARDC 161.0   circuit 1
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Outage case 1552              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        90204 MTSFTPCK 230.0 to   90211 MTSRICHC 230.0   circuit 1
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Outage case 1553              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63006 HARLEM   161.0 to   63008 HAVRE    161.0   circuit 1
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Outage case 1554              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        90206 MTSHARLM 230.0 to   90208 MTSHAVRE 230.0   circuit 1
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Outage case 1555              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63007 HAVRE    115.0 to   63013 RUDYARD  115.0   circuit 1
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Outage case 1556              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63008 HAVRE    161.0 to   63015 VERONA   161.0   circuit 1
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Outage case 1557              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        90208 MTSHAVRE 230.0 to   90215 MTSVER   230.0   circuit 1
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Outage case 1558              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63009 MALTA UM 161.0 to   63006 HARLEM   161.0   circuit 1
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Outage case 1559              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        90209 MTSMALTA 230.0 to   90206 MTSHARLM 230.0   circuit 1
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Outage case 1560              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63010 MILCTYDC 230.0 to   63012 ROSEBUD  230.0   circuit 1
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Outage case 1561              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63011 RICHARDC 161.0 to   63009 MALTA UM 161.0   circuit 1
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Outage case 1562              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        90211 MTSRICHC 230.0 to   90209 MTSMALTA 230.0   circuit 1
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Outage case 1563              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63013 RUDYARD  115.0 to   63014 TIBERTAP 115.0   circuit 1
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Outage case 1564              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        26043 INTERMT  345.0 to   65995 MONA     345.0   circuit 1
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Outage case 1565              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        26043 INTERMT  345.0 to   65995 MONA     345.0   circuit 2
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Outage case 1566              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40391 ELMO     115.0 to   62066 KERR     115.0   circuit 1
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Outage case 1567              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40457 GARRISON 230.0 to   62072 OVANDO   230.0   circuit 1
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Outage case 1568              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        40551 HOT SPR  230.0 to   62072 OVANDO   230.0   circuit 1
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Outage case 1569              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        50822 NLYPHS   230.0 to   40145 BOUNDARY 230.0   circuit 1
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Outage case 1570              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62004 ANACOND  230.0 to   40457 GARRISON 230.0   circuit 1
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Outage case 1571              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62004 ANACOND  230.0 to   40457 GARRISON 230.0   circuit 2
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Outage case 1572              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62012 TOWN2    500.0 to   40453 GAR2EAST 500.0   circuit 2
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Outage case 1573              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62013 TOWN1    500.0 to   40451 GAR1EAST 500.0   circuit 1
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Outage case 1574              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62027 SHELBY   115.0 to   63014 TIBERTAP 115.0   circuit 1
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Outage case 1575              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62030 PTRSNFLT 230.0 to   65025 AMPS     230.0   circuit 1
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Outage case 1576              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62051 HARDIN   230.0 to   63002 CRSOVRUM 230.0   circuit 1

Outage case 1577              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62056 HUNTLEY  230.0 to   63002 CRSOVRUM 230.0   circuit 1

Outage case 1578              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62084 DILLON S 161.0 to   65155 BIGGRASS 161.0   circuit 1

Outage case 1579              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62085 CROWCR B 115.0 to   48055 BURKAVAB 115.0   circuit 1

Outage case 1580              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        62086 THOMSON  115.0 to   48053 BURKAVAA 115.0   circuit 1

Outage case 1581              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63008 HAVRE    161.0 to   62023 GT FALLS 161.0   circuit 1

Outage case 1582              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        90208 MTSHAVRE 230.0 to   90223 MTSGFALL 230.0   circuit 1

Outage case 1583              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65060 ANT MINE 230.0 to   73276 TEKLA    230.0   circuit 1

Outage case 1584              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65085 ASHLEY   138.0 to   79067 VERNAL   138.0   circuit 1

Outage case 1585              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65305 CASPERPP 115.0 to   73167 REFNRYTP 115.0   circuit 1

Outage case 1586              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65420 DAVEJOHN 230.0 to   73107 LAR.RIVR 230.0   circuit 1

Outage case 1587              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65420 DAVEJOHN 230.0 to   73190 STEGALL  230.0   circuit 1

Outage case 1588              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65425 DAVEJOHN 115.0 to   73070 GLENRCKN 115.0   circuit 1

Outage case 1589              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65425 DAVEJOHN 115.0 to   73071 GLENRCKS 115.0   circuit 1

Outage case 1590              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66235 PINTO PS 345.0 to   14101 FOURCORN 345.0   circuit 1

Outage case 1591              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66540 THERPACE 115.0 to   73197 THERMOPL 115.0   circuit 1

Outage case 1592              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66720 WORLAND  115.0 to   73222 WORLANTP 115.0   circuit 1

Outage case 1593              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66725 WYODAK   230.0 to   73148 OSAGE    230.0   circuit 1

Outage case 1594              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66725 WYODAK   230.0 to   73168 RENO     230.0   circuit 1

Outage case 1595              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66725 WYODAK   230.0 to   73294 HUGHES   230.0   circuit 1

Outage case 1596              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66750 YELOWTLP 230.0 to   62045 BLGS PHA 230.0   circuit 1

Outage case 1597              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66755 YELOWTLP 161.0 to   62061 RMRK PHA 161.0   circuit 1

Outage case 1598              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66750 YELOWTLP 230.0 to   73229 YELLOWBR 230.0   circuit 1

Outage case 1599              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73042 CASPERLM 115.0 to   65305 CASPERPP 115.0   circuit 1

Outage case 1600              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73229 YELLOWBR 230.0 to   63001 CROS PHA 230.0   circuit 1

Outage case 1601              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79001 ARTESIA  138.0 to   66278 RANGELY  138.0   circuit 1

Outage case 1602              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79005 BEARS    345.0 to   65193 BONANZA  345.0   circuit 1

Outage case 1603              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79046 MEEKER   138.0 to   66278 RANGELY  138.0   circuit 1

Outage case 1604              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79067 VERNAL   138.0 to   65192 BONANZA  138.0   circuit 1

Outage case 1605              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        45029 BURNS    500.0 to   60240 MIDPOINT 500.0   circuit 1

Outage case 1606              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60030 BLACKFT  161.0 to   65670 GOSHEN   161.0   circuit 1

Outage case 1607              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60073 BRADY    230.0 to   65075 ANTLOPE  230.0   circuit 1

Outage case 1608              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60085 BRIDGER  345.0 to   65665 GOSHEN   345.0   circuit 1

Outage case 1609              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60150 HELLSCYN 230.0 to   45103 ENTERPRS 230.0   circuit 1

Outage case 1610              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        60235 MIDPOINT 345.0 to   64061 IDAHO-NV 345.0   circuit 1

Outage case 1611              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        61826 HINES    115.0 to   40507 HARNEY   115.0   circuit 1

Outage case 1612              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65135 BENLOMND 345.0 to   60060 BORAH    345.0   circuit 1
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Outage case 1613              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65665 GOSHEN   345.0 to   60190 KINPORT  345.0   circuit 1

Outage case 1614              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        65920 MALAD    138.0 to   60020 AMFLS    138.0   circuit 1

Outage case 1615              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        66565 TREASTON 230.0 to   60073 BRADY    230.0   circuit 1

Outage case 1616              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70193 FTN VALL 115.0 to   73412 MIDWAYBR 115.0   circuit 1

Outage case 1617              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70274 MALTA    230.0 to   73138 MT.ELBRT 230.0   circuit 1

Outage case 1618              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70287 MILL     115.0 to   73296 FRASER   115.0   circuit 1

Outage case 1619              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70308 PALMER   115.0 to   73414 MONUMENT 115.0   circuit 1

Outage case 1620              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70327 PONCHA   115.0 to   79037 GUNNISON 115.0   circuit 1

Outage case 1621              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70358 RIFLE PS 230.0 to   79059 RIFLE WA 230.0   circuit 1

Outage case 1622              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70410 ST.VRAIN 230.0 to   73116 LONGPEAK 230.0   circuit 1

Outage case 1623              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70470 WELD  PS 115.0 to   73211 WELD  LM 115.0   circuit 1

Outage case 1624              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70471 WELD  PS 230.0 to   73212 WELD  LM 230.0   circuit 1

Outage case 1625              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70476 WOODLAND 115.0 to   73400 EMIL AND 115.0   circuit 1

Outage case 1626              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73011 AULT     230.0 to   70474 WINDSOR  230.0   circuit 1

Outage case 1627              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70005 BRUSHCPP 115.0 to   73013 B.CK PS  115.0   circuit 1

Outage case 1628              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70005 BRUSHCPP 115.0 to   73013 B.CK PS  115.0   circuit 2

Outage case 1629              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73044 COBBLKTP 115.0 to   70116 COBBLAKE 115.0   circuit 1

Outage case 1630              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73105 LAPORTE  115.0 to   70256 LAPORTPS 115.0   circuit 1

Outage case 1631              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73192 STORY    230.0 to   70311 PAWNEE   230.0   circuit 1

Outage case 1632              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73477 FULLER   230.0 to   70122 COMANCHE 230.0   circuit 1

Outage case 1633              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73477 FULLER   230.0 to   70139 DANIELPK 230.0   circuit 1

Outage case 1634              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73413 MIDWAYBR 230.0 to   70286 MIDWAYPS 230.0   circuit 1

Outage case 1635              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79054 PONCHABR 230.0 to   70375 SAN LUIS 230.0   circuit 1

Outage case 1636              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79105 GLADETAP 115.0 to   79260 ELPASOTP 115.0   circuit 1

Outage case 1637              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        63015 VERONA   161.0 to   62024 RAINBOW  161.0   circuit 1

Outage case 1638              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        90215 MTSVER   230.0 to   90224 MTSRNBW  230.0   circuit 1

Outage case 1639              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70358 RIFLE PS 230.0 to   79250 AMATLAS  230.0   circuit 1

Outage case 1640              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        70525 MTHARRIS 138.0 to   79038 HAYDEN   138.0   circuit 1

Outage case 1641              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79173 COLBRAN  115.0 to   79174 MOLINA-L 115.0   circuit 1

Outage case 1642              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79033 GOREPASS 230.0 to   79039 HAYDEN   230.0   circuit 1

Outage case 1643              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79034 GRANDJCT 115.0 to   79048 MONTROSE 115.0   circuit 1

Outage case 1644              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79039 HAYDEN   230.0 to   79091 WOLCOTTP 230.0   circuit 1

Outage case 1645              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79046 MEEKER   138.0 to   79056 RIFLE CU 138.0   circuit 1

Outage case 1646              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79057 RIFLE CU 230.0 to   79059 RIFLE WA 230.0   circuit 1

Outage case 1647              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79014 CRAIG    345.0 to   79058 RIFLE CU 345.0   circuit 1

Outage case 1648              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        79036 GRANDJCT 345.0 to   79058 RIFLE CU 345.0   circuit 1

Outage case 1649              Y, WAPA UGP, JUNE 2002
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    switched OUT LINE        48197 LOLO     230.0 to   60278 IMNAHA   230.0   circuit 1
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Outage case 1650              Y, WAPA UGP, JUNE 2002
    switched OUT LINE        73412 MIDWAYBR 115.0 to   70285 MIDWAYPS 115.0   circuit 1
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Outage case 1651              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 90700 MTSKINP  500.0 to   60190 KINPORT  345.0   circuit 1
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Outage case 1652              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 90800 MTSBENL  500.0 to   65135 BENLOMND 345.0   circuit 1
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Outage case 1653              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60006 ADELAIDE 345.0 to   60010 ADELAIDE 138.0   circuit 1
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Outage case 1654              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60006 ADELAIDE 345.0 to   60010 ADELAIDE 138.0   circuit 2
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Outage case 1655              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60030 BLACKFT  161.0 to   60031 BLACKFT  138.0   circuit 1
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Outage case 1656              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60045 BOISEBCH 230.0 to   60040 BOISEBCH 138.0   circuit 1
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Outage case 1657              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60045 BOISEBCH 230.0 to   60040 BOISEBCH 138.0   circuit 2
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Outage case 1658              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60045 BOISEBCH 230.0 to   60040 BOISEBCH 138.0   circuit 3
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Outage case 1659              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60045 BOISEBCH 230.0 to   60040 BOISEBCH 138.0   circuit 4
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Outage case 1660              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60060 BORAH    345.0 to   60062 BORAH    230.0   circuit 1
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Outage case 1661              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60073 BRADY    230.0 to   60070 BRADY    138.0   circuit 1
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Outage case 1662              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60073 BRADY    230.0 to   60070 BRADY    138.0   circuit 2
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Outage case 1663              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60073 BRADY    230.0 to   60070 BRADY    138.0   circuit 3
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Outage case 1664              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60110 CALDWELL 230.0 to   60105 CALDWELL 138.0   circuit 1
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Outage case 1665              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60110 CALDWELL 230.0 to   60105 CALDWELL 138.0   circuit 2
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Outage case 1666              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60115 CLIFF    138.0 to   60116 SHSNFALS   6.6   circuit 1
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Outage case 1667              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60130 DRAM     230.0 to   60225 MICRON   138.0   circuit 1
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Outage case 1668              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60130 DRAM     230.0 to   60225 MICRON   138.0   circuit 2
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Outage case 1669              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60165 HUNT     230.0 to   60160 HUNT     138.0   circuit 1
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Outage case 1670              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60165 HUNT     230.0 to   60160 HUNT     138.0   circuit 2
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Outage case 1671              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60165 HUNT     230.0 to   60160 HUNT     138.0   circuit 3
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Outage case 1672              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60185 KINPORT  230.0 to   60180 KINPORT  138.0   circuit 1
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Outage case 1673              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60185 KINPORT  230.0 to   60180 KINPORT  138.0   circuit 2
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Outage case 1674              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60190 KINPORT  345.0 to   60185 KINPORT  230.0   circuit 1
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Outage case 1675              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60195 L MALAD  138.0 to   60196 L MALAD    6.9   circuit 1
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Outage case 1676              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60232 MIDPOINT 230.0 to   60230 MIDPOINT 138.0   circuit 1
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Outage case 1677              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60235 MIDPOINT 345.0 to   60232 MIDPOINT 230.0   circuit 1
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Outage case 1678              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60235 MIDPOINT 345.0 to   60232 MIDPOINT 230.0   circuit 2
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Outage case 1679              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60240 MIDPOINT 500.0 to   60235 MIDPOINT 345.0   circuit 1
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Outage case 1680              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60250 MT HOME  138.0 to   61805 MT HOME  115.0   circuit 1
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Outage case 1681              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60265 ONTARIO  230.0 to   60260 ONTARIO  138.0   circuit 1
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Outage case 1682              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60275 OXBOW    230.0 to   60270 OXBOW    138.0   circuit 1
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Outage case 1683              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60306 QUARTZ   230.0 to   60305 QUARTZ   138.0   circuit 1
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Outage case 1684              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60332 SWNFL PP 138.0 to   60331 SWANFALL   6.9   circuit 1
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Outage case 1685              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60351 TFALL PP 138.0 to   60352 TWINFALS   6.9   circuit 1
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Outage case 1686              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60360 U SALMON 138.0 to   60361 U SAMN 1   6.9   circuit 1
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Outage case 1687              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60360 U SALMON 138.0 to   60362 U SAMN 2   6.9   circuit 1
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Outage case 1688              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60360 U SALMON 138.0 to   60363 U SAMN 3   6.9   circuit 1
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Outage case 1689              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60360 U SALMON 138.0 to   60364 U SAMN 4   6.9   circuit 1
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Outage case 1690              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61800 ANDERSN  115.0 to   61801 ANDERSN1   6.9   circuit 1
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Outage case 1691              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61800 ANDERSN  115.0 to   61802 ANDERSN2   6.9   circuit 1
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Outage case 1692              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61810 MINIDOKA 138.0 to   61811 MINIDOKA   2.4   circuit 1
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Outage case 1693              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61810 MINIDOKA 138.0 to   61812 MINIDOKA   4.2   circuit 1
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Outage case 1694              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 61825 HINES    138.0 to   61826 HINES    115.0   circuit 1
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Outage case 1695              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60265 ONTARIO  230.0 to   60260 ONTARIO  138.0   circuit 2
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Outage case 1696              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60207 LOCUST   230.0 to   61254 LOCUST   138.0   circuit 1
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Outage case 1697              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 90208 MTSHAVRE 230.0 to   63007 HAVRE    115.0   circuit 1
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Outage case 1698              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62004 ANACOND  230.0 to   62005 ANACOND  161.0   circuit 1
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Outage case 1699              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62004 ANACOND  230.0 to   62005 ANACOND  161.0   circuit 2
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Outage case 1700              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62005 ANACOND  161.0 to   62115 ANACOND  100.0   circuit 1
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Outage case 1701              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62005 ANACOND  161.0 to   62115 ANACOND  100.0   circuit 2
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Outage case 1702              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62006 TAFTAUTO 115.0 to   62090 TAFTAUTO 100.0   circuit 1
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Outage case 1703              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62007 KERR B   161.0 to   62066 KERR     115.0   circuit 1
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Outage case 1704              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62007 KERR B   161.0 to   62066 KERR     115.0   circuit 2
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Outage case 1705              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62008 KERR A   161.0 to   62066 KERR     115.0   circuit 1
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Outage case 1706              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62008 KERR A   161.0 to   62066 KERR     115.0   circuit 2
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Outage case 1707              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62009 RATTLE S 161.0 to   62114 MISOULA  100.0   circuit 1
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Outage case 1708              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62009 RATTLE S 161.0 to   62114 MISOULA  100.0   circuit 2
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Outage case 1709              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62019 WILSALL  230.0 to   62016 WILSALL  161.0   circuit 1
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Outage case 1710              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62019 WILSALL  230.0 to   62016 WILSALL  161.0   circuit 2
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Outage case 1711              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62023 GT FALLS 161.0 to   62119 RAINBOW  100.0   circuit 1
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Outage case 1712              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 90223 MTSGFALL 230.0 to   62119 RAINBOW  100.0   circuit 1
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Outage case 1713              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62024 RAINBOW  161.0 to   62119 RAINBOW  100.0   circuit 1
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Outage case 1714              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 90224 MTSRNBW  230.0 to   62119 RAINBOW  100.0   circuit 1
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Outage case 1715              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62026 SHELBY   230.0 to   62027 SHELBY   115.0   circuit 1
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Outage case 1716              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62033 ANA BPA  115.0 to   62004 ANACOND  230.0   circuit 1
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Outage case 1717              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62035 CNRDWAPA 230.0 to   62069 CNRDWAPA 115.0   circuit 1
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Outage case 1718              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62036 JUDITHGP 230.0 to   62104 JUDITHGP 100.0   circuit 1
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Outage case 1719              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62046 BROADVU  500.0 to   62223 BROADVU  230.0   circuit 1
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Outage case 1720              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62046 BROADVU  500.0 to   62223 BROADVU  230.0   circuit 2
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Outage case 1721              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62051 HARDIN   230.0 to   62080 HARDIN   115.0   circuit 1
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Outage case 1722              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62052 ALKALI   230.0 to   62109 ALKALI   161.0   circuit 1
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Outage case 1723              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62052 ALKALI   230.0 to   62109 ALKALI   161.0   circuit 2

Outage case 1724              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62055 BASELINE 230.0 to   62099 BASELINE 100.0   circuit 1

Outage case 1725              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62057 COLSTRP  500.0 to   62060 COLSTRP  230.0   circuit 1

Outage case 1726              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62057 COLSTRP  500.0 to   62060 COLSTRP  230.0   circuit 2

Outage case 1727              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62060 COLSTRP  230.0 to   62081 COLSTRP  115.0   circuit 1

Outage case 1728              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62060 COLSTRP  230.0 to   62081 COLSTRP  115.0   circuit 2

Outage case 1729              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62062 RIMROCK  161.0 to   62061 RMRK PHA 161.0   circuit 1

Outage case 1730              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62062 RIMROCK  161.0 to   62096 RIMROCK  100.0   circuit 1

Outage case 1731              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62062 RIMROCK  161.0 to   62096 RIMROCK  100.0   circuit 2

Outage case 1732              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62064 BRADLEYC 161.0 to   62105 BRADLEYC 100.0   circuit 1

Outage case 1733              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62070 GT FALLS 115.0 to   62118 GT FALLS 100.0   circuit 1

Outage case 1734              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62071 GT FALLS 230.0 to   62118 GT FALLS 100.0   circuit 1

Outage case 1735              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62071 GT FALLS 230.0 to   62118 GT FALLS 100.0   circuit 2

Outage case 1736              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62076 TRIDENT  161.0 to   62021 THREERIV 100.0   circuit 1

Outage case 1737              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62077 BUTTE MT 161.0 to   62116 BUTTE MT 100.0   circuit 1

Outage case 1738              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62077 BUTTE MT 161.0 to   62116 BUTTE MT 100.0   circuit 2

Outage case 1739              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62078 RESERVST 161.0 to   62113 RESERVST 100.0   circuit 1

Outage case 1740              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62079 MILLERCK 161.0 to   62112 MILLERCK 100.0   circuit 1

Outage case 1741              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62082 BILINGS  230.0 to   62045 BLGS PHA 230.0   circuit 1

Outage case 1742              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62082 BILINGS  230.0 to   62097 BILINGS  100.0   circuit 1

Outage case 1743              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62082 BILINGS  230.0 to   62097 BILINGS  100.0   circuit 2

Outage case 1744              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62086 THOMSON  115.0 to   62000 THOMSON    6.6   circuit 1

Outage case 1745              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62205 COLRPLJE 161.0 to   62220 COLRPLJE 100.0   circuit 1

Outage case 1746              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62223 BROADVU  230.0 to   62089 BROADVU  100.0   circuit 2

Outage case 1747              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40021 ADDY 2   230.0 to   40017 ADDY     115.0   circuit 1

Outage case 1748              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48025 BEACON N 230.0 to   48023 BEACON N 115.0   circuit 1

Outage case 1749              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48031 BEACON S 230.0 to   48029 BEACON S 115.0   circuit 1

Outage case 1750              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40091 BELL BPA 500.0 to   40090 BELL SO  230.0   circuit 1

Outage case 1751              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40088 BELL MI  230.0 to   40087 BELL BPA 115.0   circuit 1

Outage case 1752              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40145 BOUNDARY 230.0 to   40143 BOUNDARY 115.0   circuit 1

Outage case 1753              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 47126 BOX PS   115.0 to   47009 BOX CANY 115.0   circuit 1

Outage case 1754              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48059 CAB GORG 230.0 to   48057 CAB GORG 115.0   circuit 1

Outage case 1755              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40223 CHIEF J3 345.0 to   40231 CHIEF JO 230.0   circuit 1

Outage case 1756              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40225 CHIEF J4 345.0 to   40231 CHIEF JO 230.0   circuit 1

Outage case 1757              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40233 CHIEF JO 500.0 to   40231 CHIEF JO 230.0   circuit 1

Outage case 1758              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 41195 COL FAL2 230.0 to   40247 COL FALL 115.0   circuit 1

Outage case 1759              Y, WAPA UGP, JUNE 2002
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    switched OUT TRANSFORMER 40249 COL FALL 230.0 to   40247 COL FALL 115.0   circuit 1
Outage case 1760              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40261 COLUMBIA 230.0 to   40259 COLUMBIA 115.0   circuit 1
Outage case 1761              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40261 COLUMBIA 230.0 to   40259 COLUMBIA 115.0   circuit 2
Outage case 1762              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40285 COULEE   300.0 to   41357 COULEES2 230.0   circuit 1
Outage case 1763              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40287 COULEE   500.0 to   41357 COULEES2 230.0   circuit 1
Outage case 1764              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 41356 COULEES1 230.0 to   40281 COULEE   115.0   circuit 1
Outage case 1765              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 47031 DOUGLAS  230.0 to   47029 DOUGLAS  115.0   circuit 1
Outage case 1766              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40369 DWORSHAK 500.0 to   41201 DWOR     100.0   circuit 1
Outage case 1767              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40373 E OMAK   230.0 to   40371 E OMAK   115.0   circuit 1
Outage case 1768              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40459 GARRISON 500.0 to   40457 GARRISON 230.0   circuit 1
Outage case 1769              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40521 HATWAI   500.0 to   40519 HATWAI   230.0   circuit 1
Outage case 1770              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40553 HOT SPR  500.0 to   40551 HOT SPR  230.0   circuit 1
Outage case 1771              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40657 LIBBY    230.0 to   40655 LIBBY    115.0   circuit 1
Outage case 1772              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48306 OTIS     230.0 to   48311 OTIS     115.0   circuit 1
Outage case 1773              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48317 PINE CRK 230.0 to   48315 PINE CRK 115.0   circuit 1
Outage case 1774              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48329 POST FLS 115.0 to   48331 POSTFL15   2.4   circuit 1
Outage case 1775              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48329 POST FLS 115.0 to   48333 POSTFLS6   2.4   circuit 1
Outage case 1776              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40851 POTHOLES 230.0 to   40849 POTHOLES 115.0   circuit 1
Outage case 1777              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48357 RATHDRUM 230.0 to   48356 RATHDRME 115.0   circuit 1
Outage case 1778              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48357 RATHDRUM 230.0 to   48355 RATHDRUM 115.0   circuit 1
Outage case 1779              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 46821 ROCKY RH 115.0 to   46831 ROCKYRH1 230.0   circuit 1
Outage case 1780              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 46821 ROCKY RH 115.0 to   46831 ROCKYRH1 230.0   circuit 2
Outage case 1781              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40891 ROCKY RH 345.0 to   46832 ROCKYRH2 230.0   circuit 1
Outage case 1782              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40909 SACHEEN  230.0 to   40907 SACHEEN  115.0   circuit 1
Outage case 1783              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 40973 SICKLER  500.0 to   47031 DOUGLAS  230.0   circuit 1
Outage case 1784              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 47091 USK      230.0 to   47254 USK      115.0   circuit 1
Outage case 1785              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 41113 VANTAGE  500.0 to   41111 VANTAGE  230.0   circuit 1
Outage case 1786              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 41113 VANTAGE  500.0 to   41111 VANTAGE  230.0   circuit 2
Outage case 1787              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 47101 WELLS    230.0 to   47099 WELLS    115.0   circuit 1
Outage case 1788              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48463 WEST     230.0 to   48461 WEST     115.0   circuit 1
Outage case 1789              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 48463 WEST     230.0 to   48461 WEST     115.0   circuit 2
Outage case 1790              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65075 ANTLOPE  230.0 to   65080 ANTLOPE  161.0   circuit 1
Outage case 1791              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65080 ANTLOPE  161.0 to   65065 ANTLOP 1 138.0   circuit 1
Outage case 1792              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65080 ANTLOPE  161.0 to   65070 ANTLOP 2 138.0   circuit 1
Outage case 1793              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65135 BENLOMND 345.0 to   65140 BENLOMND 230.0   circuit 1
Outage case 1794              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65135 BENLOMND 345.0 to   65145 BENLOMND 138.0   circuit 1
Outage case 1795              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65135 BENLOMND 345.0 to   65190 BNLMD MP 100.0   circuit 2
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Outage case 1796              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65140 BENLOMND 230.0 to   65145 BENLOMND 138.0   circuit 1
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Outage case 1797              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65140 BENLOMND 230.0 to   65145 BENLOMND 138.0   circuit 2
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Outage case 1798              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65140 BENLOMND 230.0 to   65190 BNLMD MP 100.0   circuit 2
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Outage case 1799              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65193 BONANZA  345.0 to   65192 BONANZA  138.0   circuit 1
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Outage case 1800              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65260 CAMP WIL 345.0 to   65261 CAMP WIL 138.0   circuit 1
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Outage case 1801              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65300 CASPERPP 230.0 to   65305 CASPERPP 115.0   circuit 1
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Outage case 1802              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65395 CUTLER   138.0 to   65385 CTLR MP  100.0   circuit 1
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Outage case 1803              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65420 DAVEJOHN 230.0 to   65425 DAVEJOHN 115.0   circuit 1
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Outage case 1804              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65510 EMERY    345.0 to   65515 EMERY    138.0   circuit 1
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Outage case 1805              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65510 EMERY    345.0 to   65515 EMERY    138.0   circuit 2
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Outage case 1806              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65665 GOSHEN   345.0 to   65670 GOSHEN   161.0   circuit 1
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Outage case 1807              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65665 GOSHEN   345.0 to   65685 GOSHN MP 100.0   circuit 2
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Outage case 1808              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65670 GOSHEN   161.0 to   65675 GOSHEN   115.0   circuit 1
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Outage case 1809              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65670 GOSHEN   161.0 to   65675 GOSHEN   115.0   circuit 2
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Outage case 1810              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65670 GOSHEN   161.0 to   65685 GOSHN MP 100.0   circuit 2
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Outage case 1811              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65690 GRACE    161.0 to   65695 GRACE    138.0   circuit 1
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Outage case 1812              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65695 GRACE    138.0 to   65705 GRACE G3   6.6   circuit 1
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Outage case 1813              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65695 GRACE    138.0 to   65710 GRACE G4   6.6   circuit 1
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Outage case 1814              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65695 GRACE    138.0 to   65715 GRACE G5   6.6   circuit 1
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Outage case 1815              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65805 HUNTNGTN 345.0 to   65810 HUNTNGTN 138.0   circuit 1
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Outage case 1816              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65805 HUNTNGTN 345.0 to   65810 HUNTNGTN 138.0   circuit 2
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Outage case 1817              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65860 JFRSNPHA 161.0 to   65850 JEFFERSN 161.0   circuit 1
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Outage case 1818              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65945 MIDVALLY 345.0 to   66550 THIRTY S 138.0   circuit 1
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Outage case 1819              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65945 MIDVALLY 345.0 to   66550 THIRTY S 138.0   circuit 2
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Outage case 1820              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66020 MUSTANG  230.0 to   66025 MUSTANG  115.0   circuit 1
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Outage case 1821              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66050 NAUGHTON 230.0 to   66040 NAUGHTN1 138.0   circuit 1
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Outage case 1822              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66050 NAUGHTON 230.0 to   66045 NAUGHTN2 138.0   circuit 1
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Outage case 1823              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66080 NINETY S 345.0 to   66085 NINETY S 138.0   circuit 1
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Outage case 1824              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66080 NINETY S 345.0 to   66085 NINETY S 138.0   circuit 2
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Outage case 1825              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66080 NINETY S 345.0 to   66085 NINETY S 138.0   circuit 3
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Outage case 1826              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66080 NINETY S 345.0 to   66085 NINETY S 138.0   circuit 4
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Outage case 1827              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66130 ONEIDA   138.0 to   66120 ONED G23   6.6   circuit 2
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Outage case 1828              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66130 ONEIDA   138.0 to   66125 ONED G1    6.6   circuit 1
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Outage case 1829              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66134 OQUIRRH  345.0 to   66135 OQUIRRH  138.0   circuit 1
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Outage case 1830              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66226 PINT MP2 100.0   circuit 2
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Outage case 1831              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66227 PINT MP3 100.0   circuit 3
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Outage case 1832              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66230 PINTO    138.0   circuit 1
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Outage case 1833              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66230 PINTO    138.0   circuit 2

Outage case 1834              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66225 PINTO    345.0 to   66235 PINTO PS 345.0   circuit 1

Outage case 1835              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66240 PLATTE   230.0 to   66245 PLATTE   115.0   circuit 1

Outage case 1836              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66270 RAILROAD 230.0 to   66275 RAILROAD 138.0   circuit 1

Outage case 1837              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66270 RAILROAD 230.0 to   66275 RAILROAD 138.0   circuit 2

Outage case 1838              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66385 SODA     138.0 to   66390 SODA G12   6.6   circuit 1

Outage case 1839              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66465 SWAN VAL 161.0 to   66470 SWAN VAL 115.0   circuit 1

Outage case 1840              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66510 TERMINAL 345.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 1841              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66510 TERMINAL 345.0 to   66520 TERMINAL 138.0   circuit 2

Outage case 1842              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66515 TERMINAL 230.0 to   66520 TERMINAL 138.0   circuit 1

Outage case 1843              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66515 TERMINAL 230.0 to   66520 TERMINAL 138.0   circuit 2

Outage case 1844              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66540 THERPACE 115.0 to   66535 THERMOPL 230.0   circuit 1

Outage case 1845              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66565 TREASTON 230.0 to   66570 TREASTON 138.0   circuit 1

Outage case 1846              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66565 TREASTON 230.0 to   66580 TRSTN MP 100.0   circuit 2

Outage case 1847              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66570 TREASTON 138.0 to   66580 TRSTN MP 100.0   circuit 2

Outage case 1848              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66578 TRI CITY 345.0 to   66577 TRI CITY 138.0   circuit 1

Outage case 1849              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 66750 YELOWTLP 230.0 to   66755 YELOWTLP 161.0   circuit 1

Outage case 1850              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62071 GT FALLS 230.0 to   90400 MTSGFALL 500.0   circuit 1

Outage case 1851              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62084 DILLON S 161.0 to   90600 MTSDILL  500.0   circuit 1

Outage case 1852              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65420 DAVEJOHN 230.0 to   90200 MTSDAVEJ 500.0   circuit 1

Outage case 1853              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70139 DANIELPK 230.0 to   90300 MTSDAN   500.0   circuit 1

Outage case 1854              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70037 ARAPAHOB 115.0 to   70038 ARAPAHOE 230.0   circuit 1

Outage case 1855              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70071 CABINCRK 115.0 to   70072 CABINCRK 230.0   circuit 1

Outage case 1856              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70071 CABINCRK 115.0 to   70072 CABINCRK 230.0   circuit 2

Outage case 1857              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70109 CHEROKES 115.0 to   70107 CHEROKEE 230.0   circuit 1

Outage case 1858              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70109 CHEROKES 115.0 to   70107 CHEROKEE 230.0   circuit 2

Outage case 1859              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70138 DANIELPK 115.0 to   70139 DANIELPK 230.0   circuit 1

Outage case 1860              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70148 DENVTM   115.0 to   70149 DENVTM   230.0   circuit 1

Outage case 1861              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70191 FTLUPTON 115.0 to   70192 FTLUPTON 230.0   circuit 1

Outage case 1862              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70259 LEETSDAL 115.0 to   70260 LEETSDAL 230.0   circuit 1

Outage case 1863              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70265 LOOKOUT  115.0 to   70266 LOOKOUT  230.0   circuit 1

Outage case 1864              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70265 LOOKOUT  115.0 to   70266 LOOKOUT  230.0   circuit 2

Outage case 1865              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70354 RIDGE    115.0 to   70355 RIDGE    230.0   circuit 1

Outage case 1866              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70354 RIDGE    115.0 to   70355 RIDGE    230.0   circuit 2

Outage case 1867              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70395 SMOKYHIL 115.0 to   70396 SMOKYHIL 230.0   circuit 1

Outage case 1868              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70395 SMOKYHIL 115.0 to   70396 SMOKYHIL 230.0   circuit 2

Outage case 1869              Y, WAPA UGP, JUNE 2002
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    switched OUT TRANSFORMER 70444 VALMONT  115.0 to   70447 VALMONT  230.0   circuit 1
Outage case 1870              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70463 WATERTON 115.0 to   70464 WATERTON 230.0   circuit 1
Outage case 1871              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70463 WATERTON 115.0 to   70464 WATERTON 230.0   circuit 2
Outage case 1872              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70470 WELD  PS 115.0 to   70471 WELD  PS 230.0   circuit 2
Outage case 1873              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73004 ALCOVA   115.0 to   73332 ALCOVA1    6.6   circuit 1
Outage case 1874              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73004 ALCOVA   115.0 to   73438 ALCOVA2    6.6   circuit 1
Outage case 1875              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73009 ARCHER   230.0 to   73008 ARCHER   115.0   circuit 1
Outage case 1876              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73011 AULT     230.0 to   73012 AULT     345.0   circuit 1
Outage case 1877              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73011 AULT     230.0 to   73012 AULT     345.0   circuit 2
Outage case 1878              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73011 AULT     230.0 to   73012 AULT     345.0   circuit 3
Outage case 1879              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73013 B.CK PS  115.0 to   73014 B.CK PS  230.0   circuit 1
Outage case 1880              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73015 B.CK TRI 115.0 to   73016 B.CK TRI 230.0   circuit 1
Outage case 1881              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73017 B.SANDY  115.0 to   73018 B.SANDY  230.0   circuit 1
Outage case 1882              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73027 BOYD     230.0 to   73026 BOYD     115.0   circuit 1
Outage case 1883              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73028 BOYSEN   115.0 to   73333 BOYSEN1    4.2   circuit 1
Outage case 1884              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73028 BOYSEN   115.0 to   73442 BOYSEN2    4.2   circuit 1
Outage case 1885              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73035 BURLNGTN 115.0 to   73036 BURLNGTN 230.0   circuit 1
Outage case 1886              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73035 BURLNGTN 115.0 to   73036 BURLNGTN 230.0   circuit 2
Outage case 1887              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73056 ESTES    115.0 to   73306 ESTES1     6.9   circuit 1
Outage case 1888              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73056 ESTES    115.0 to   73307 ESTES2     6.9   circuit 1
Outage case 1889              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73056 ESTES    115.0 to   73308 ESTES3     6.9   circuit 1
Outage case 1890              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73061 FRASER   138.0 to   73296 FRASER   115.0   circuit 1
Outage case 1891              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73069 GLENDO   115.0 to   73351 GLENDO1    6.9   circuit 1
Outage case 1892              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73069 GLENDO   115.0 to   73352 GLENDO2    6.9   circuit 1
Outage case 1893              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73099 KORTES   115.0 to   73356 KORTES1    6.9   circuit 1
Outage case 1894              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73099 KORTES   115.0 to   73357 KORTES2    6.9   circuit 1
Outage case 1895              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73099 KORTES   115.0 to   73358 KORTES3    6.9   circuit 1
Outage case 1896              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73106 LAPORTE  230.0 to   73105 LAPORTE  115.0   circuit 1
Outage case 1897              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73107 LAR.RIVR 230.0 to   73108 LAR.RIVR 345.0   circuit 1
Outage case 1898              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73116 LONGPEAK 230.0 to   73115 LONGPEAK 115.0   circuit 1
Outage case 1899              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73116 LONGPEAK 230.0 to   73115 LONGPEAK 115.0   circuit 2
Outage case 1900              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73142 N.YUMA   115.0 to   73143 N.YUMA   230.0   circuit 1
Outage case 1901              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73176 SEMINOE  115.0 to   73363 SMNOE1-2   6.9   circuit 1
Outage case 1902              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73176 SEMINOE  115.0 to   73441 SEMINOE3   6.9   circuit 1
Outage case 1903              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73179 SIDNEY   115.0 to   73180 SIDNEY   230.0   circuit 1
Outage case 1904              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73180 SIDNEY   230.0 to   73181 SIDNEYDC 230.0   circuit 1
Outage case 1905              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73190 STEGALL  230.0 to   73189 STEGALL  115.0   circuit 1
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Outage case 1906              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73190 STEGALL  230.0 to   73189 STEGALL  115.0   circuit 2
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Outage case 1907              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73192 STORY    230.0 to   73193 STORY    345.0   circuit 1
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Outage case 1908              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73192 STORY    230.0 to   73193 STORY    345.0   circuit 2
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Outage case 1909              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73199 TIMBERLN 230.0 to   73198 TIMBERLN 115.0   circuit 1
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Outage case 1910              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73211 WELD  LM 115.0 to   73212 WELD  LM 230.0   circuit 1
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Outage case 1911              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73224 WRAY     230.0 to   73223 WRAY     115.0   circuit 1
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Outage case 1912              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73228 YELLOWBR 115.0 to   73229 YELLOWBR 230.0   circuit 1
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Outage case 1913              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73231 MARYLKPP 115.0 to   73319 MARYLKPP   6.9   circuit 1
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Outage case 1914              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73392 CTTNWD N 230.0 to   73391 CTTNWD N 115.0   circuit 1
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Outage case 1915              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73394 CTTNWD S 230.0 to   73393 CTTNWD S 115.0   circuit 1
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Outage case 1916              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73407 KELKER   230.0 to   73409 KELKER W 115.0   circuit 1
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Outage case 1917              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73413 MIDWAYBR 230.0 to   73412 MIDWAYBR 115.0   circuit 1
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Outage case 1918              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73419 RD NIXON 230.0 to   73417 RD NIXON 115.0   circuit 1
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Outage case 1919              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73477 FULLER   230.0 to   73481 FULLER   115.0   circuit 1
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Outage case 1920              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79014 CRAIG    345.0 to   79013 CRAIG    230.0   circuit 1
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Outage case 1921              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79014 CRAIG    345.0 to   79013 CRAIG    230.0   circuit 2
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Outage case 1922              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79021 CURECANT 230.0 to   79020 CURECANT 115.0   circuit 1
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Outage case 1923              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79039 HAYDEN   230.0 to   79038 HAYDEN   138.0   circuit 1
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Outage case 1924              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79039 HAYDEN   230.0 to   79038 HAYDEN   138.0   circuit 2
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Outage case 1925              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79045 LOSTCANY 230.0 to   79044 LOSTCANY 115.0   circuit 1
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Outage case 1926              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79049 MONTROSE 345.0 to   79048 MONTROSE 115.0   circuit 1
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Outage case 1927              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79070 NORTHFRK 230.0 to   79050 NORTHFRK 115.0   circuit 1
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Outage case 1928              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79070 NORTHFRK 230.0 to   79050 NORTHFRK 115.0   circuit 2
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Outage case 1929              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79072 HESPERUS 345.0 to   79071 HESPERUS 115.0   circuit 1
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Outage case 1930              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79122 TOWAOC   115.0 to   79164 TOWAOC     6.9   circuit 1
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Outage case 1931              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79174 MOLINA-L 115.0 to   79166 MOLINA-L   4.2   circuit 1
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Outage case 1932              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79175 MOLINA-U 115.0 to   79172 MOLINA-U   4.2   circuit 1
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Outage case 1933              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 63002 CRSOVRUM 230.0 to   63001 CROS PHA 230.0   circuit 1
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Outage case 1934              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 63008 HAVRE    161.0 to   63007 HAVRE    115.0   circuit 1
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Outage case 1935              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 60192 LADD     230.0 to   40621 LAGRANDE 230.0   circuit 1
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Outage case 1936              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 62009 RATTLE S 161.0 to   40867 RATTLE S 230.0   circuit 1
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Outage case 1937              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65565 FLAMGORG 230.0 to   79026 FLAMGORG 138.0   circuit 1
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Outage case 1938              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65565 FLAMGORG 230.0 to   79026 FLAMGORG 138.0   circuit 2
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Outage case 1939              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73170 RIVERTON 115.0 to   66305 RIVERTON 230.0   circuit 1
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Outage case 1940              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73197 THERMOPL 115.0 to   66535 THERMOPL 230.0   circuit 1
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Outage case 1941              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79033 GOREPASS 230.0 to   73072 GOREPASS 138.0   circuit 1
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Outage case 1942              Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79060 SANJN PS 345.0 to   10292 SAN_JUAN 345.0   circuit 1
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Outage case 1943                Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65220 BRIDGER  230.0 to   60085 BRIDGER  345.0   circuit 1

Outage case 1944                Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65220 BRIDGER  230.0 to   60085 BRIDGER  345.0   circuit 2

Outage case 1945                Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 65220 BRIDGER  230.0 to   60085 BRIDGER  345.0   circuit 3

Outage case 1946                Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 70205 GRANDJCT 230.0 to   79036 GRANDJCT 345.0   circuit 1

Outage case 1947                Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 79061 SHIP PS  230.0 to   79063 SHIPROCK 230.0   circuit 1

Outage case 1948                Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 73551 W CANON  230.0 to   70550 W CANON  115.0   circuit 1

Outage case 1949                Y, WAPA UGP, JUNE 2002
    switched OUT TRANSFORMER 54159 N LETHB4 240.0 to   90500 MTSLETHB 500.0   circuit 1
```

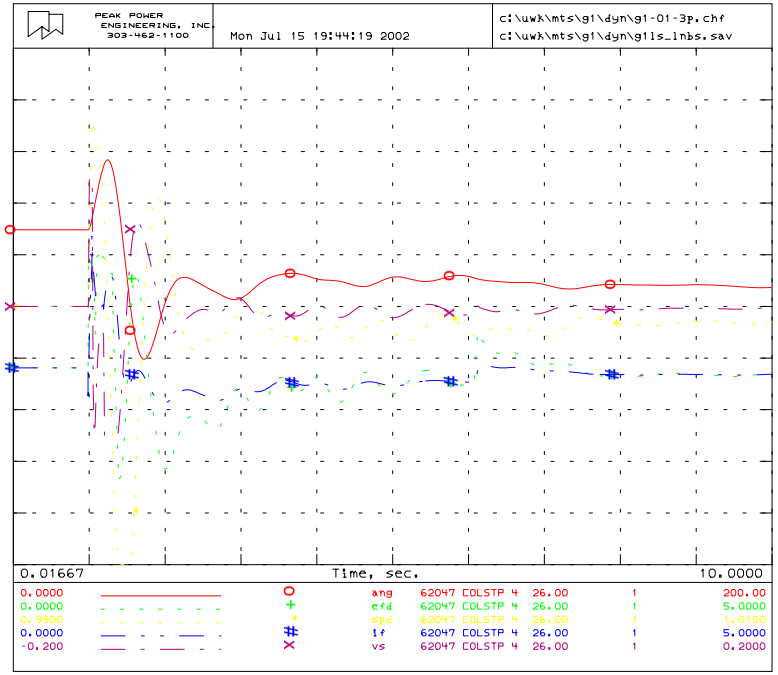
D. DYNAMIC STABILITY PLOTS

Pre-Project Cases:

Fault Location 1
Fault Location 2
Fault Location 3

Post-Project Cases:

Fault Location 1
Fault Location 2
Fault Location 3
Fault Location 4
Fault Location 5
Fault Location 6
Fault Location 7



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WAPA UGP, JUNE 2002
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Clear Flt: 3 cyc, Trip Lines "MTSCLSTP" 500 to "COLSTRP" 500, CKTS 1 & 2

2002 LS2B APPROVED OPERATING CASE
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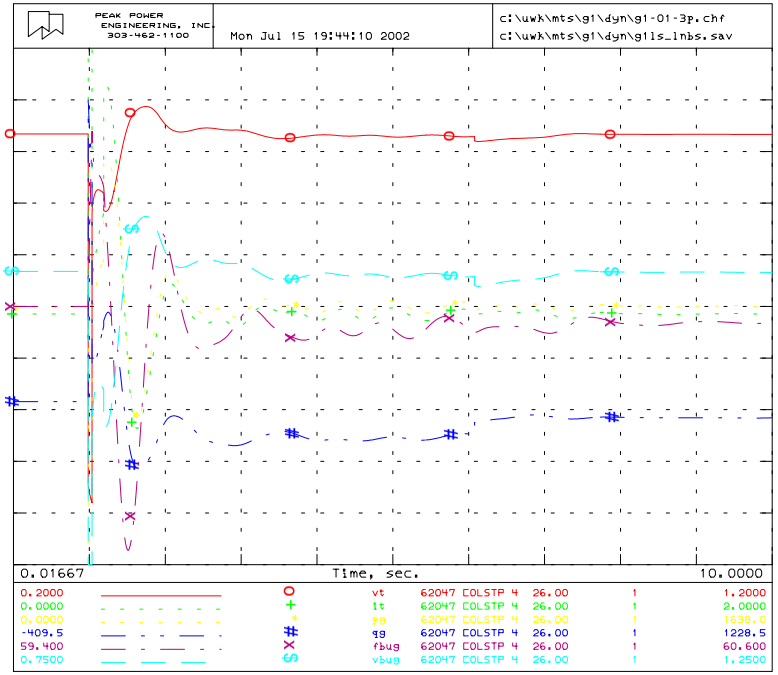

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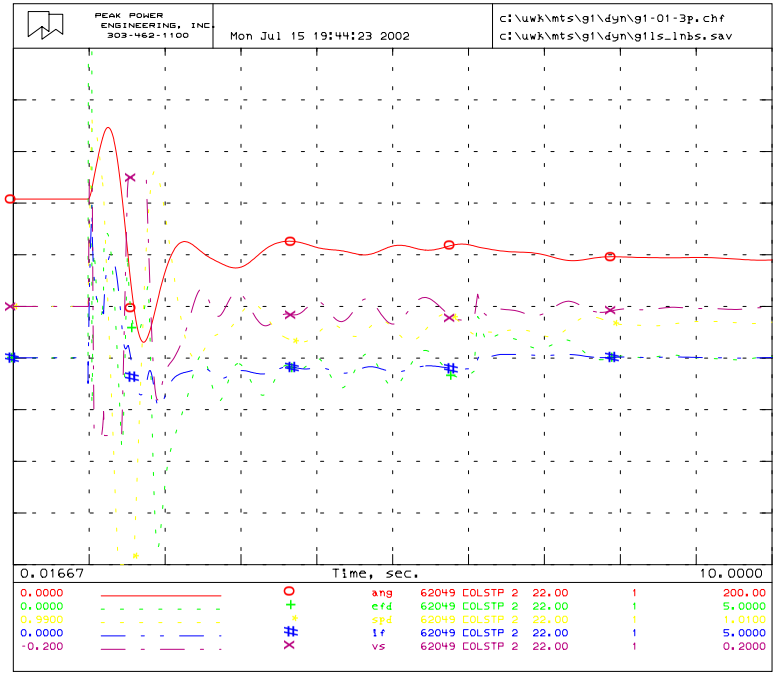

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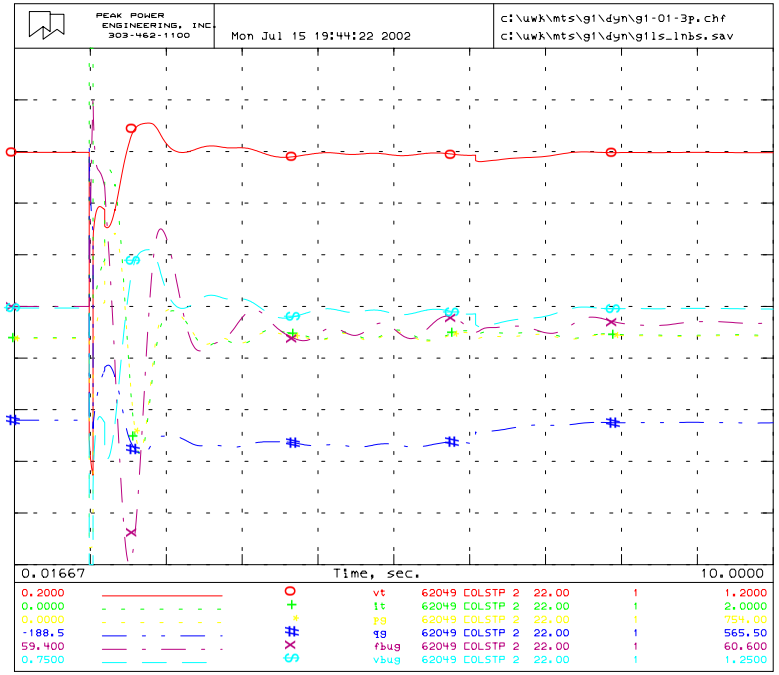

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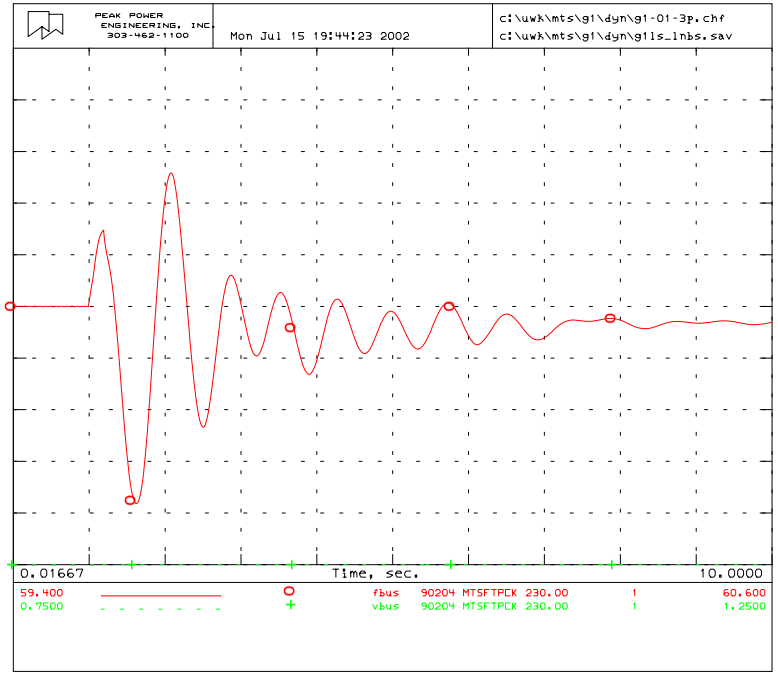

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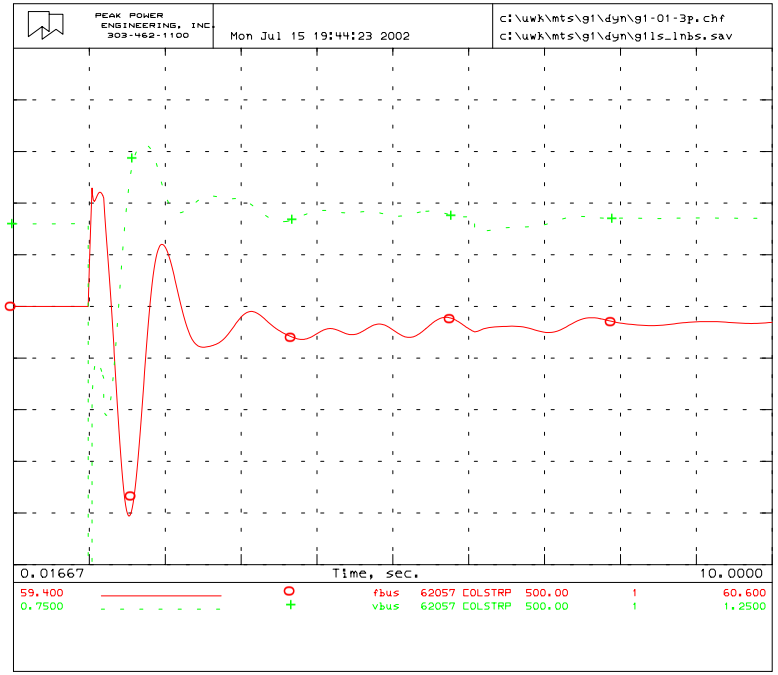

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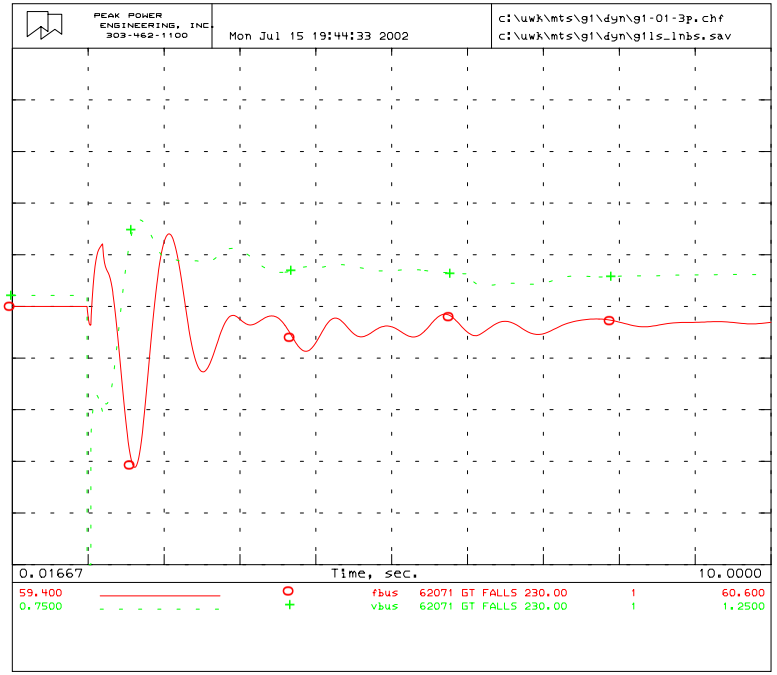

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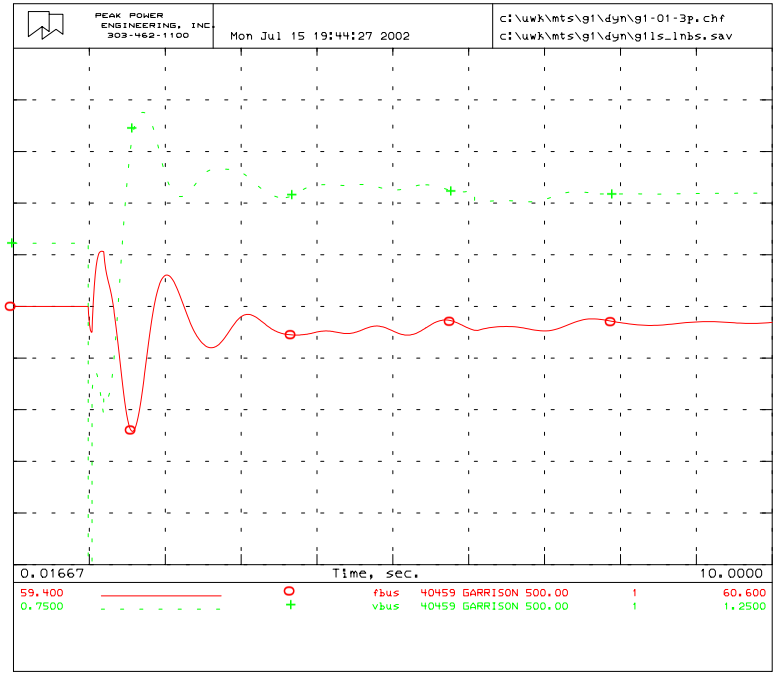

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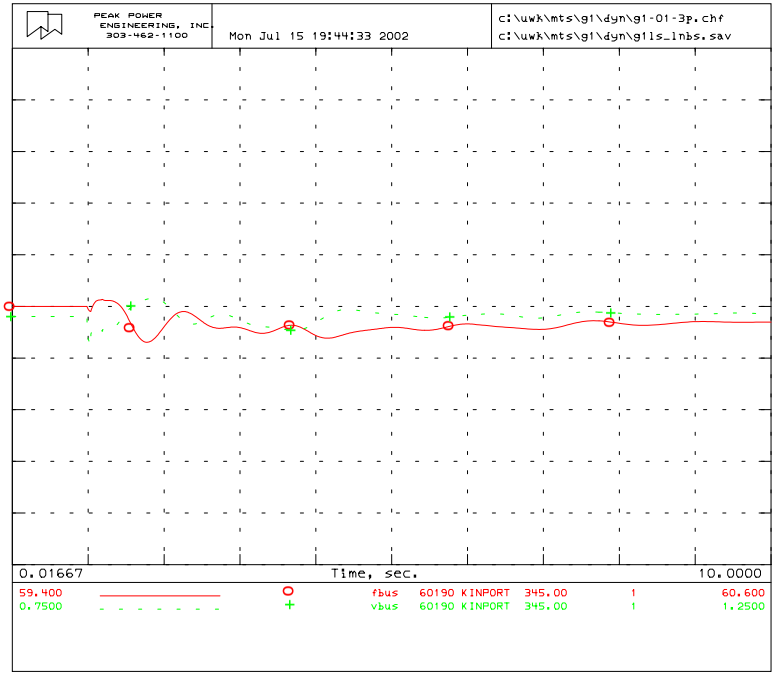

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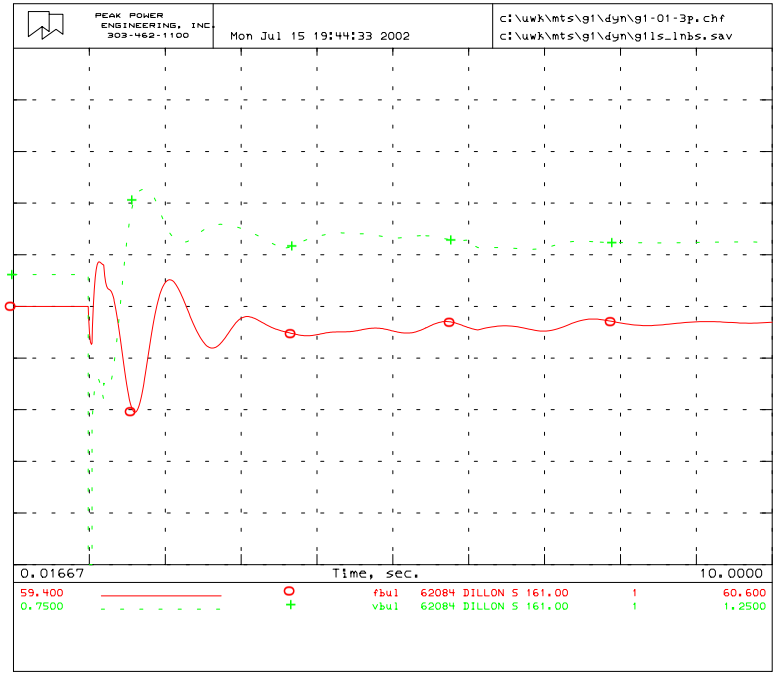

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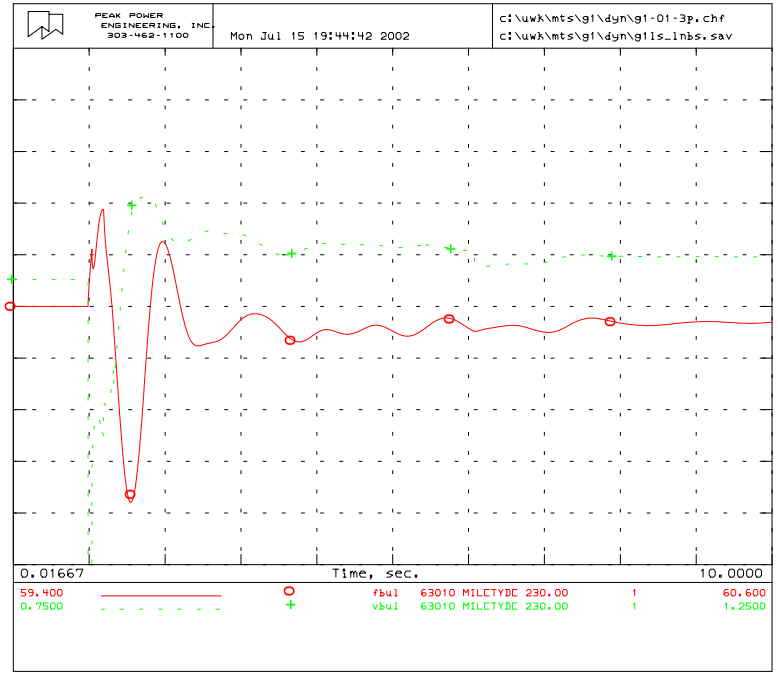

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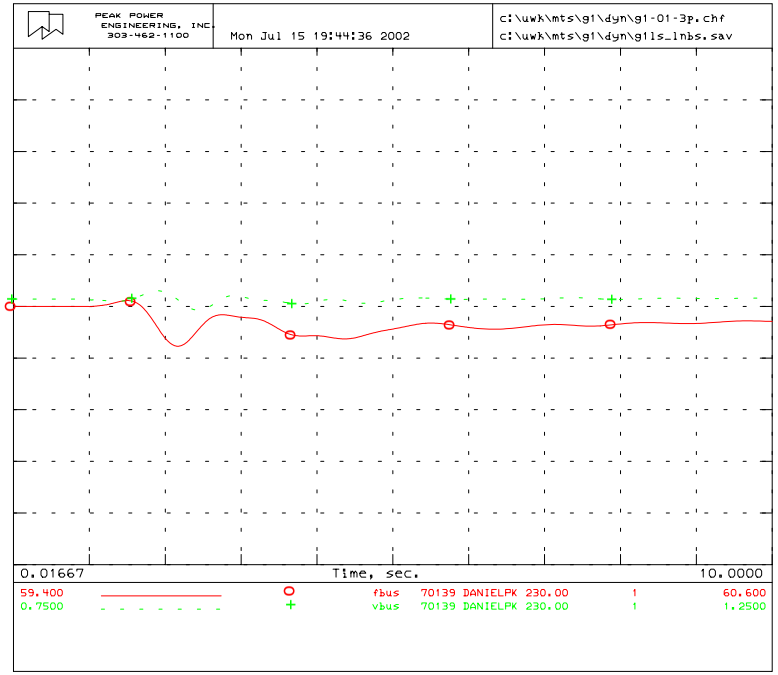

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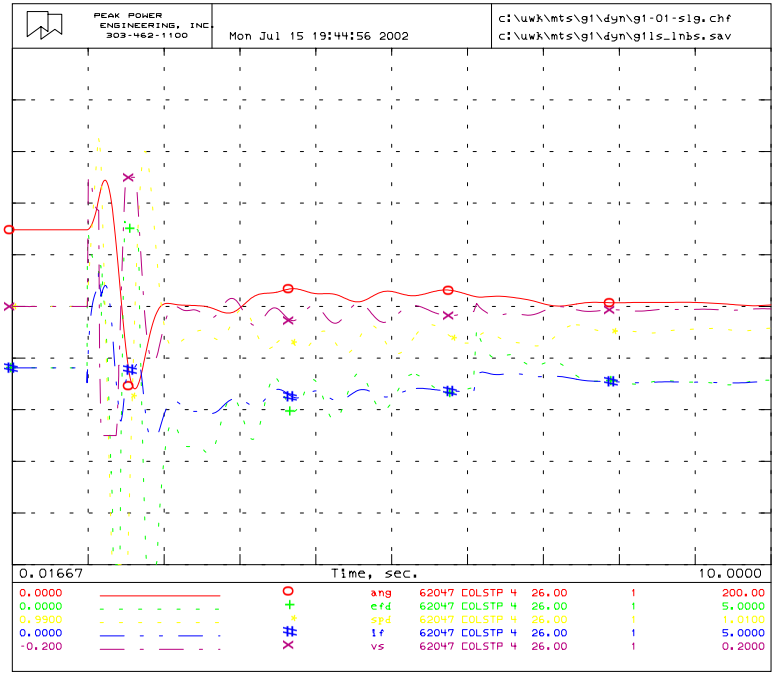

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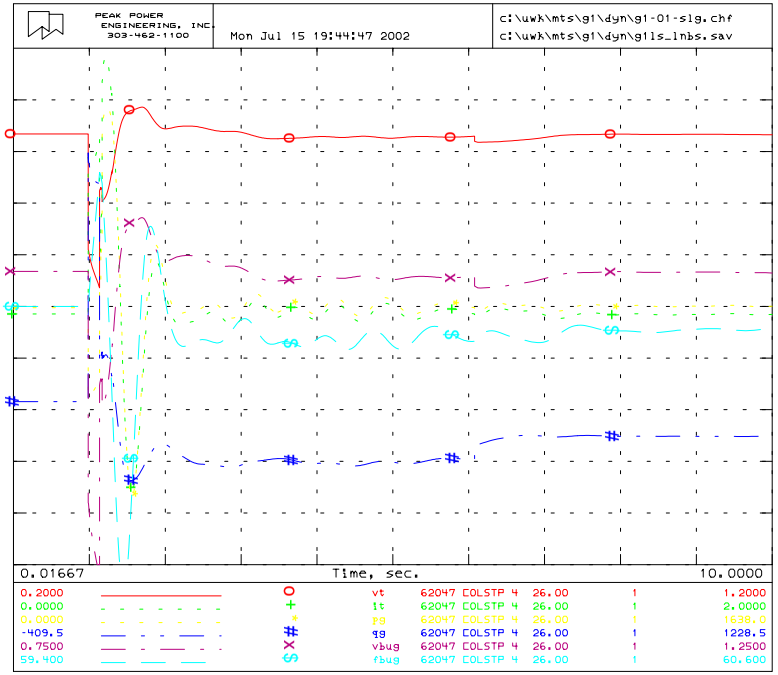

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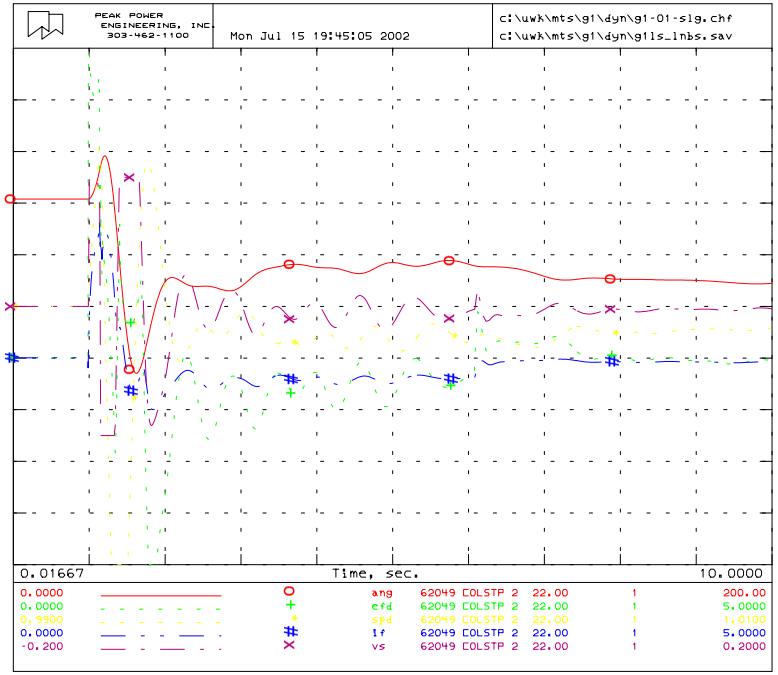

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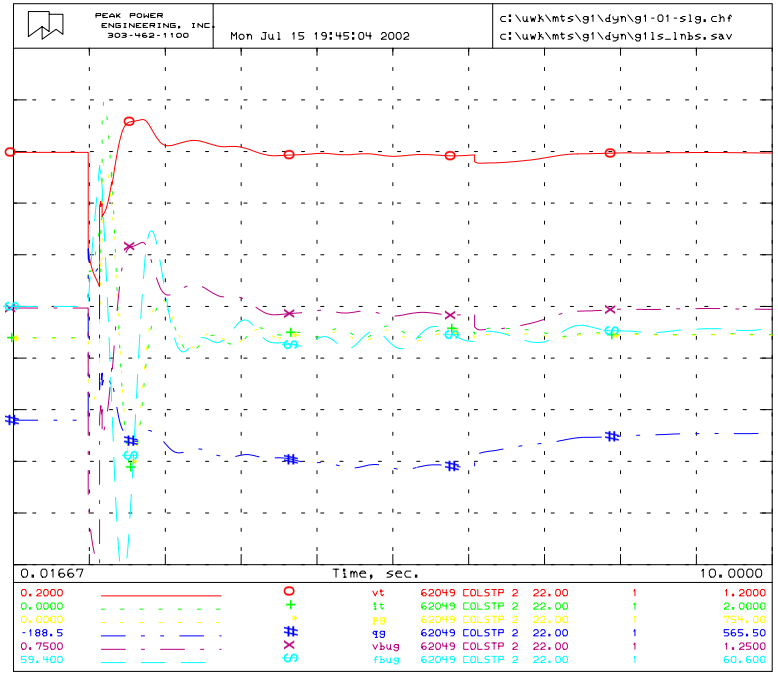

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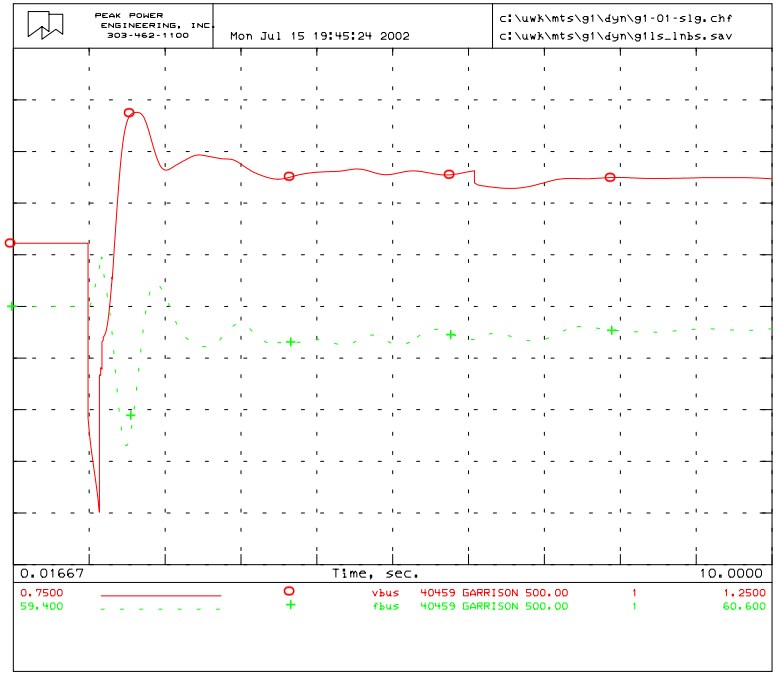

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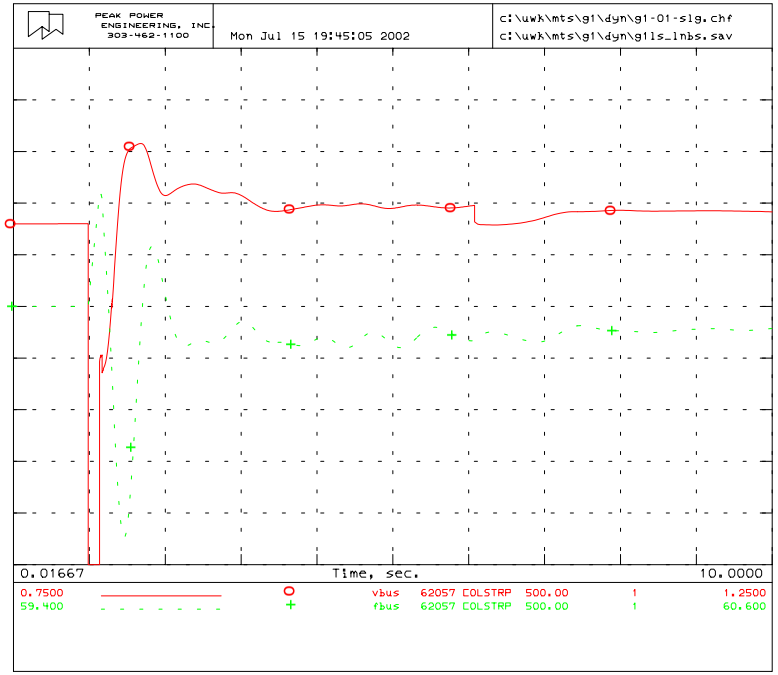

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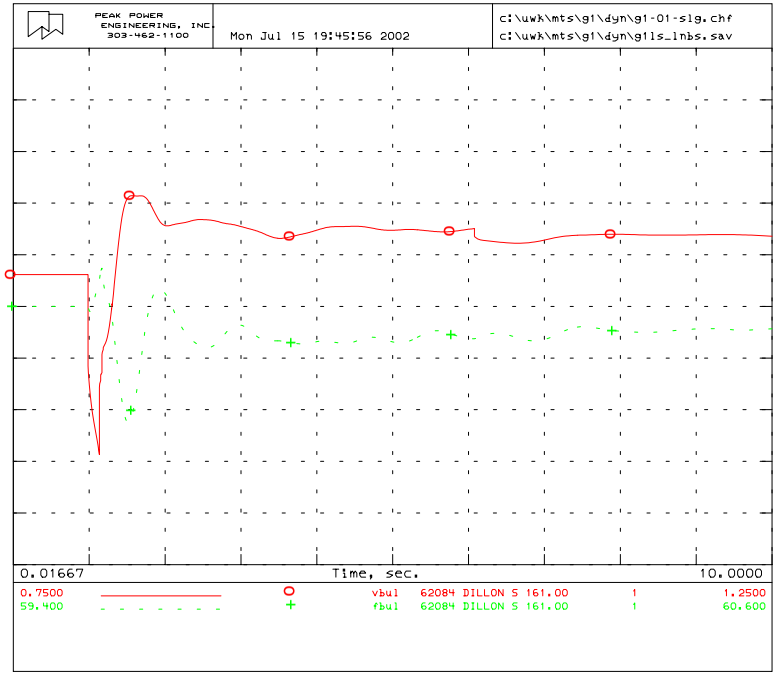

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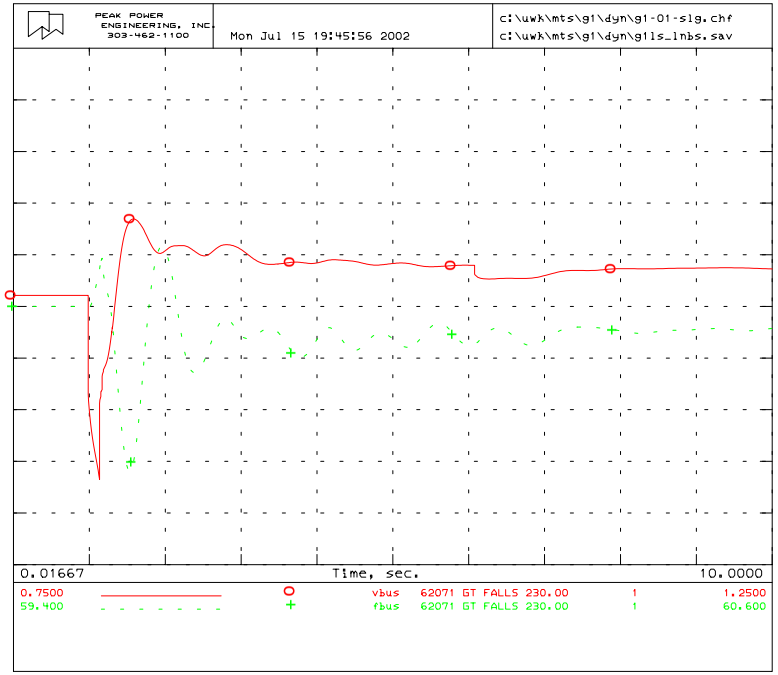

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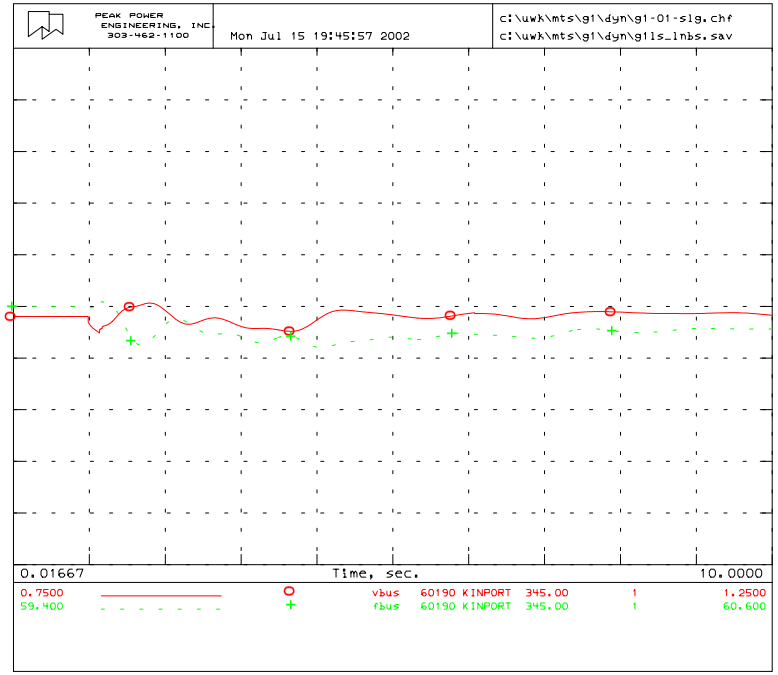

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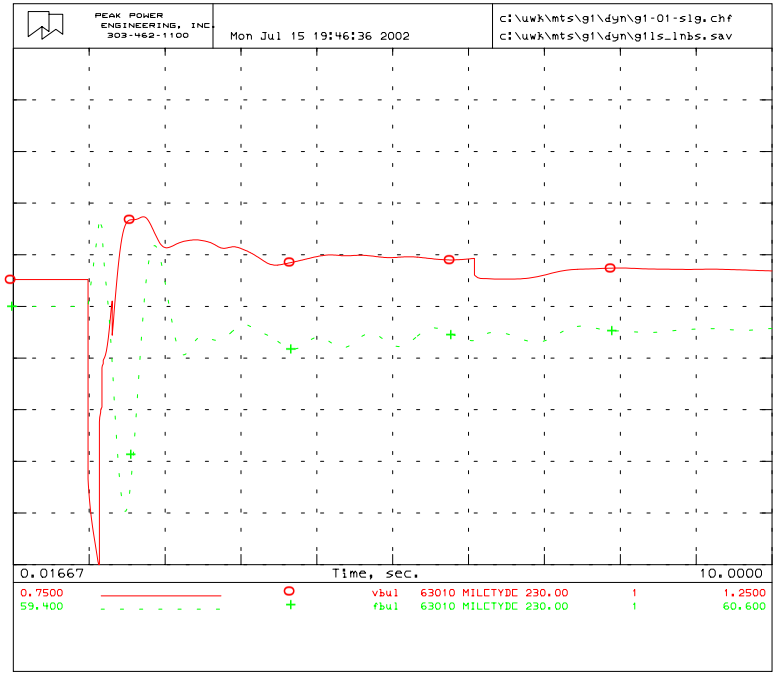

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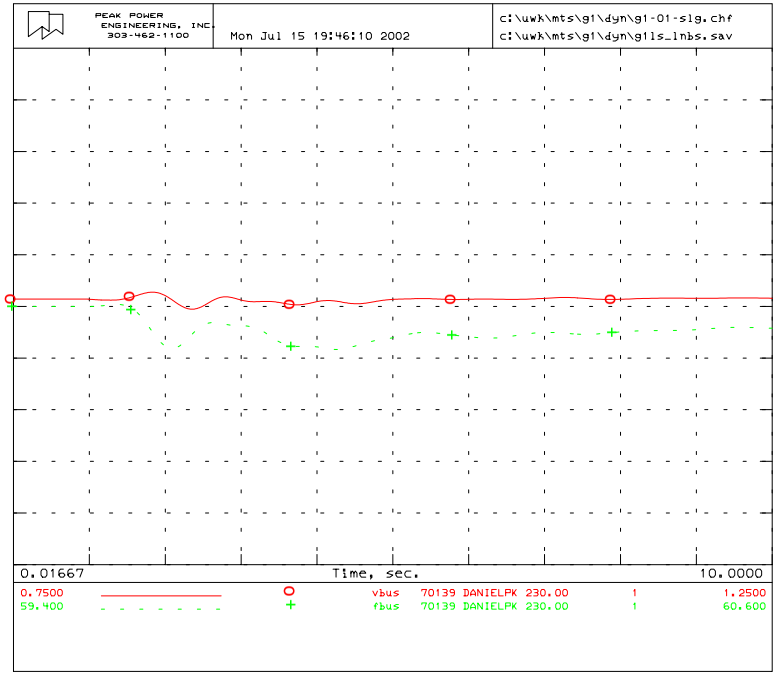

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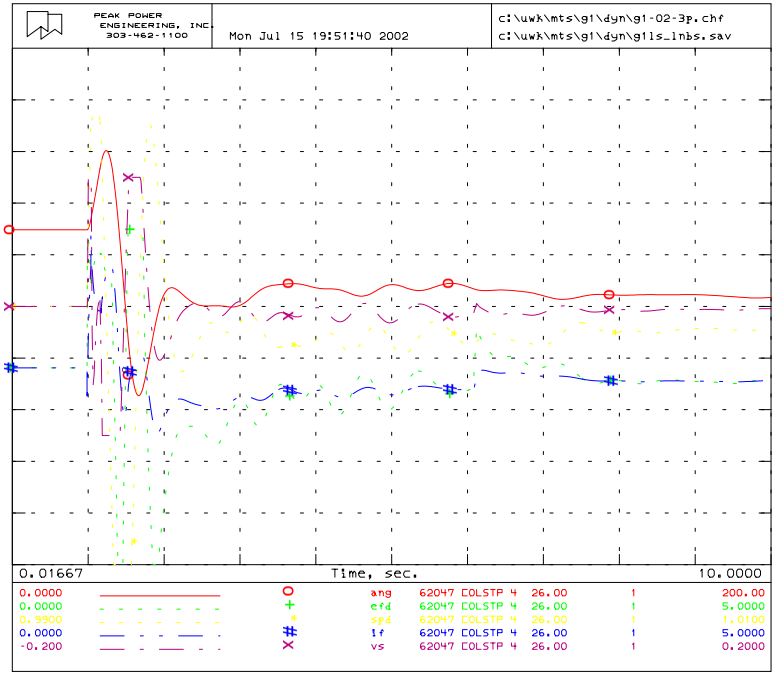

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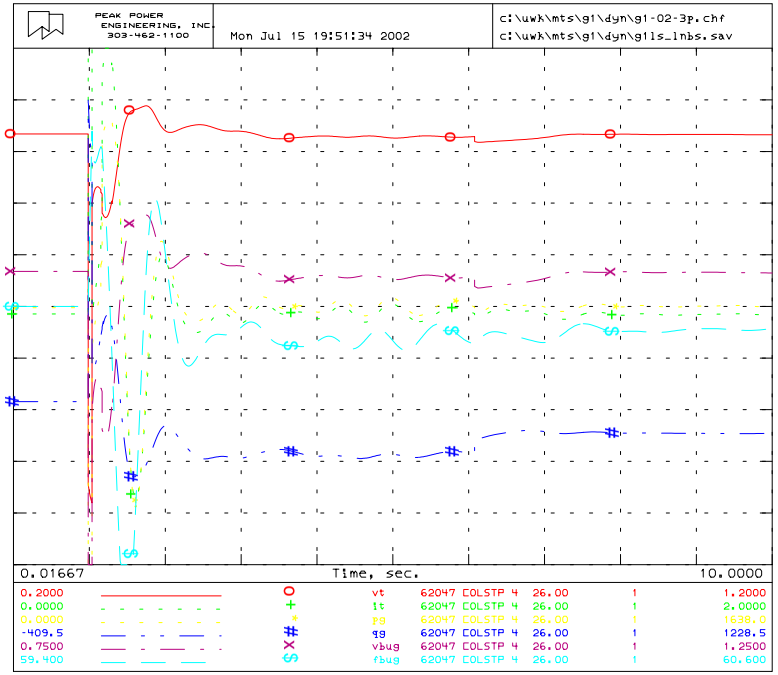

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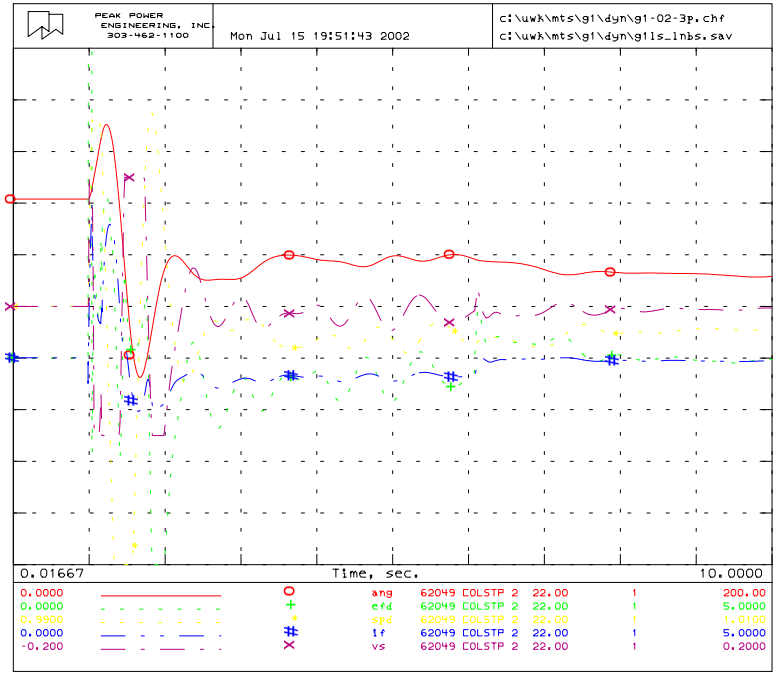

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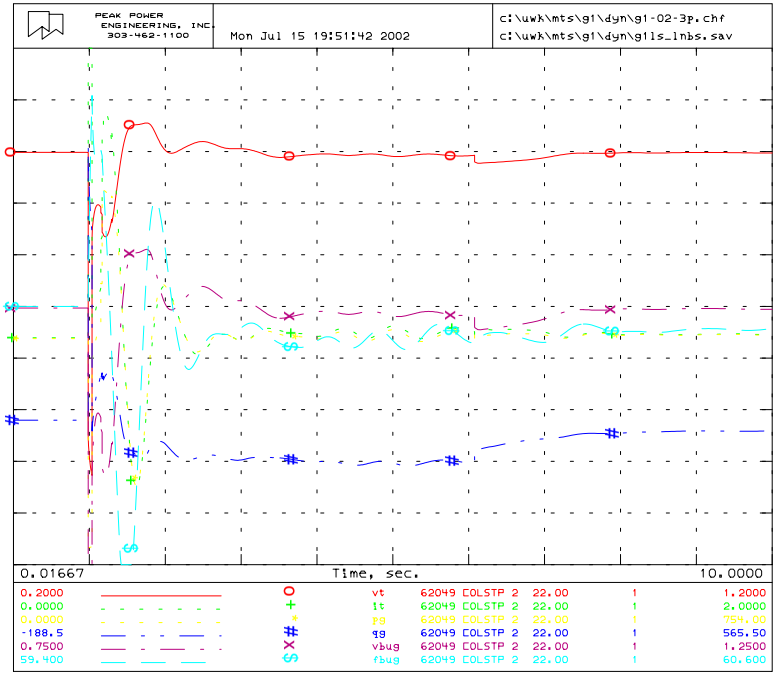

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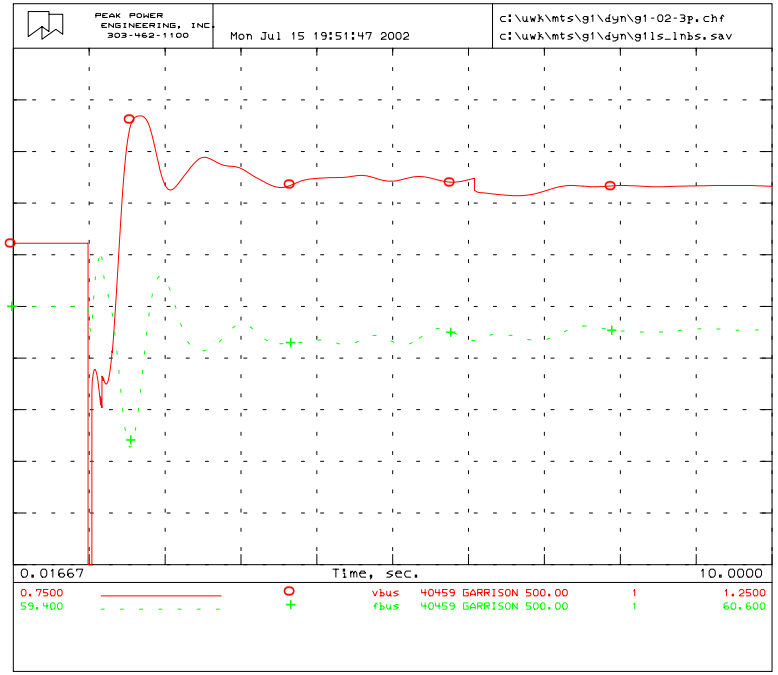

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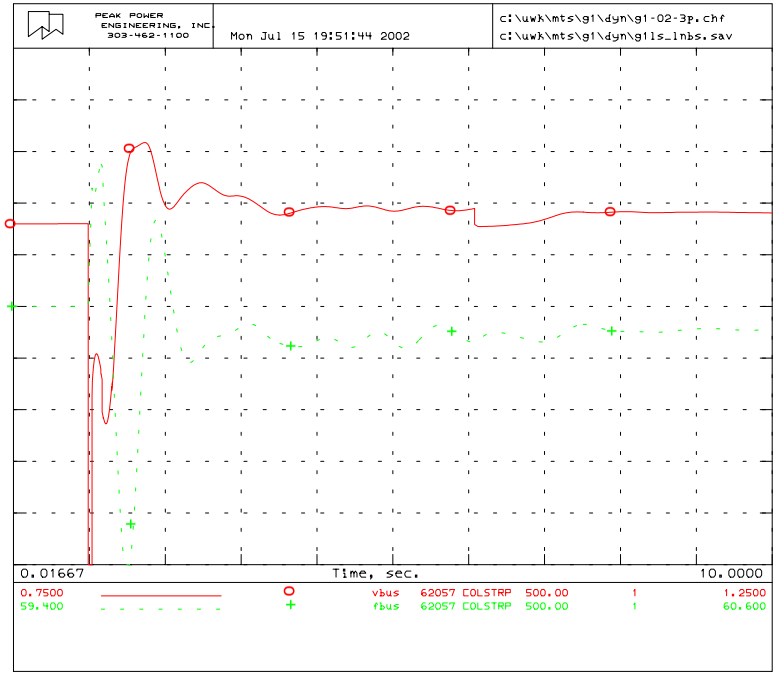

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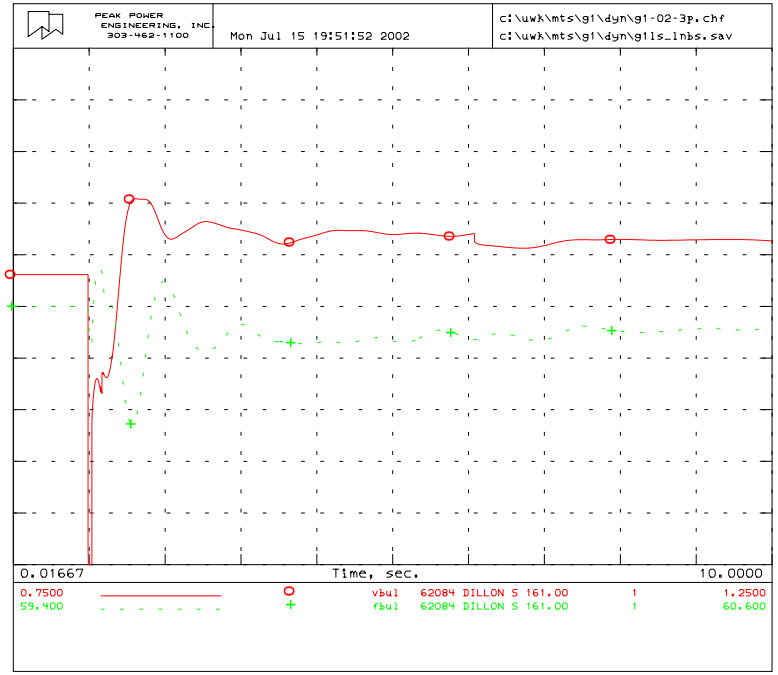

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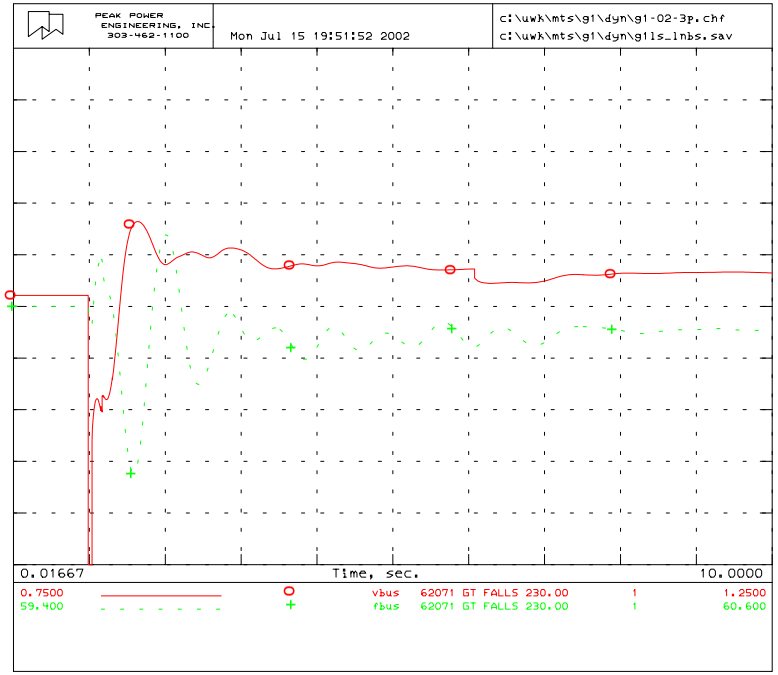

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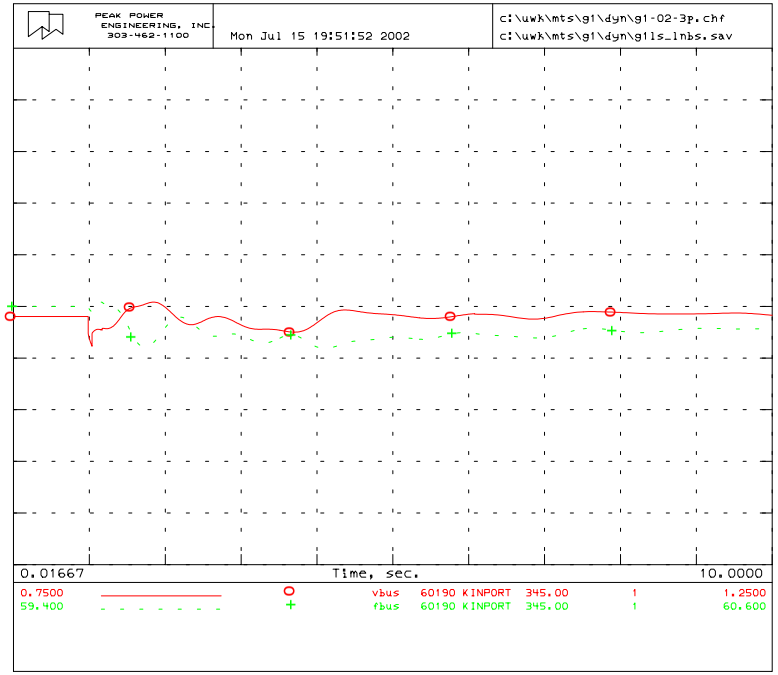

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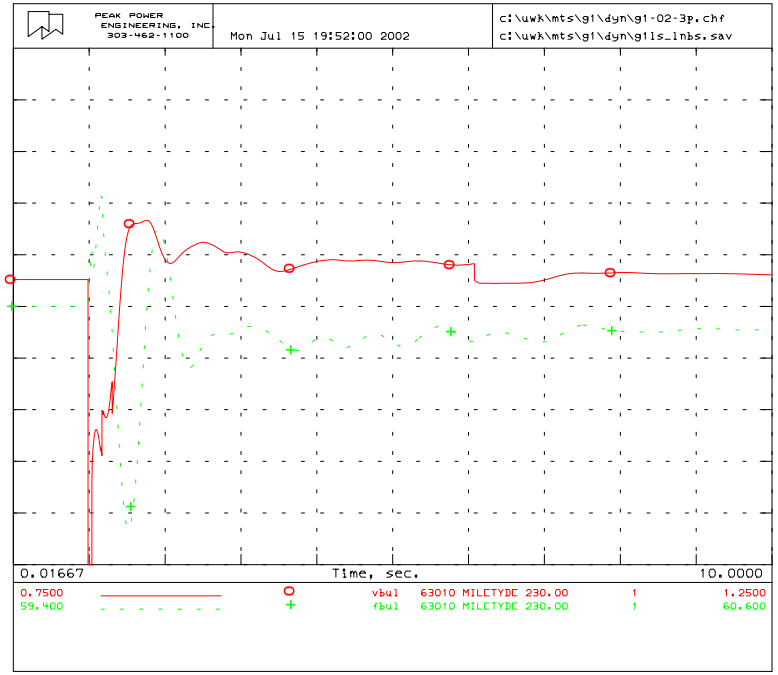

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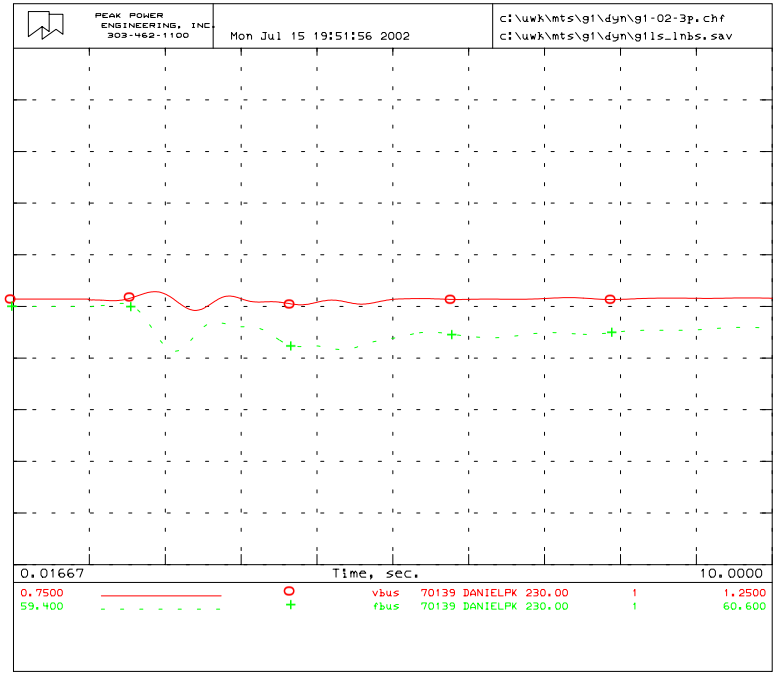

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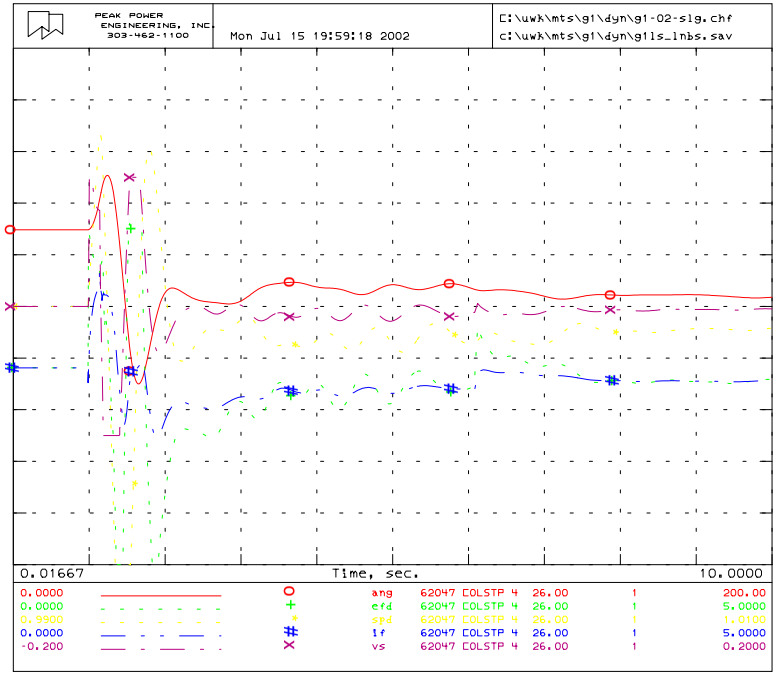

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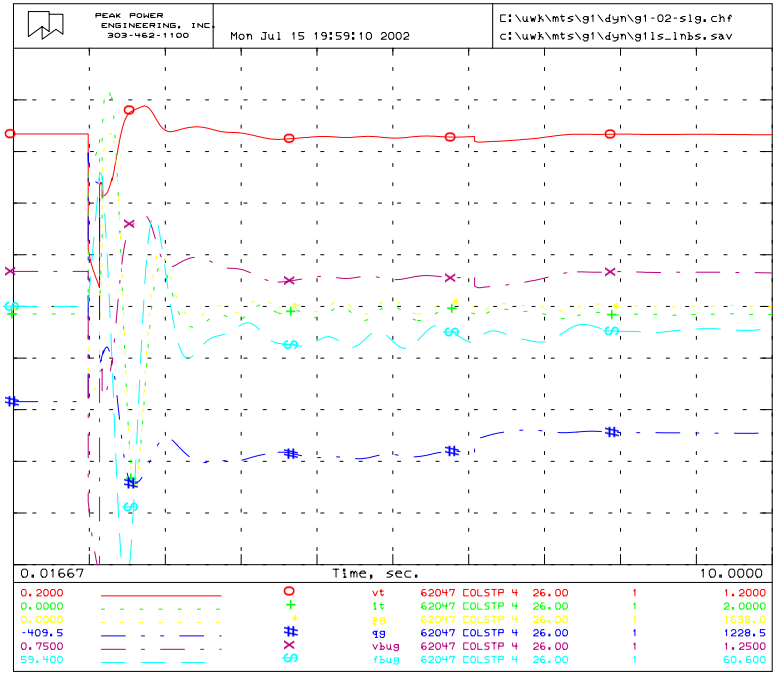

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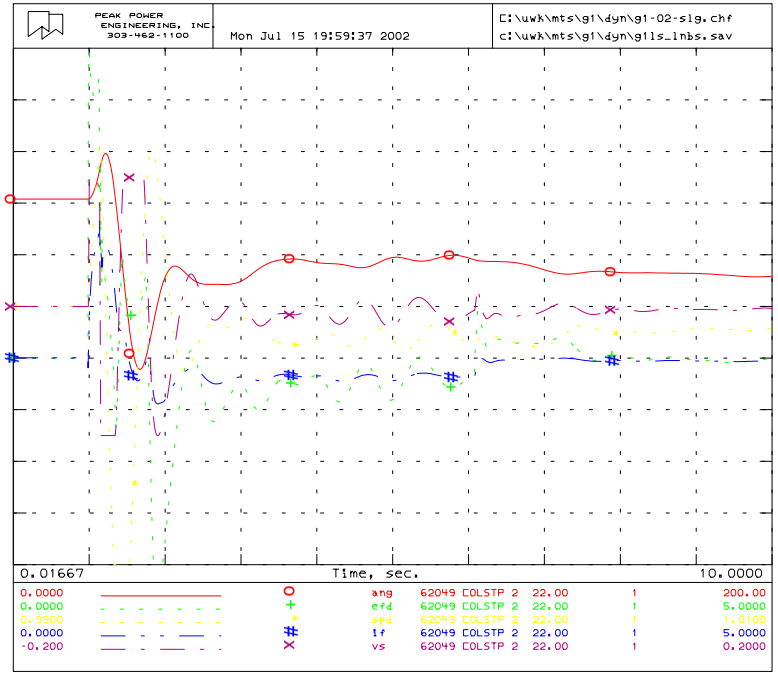

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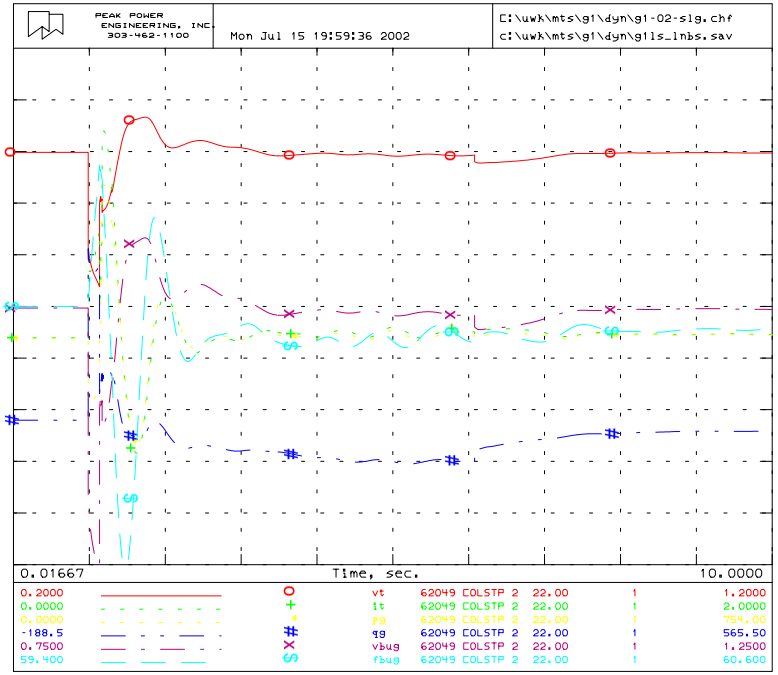

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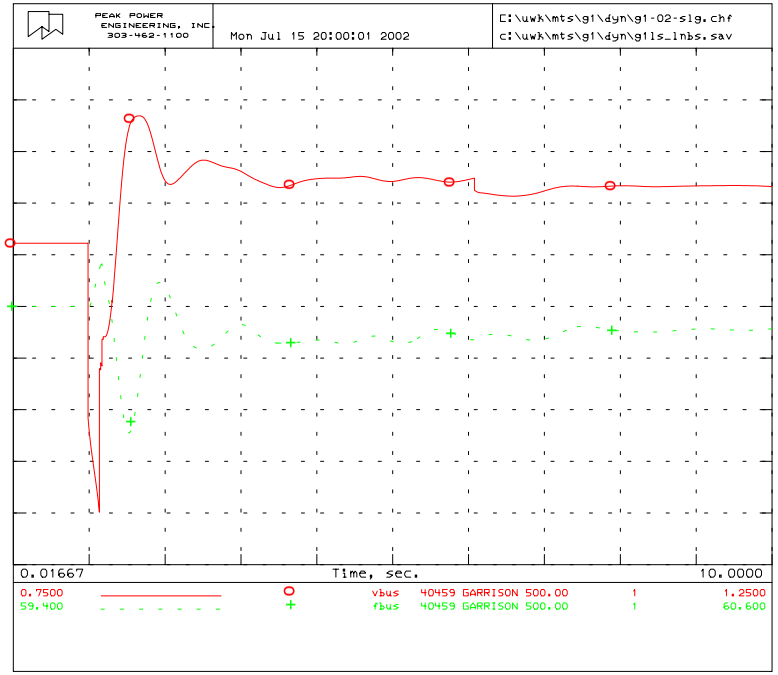

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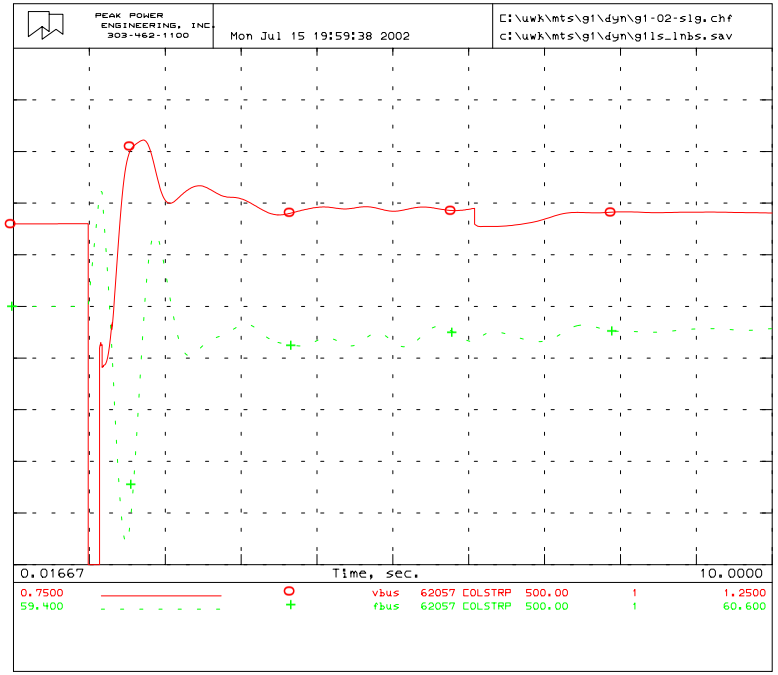

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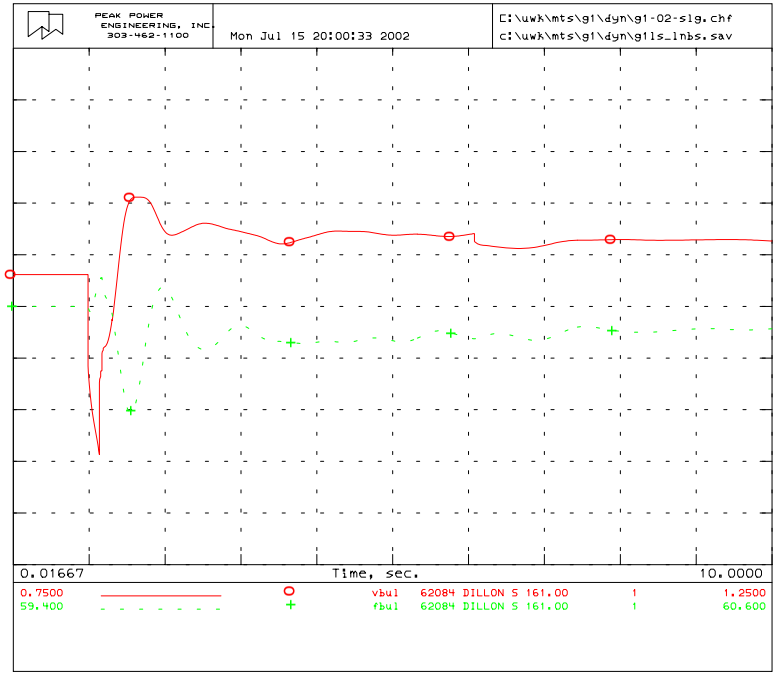

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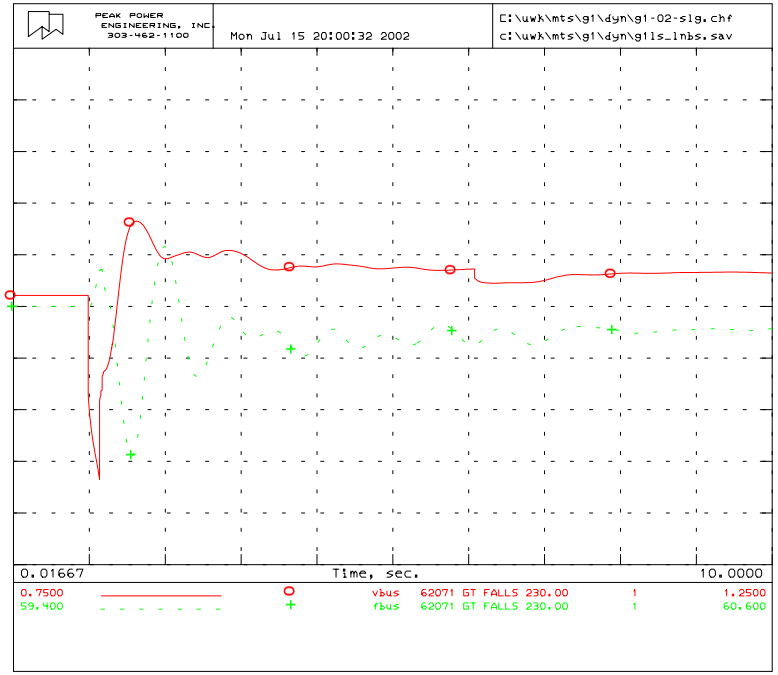

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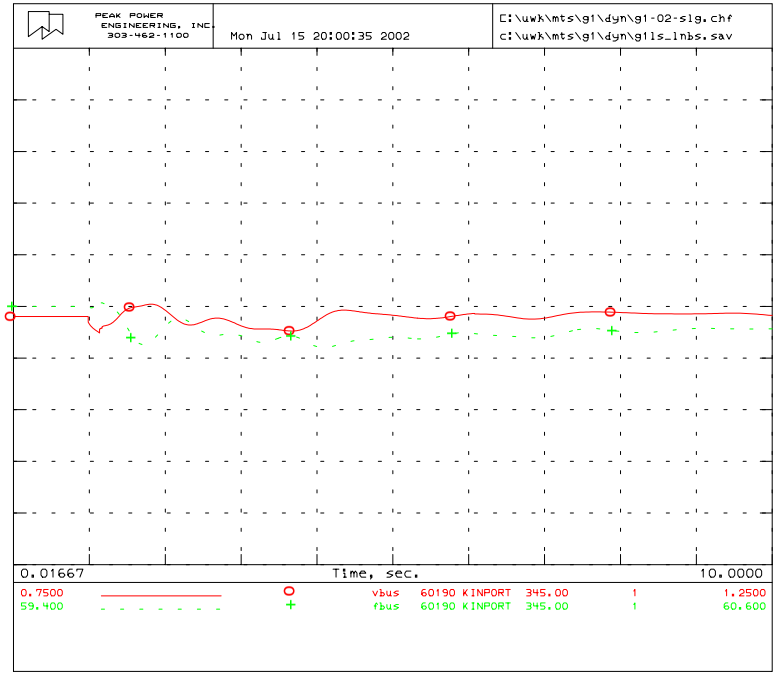

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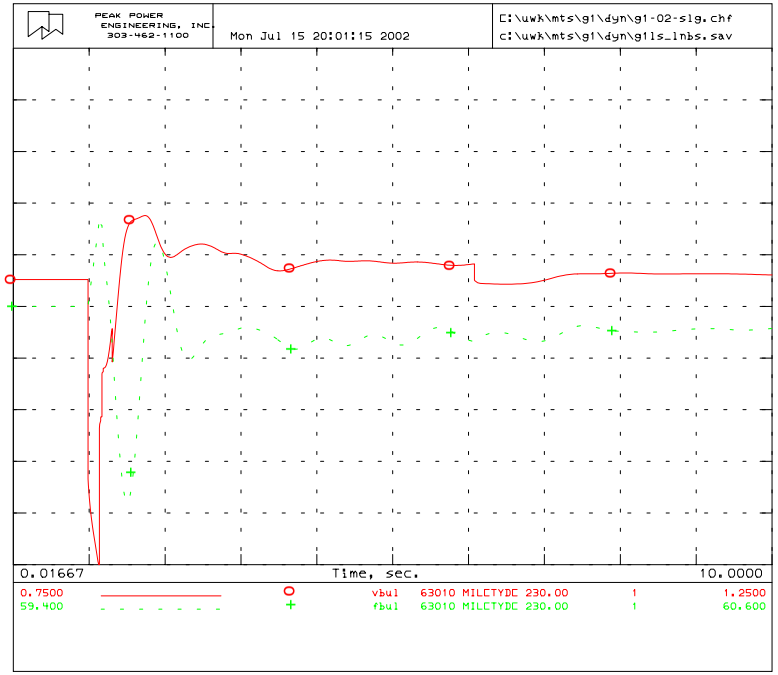

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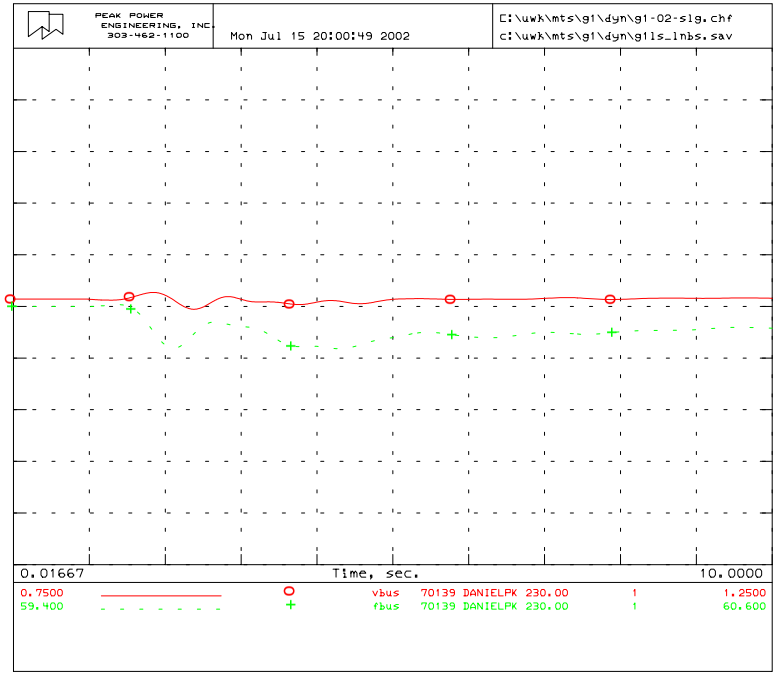

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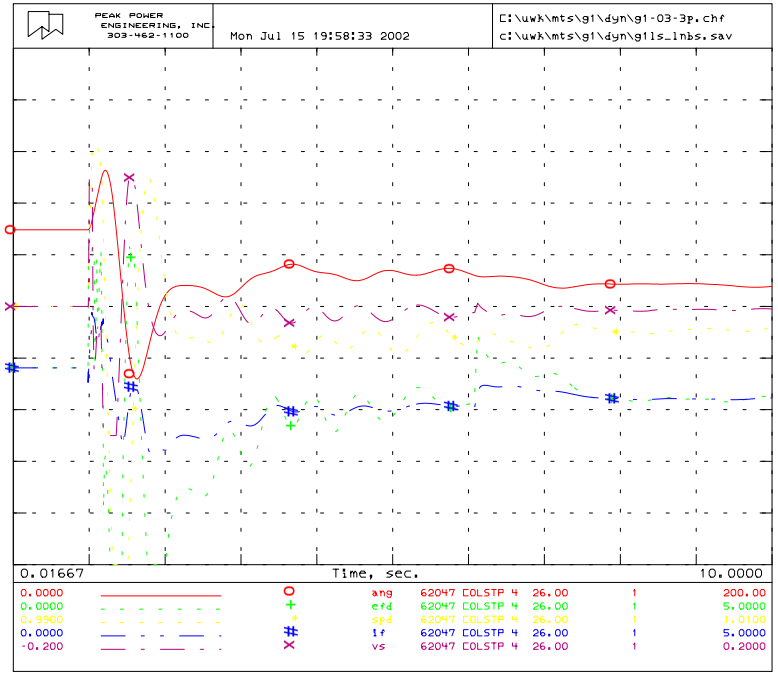

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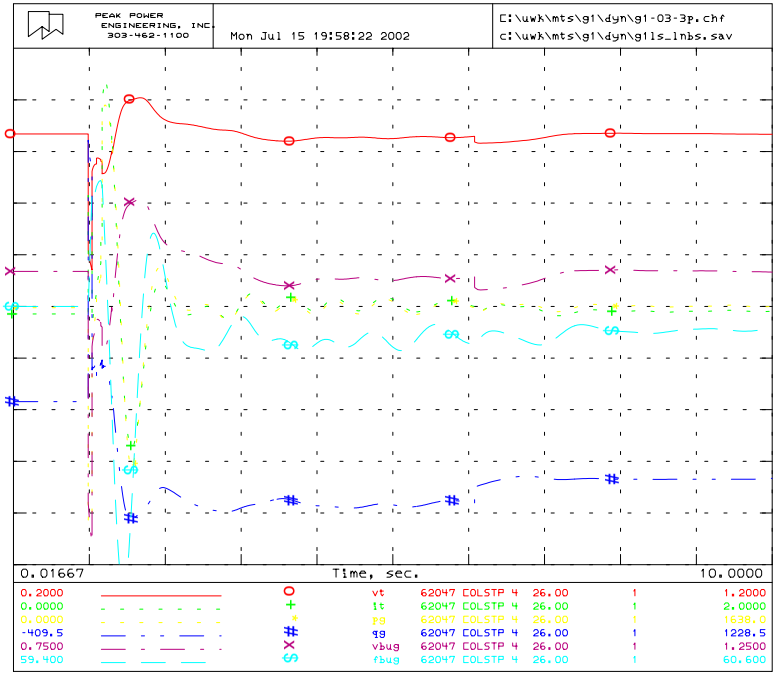

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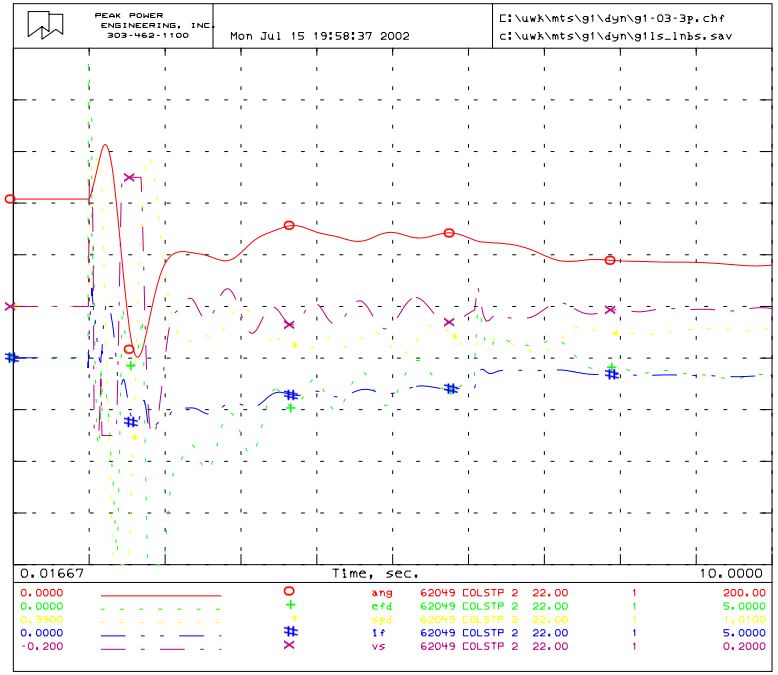

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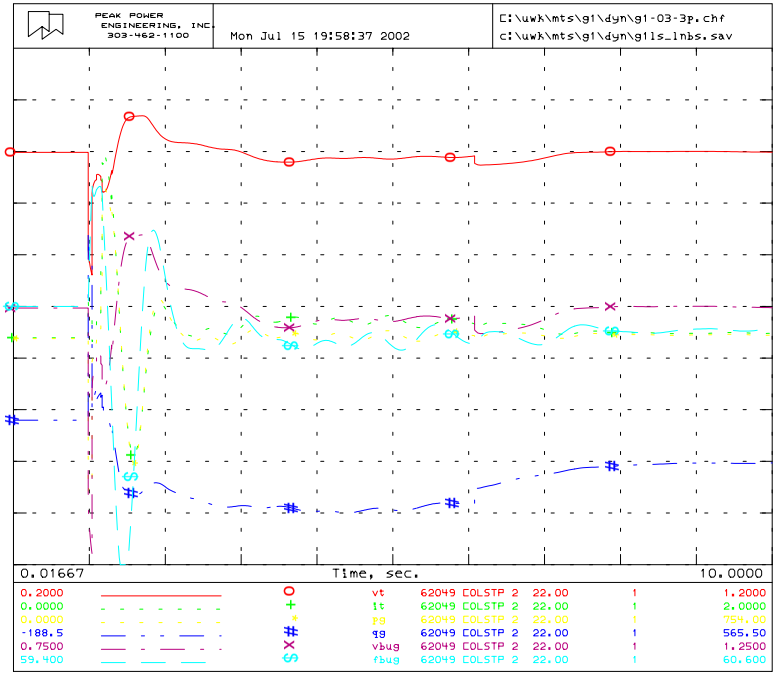

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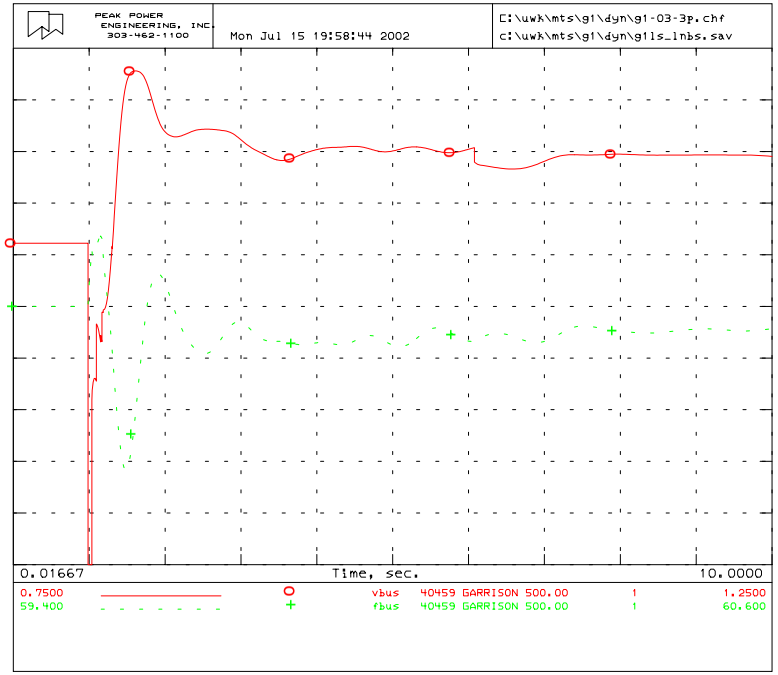

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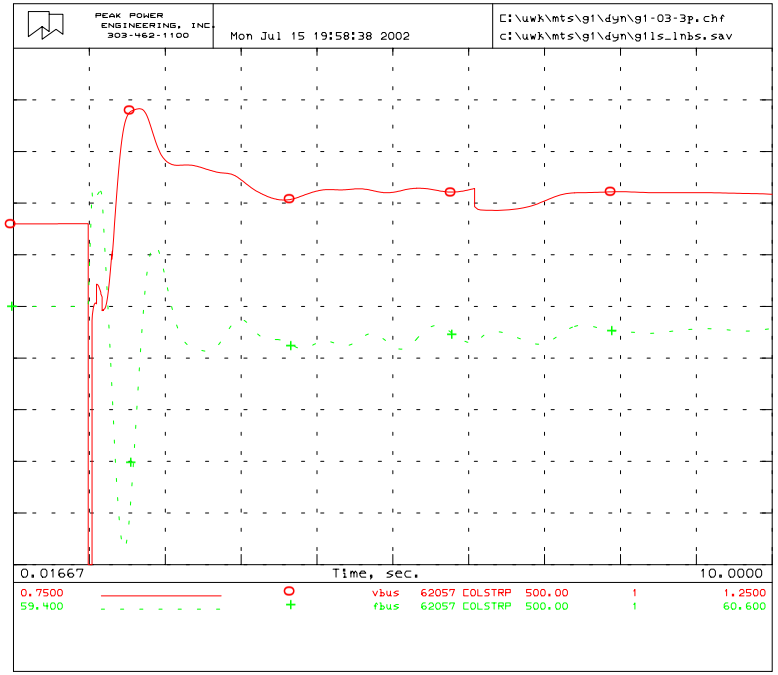

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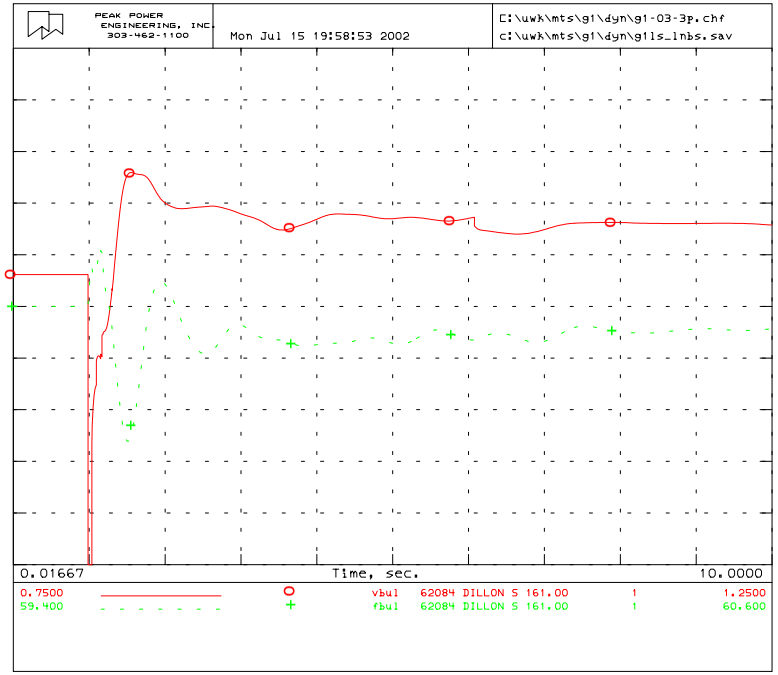

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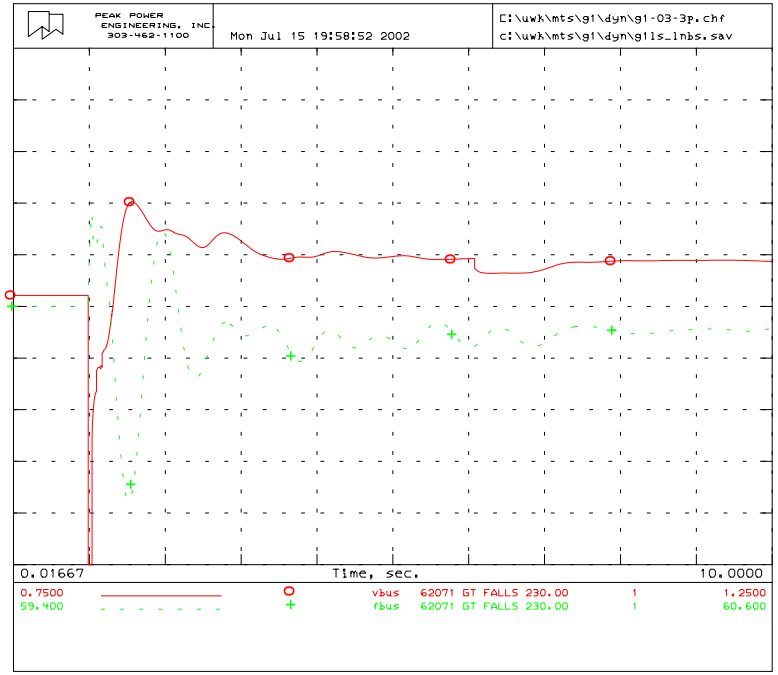

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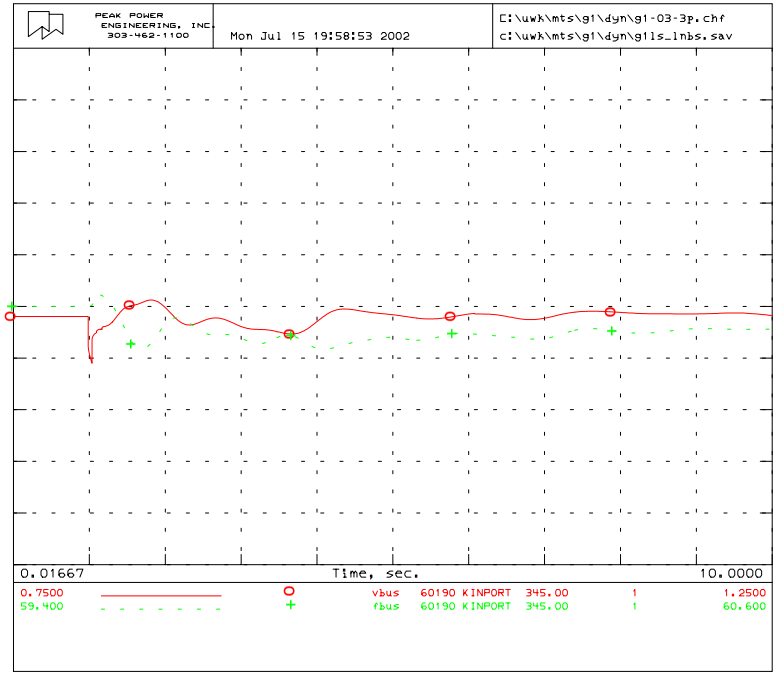

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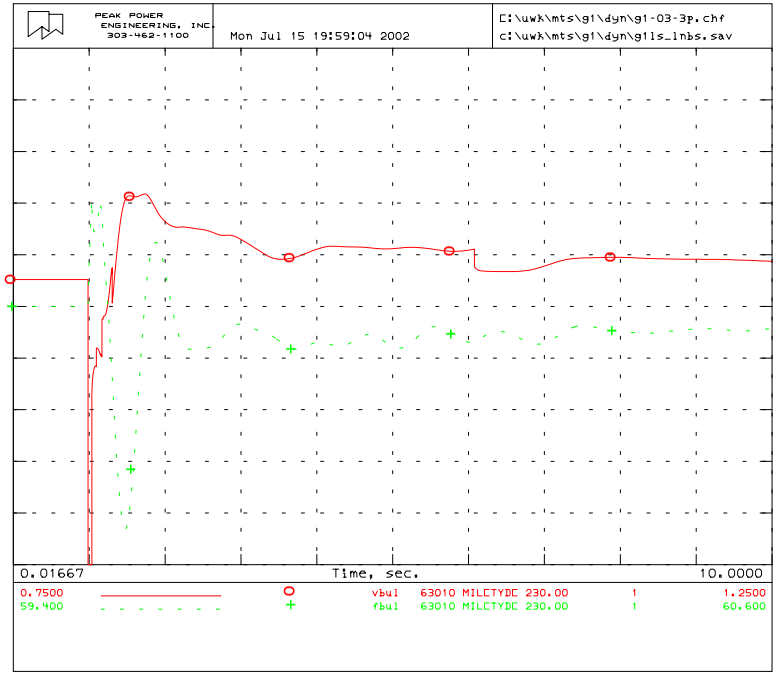

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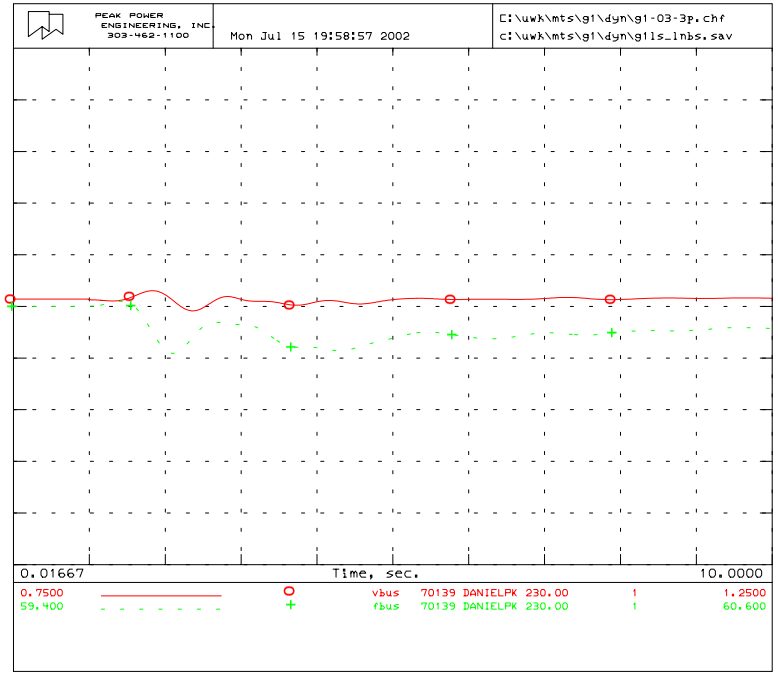

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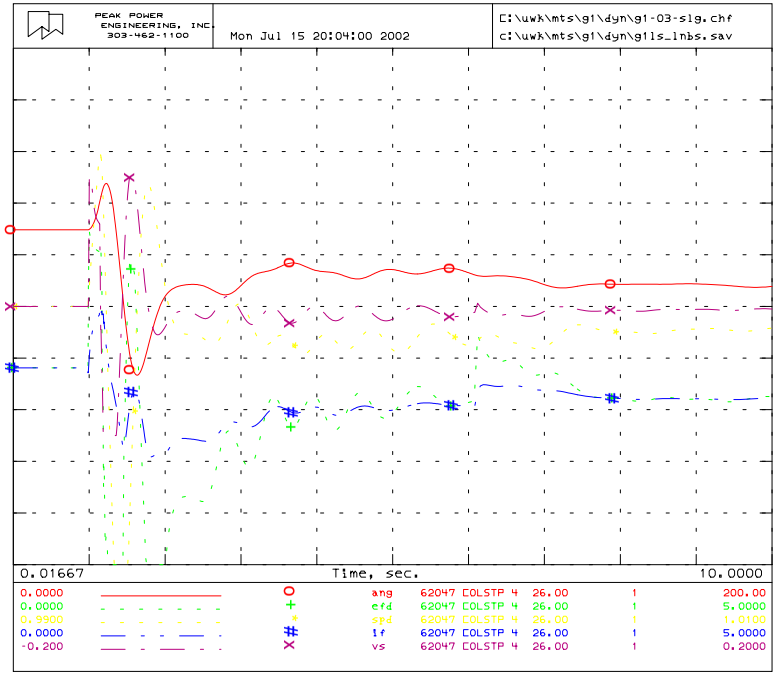

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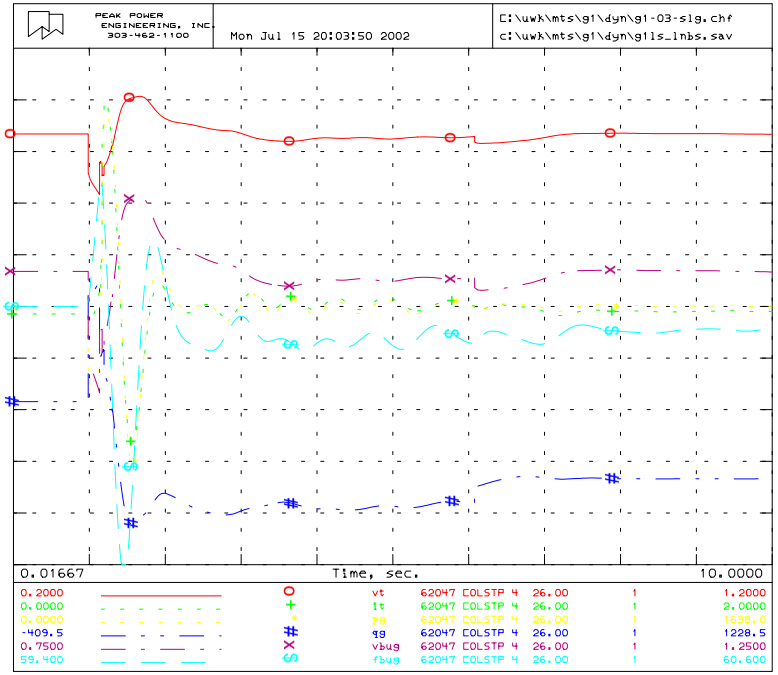

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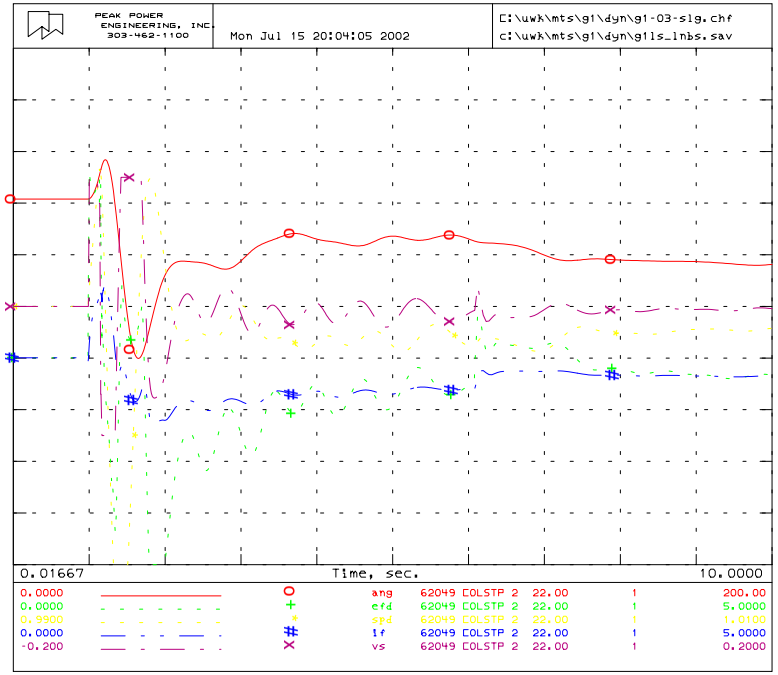

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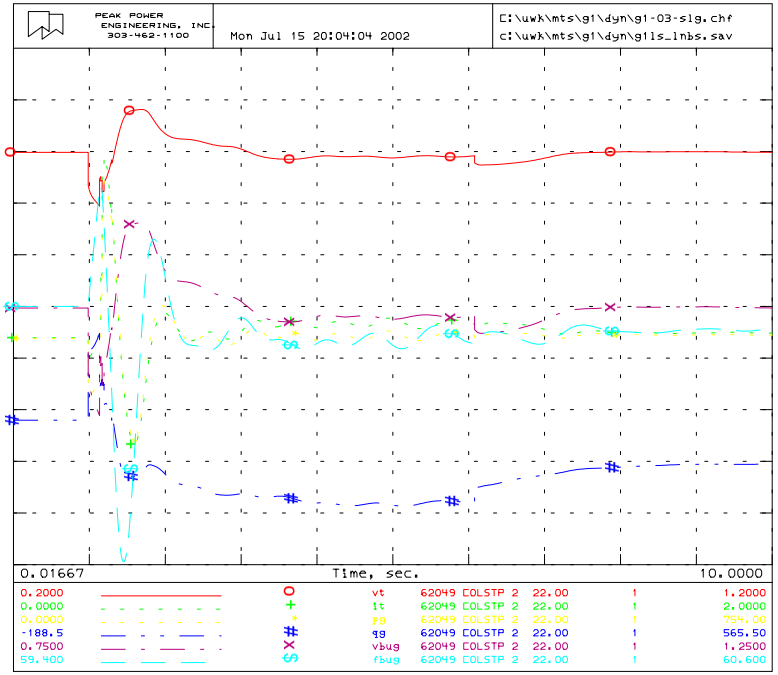

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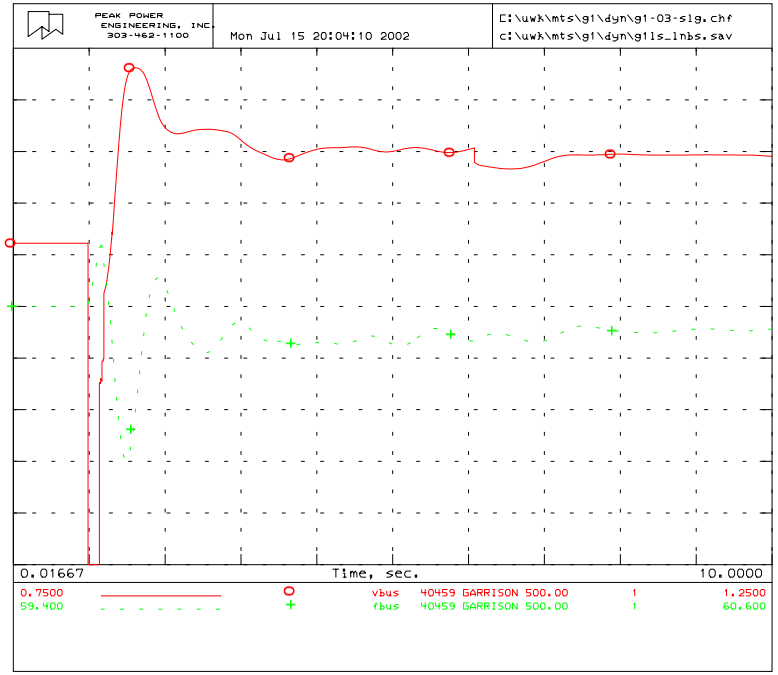

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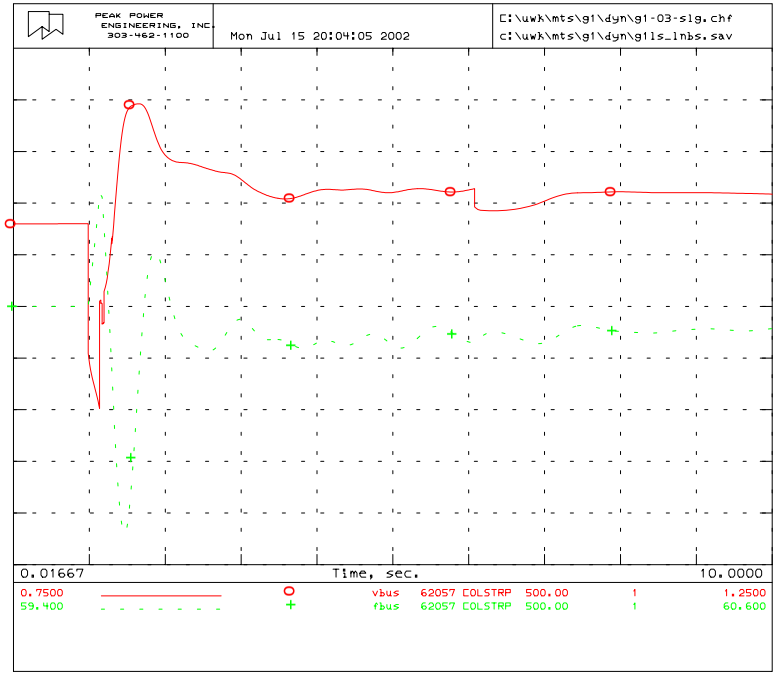

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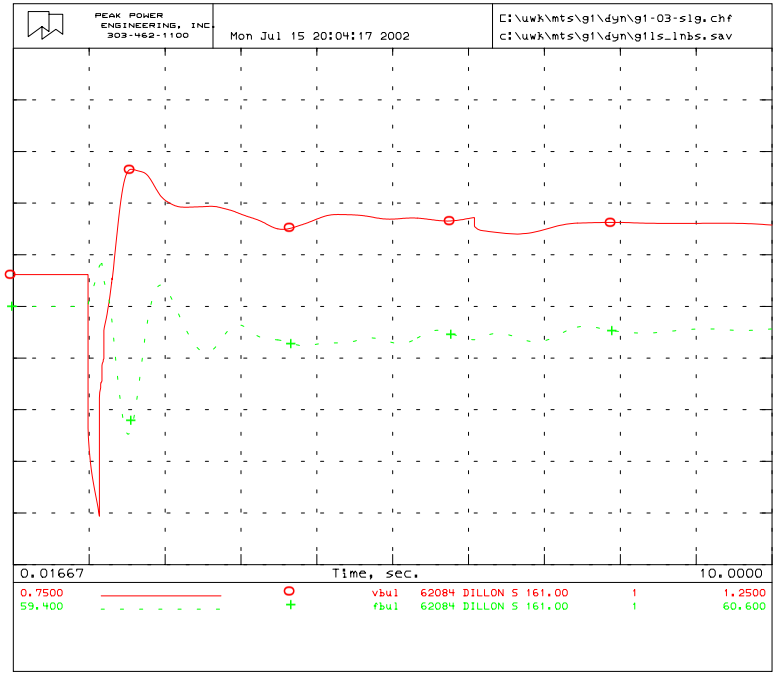

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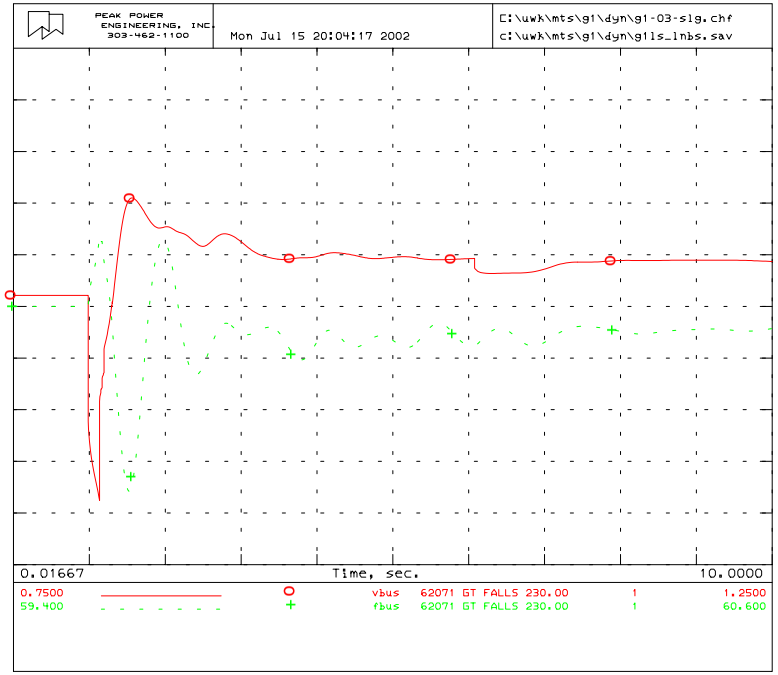

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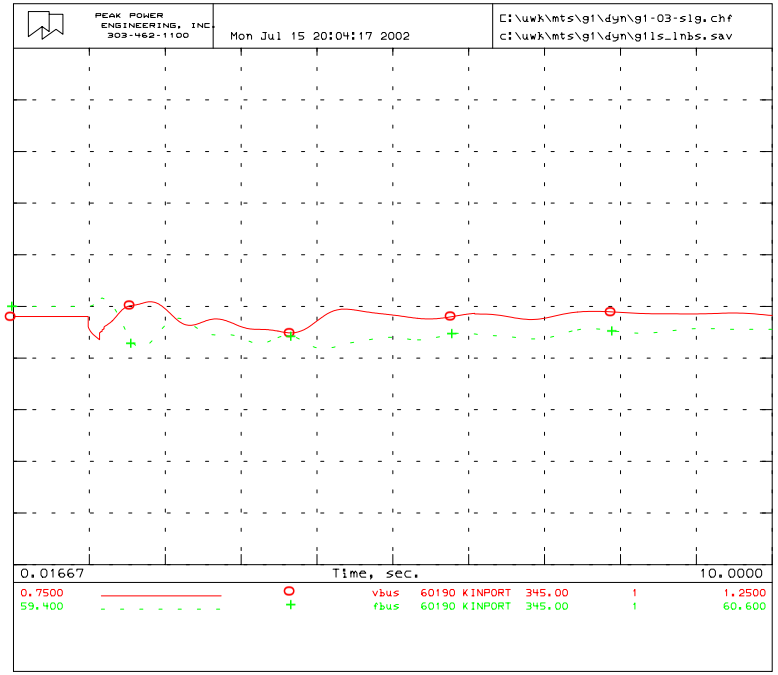

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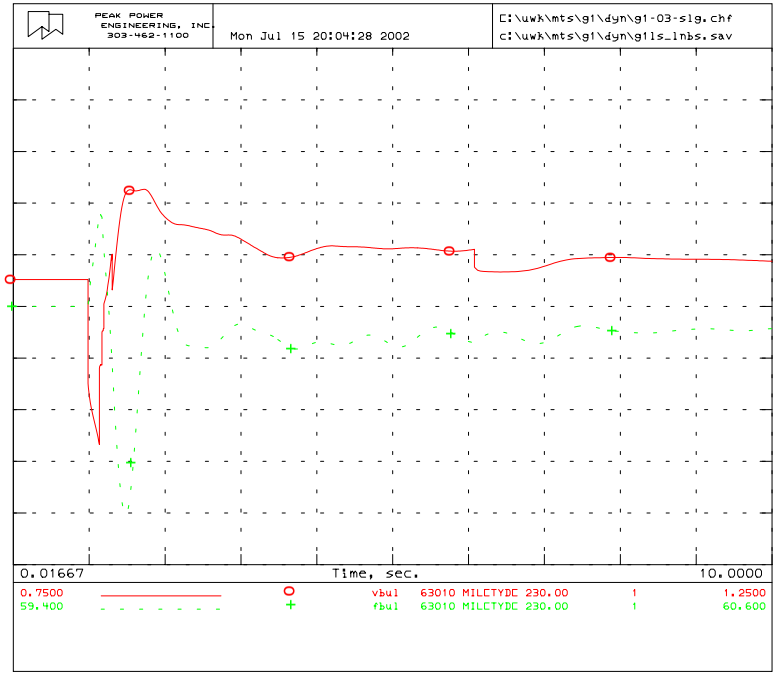

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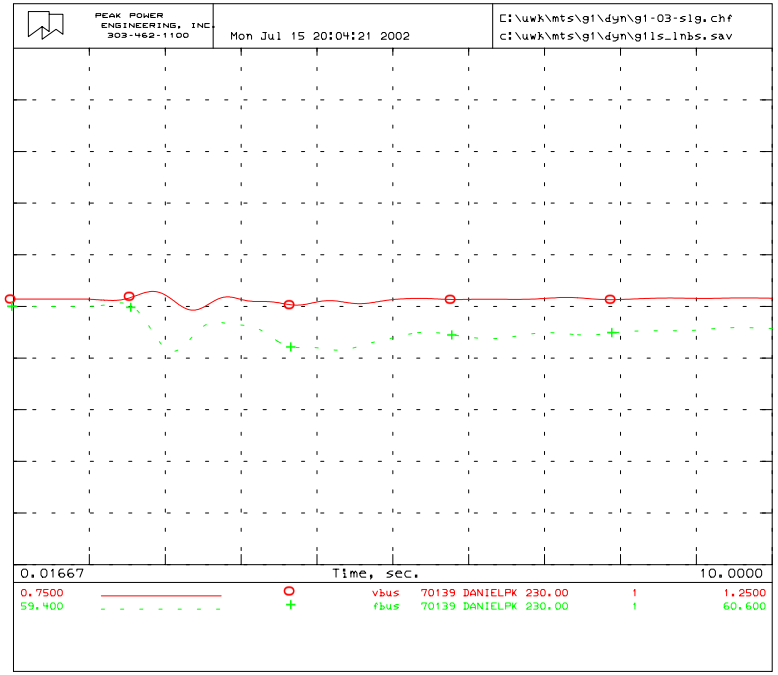

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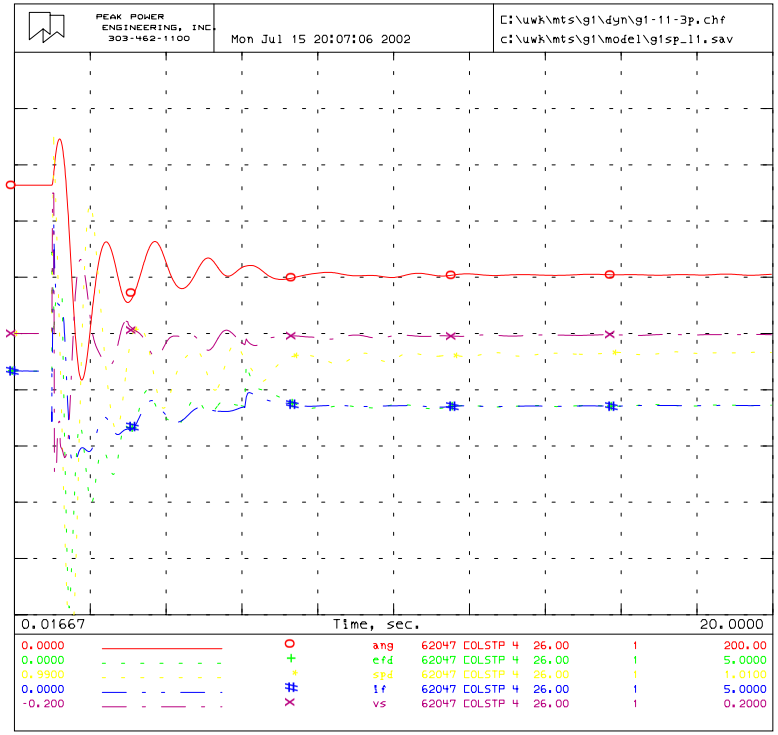

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STUDY BY PEAK POWER ENGINEERING, INC.

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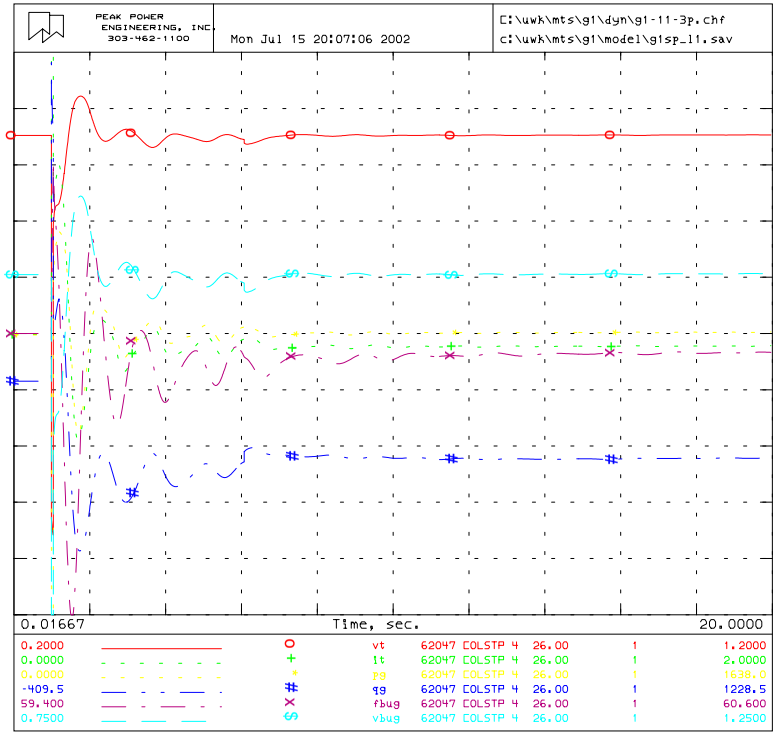

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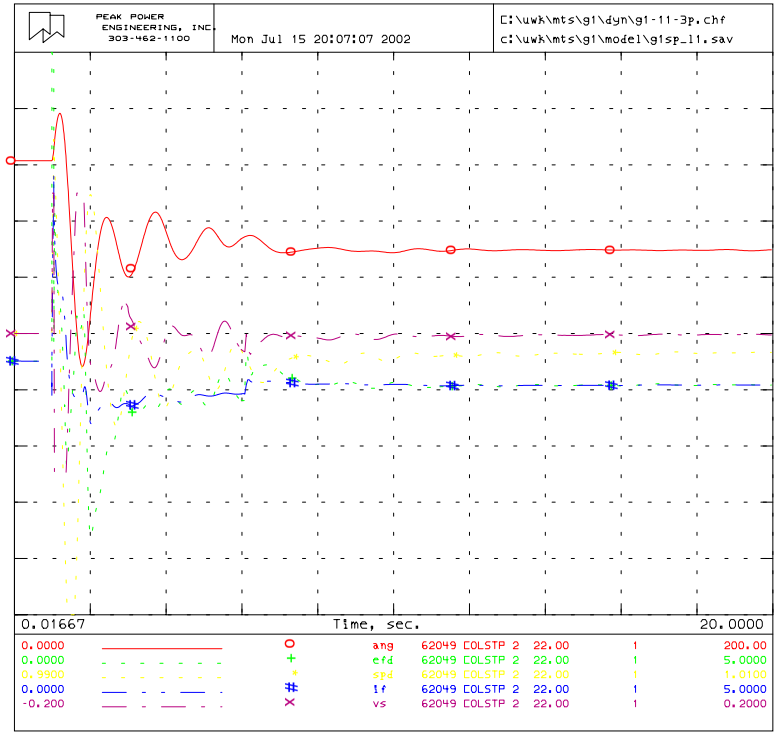

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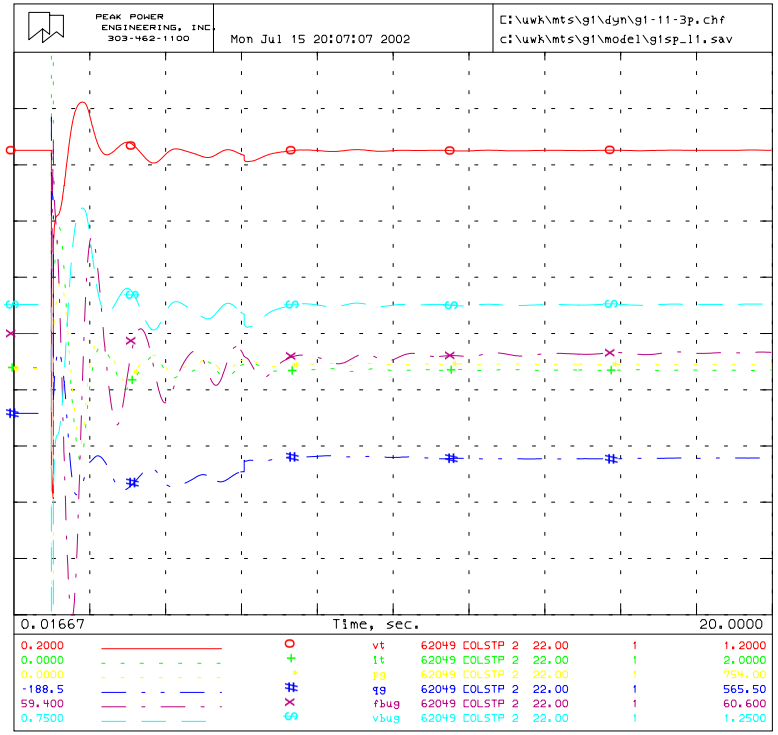

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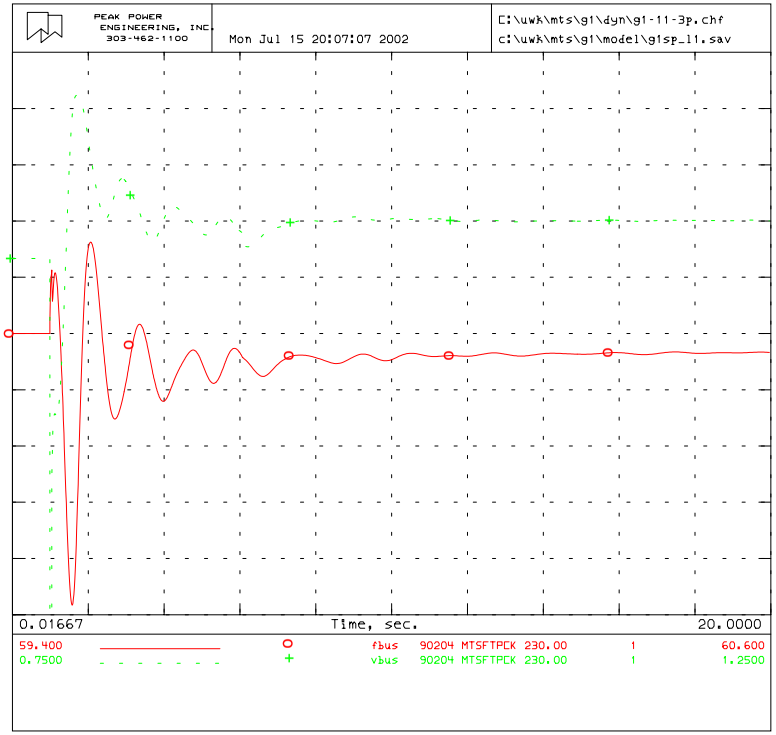

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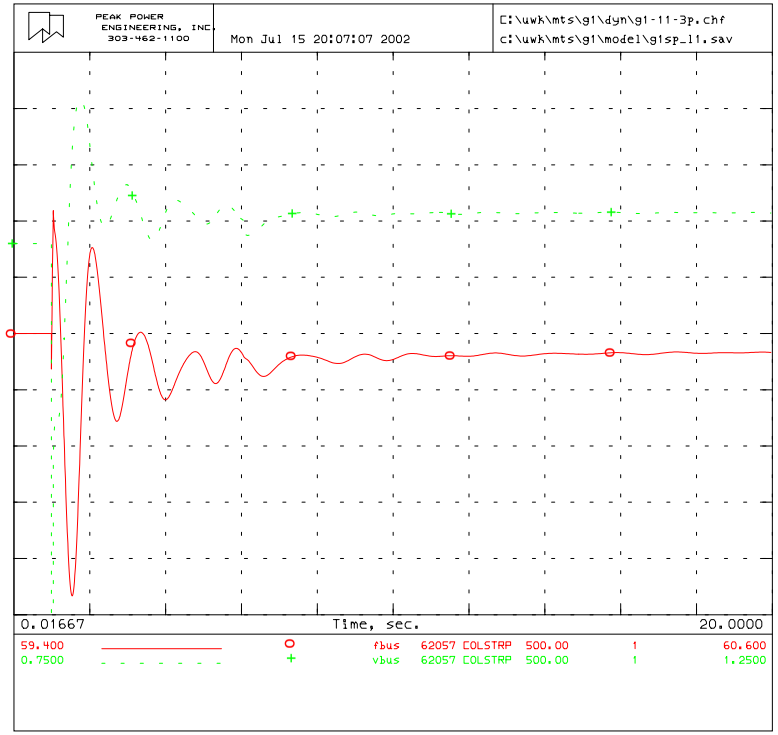

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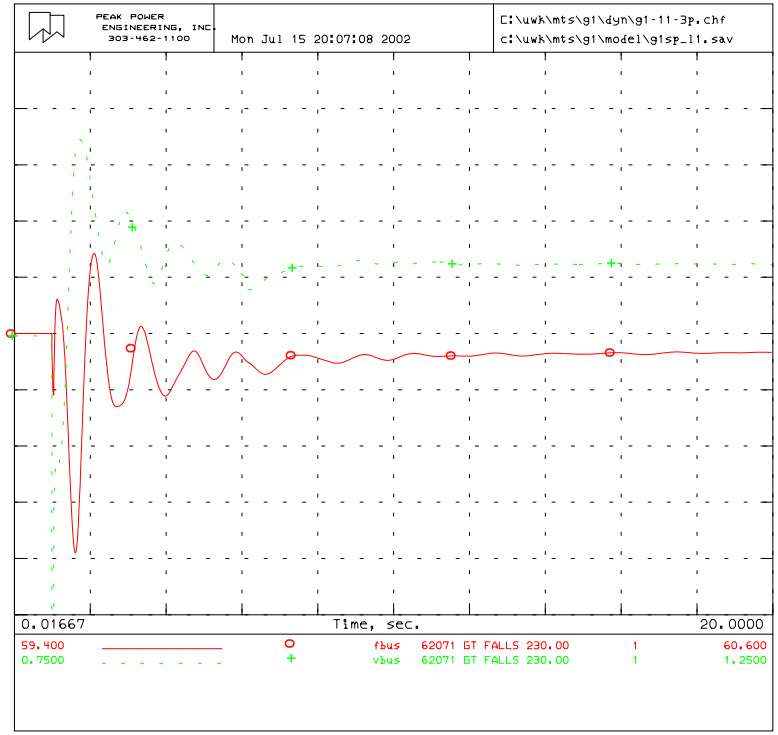

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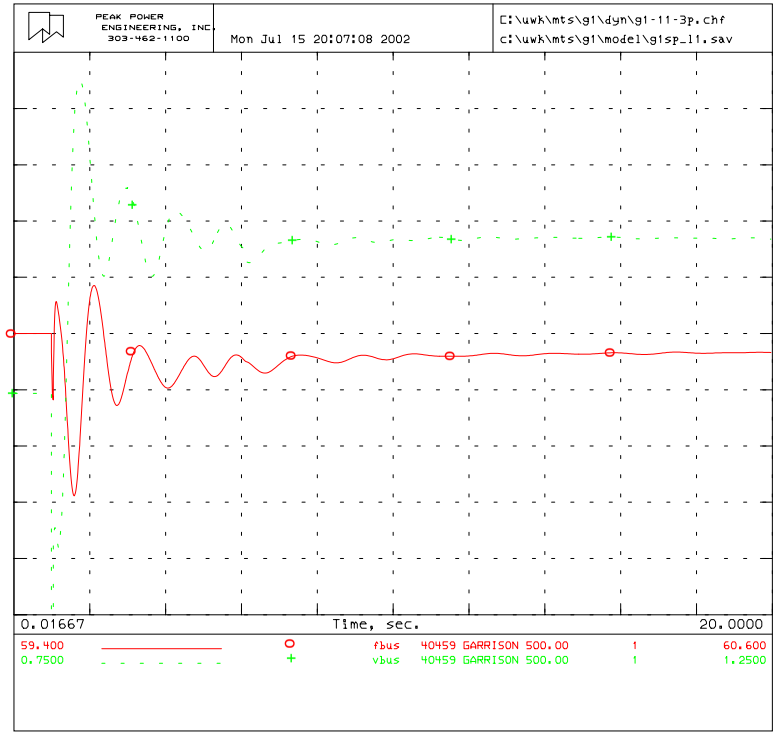

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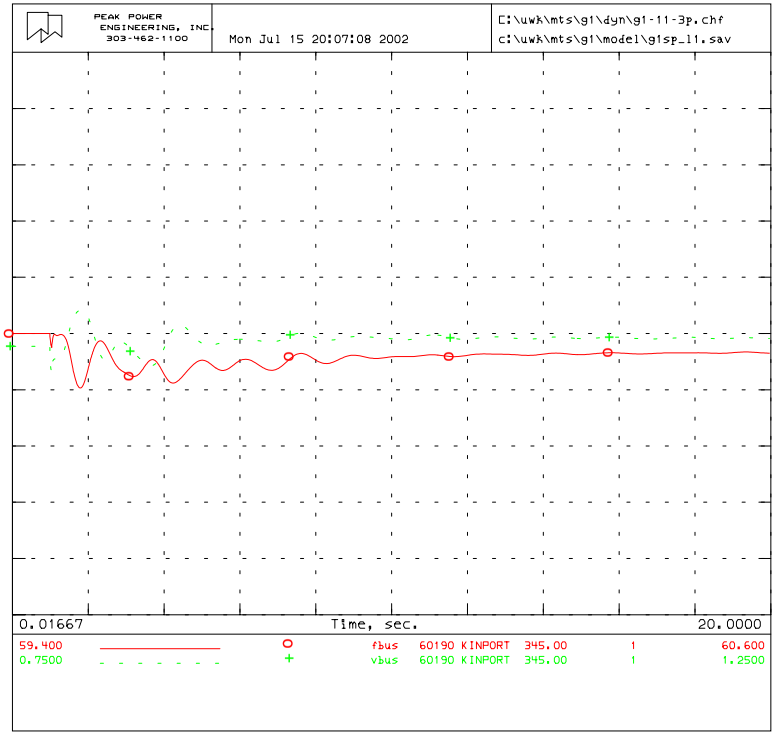

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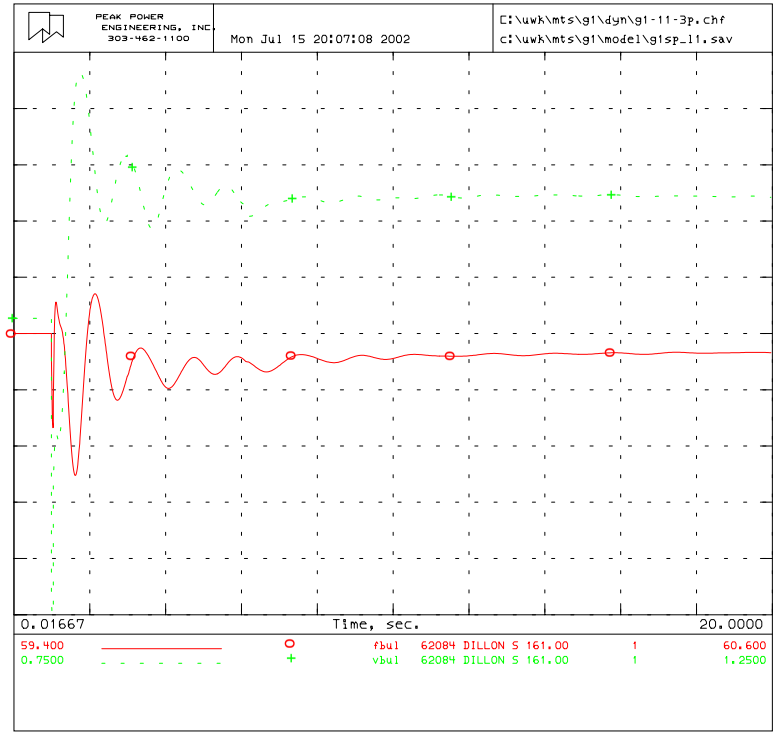

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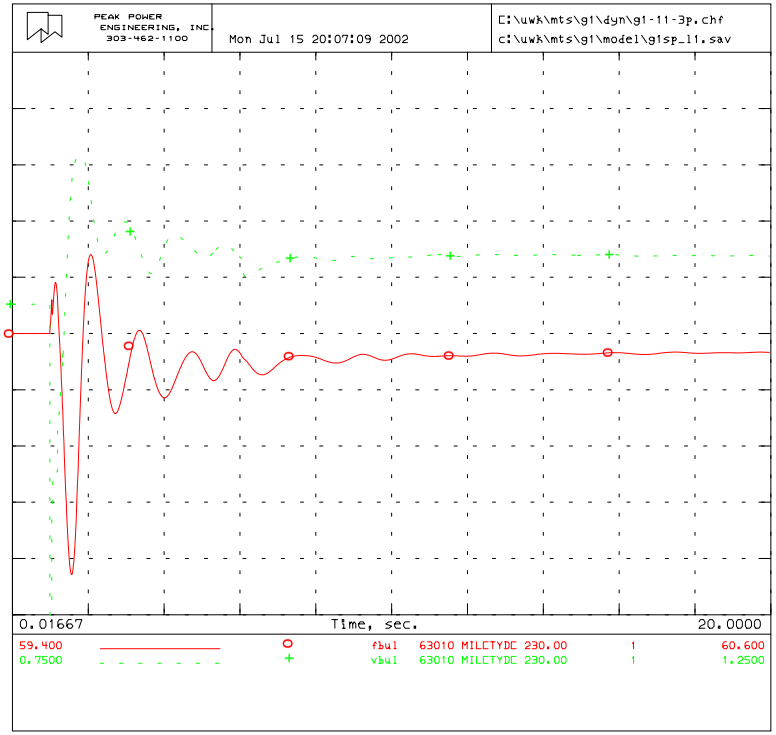

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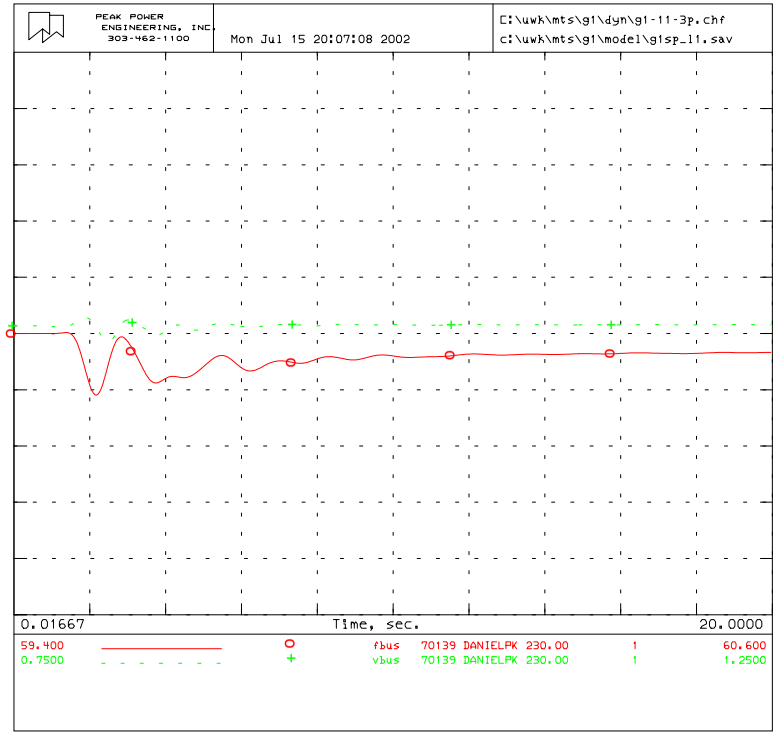

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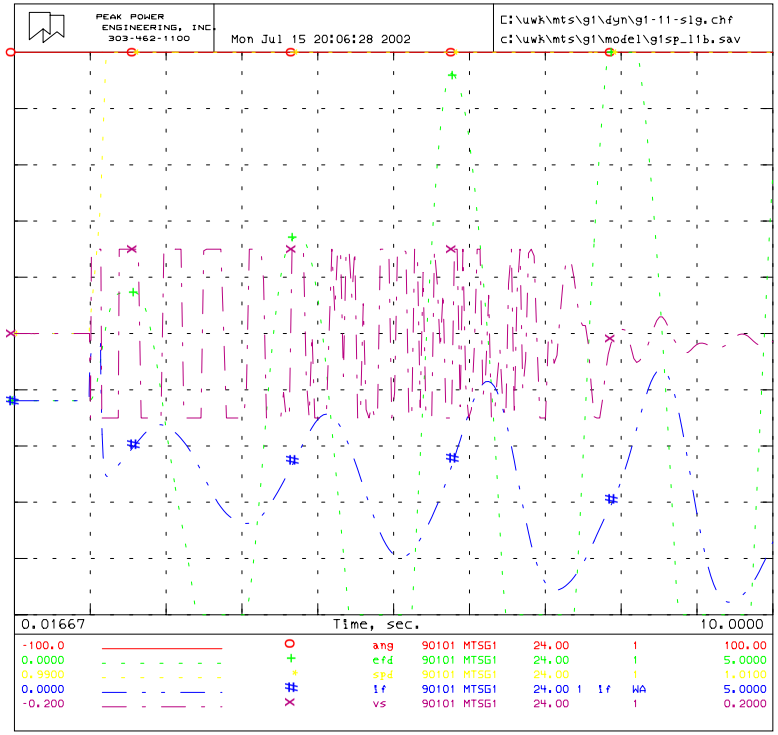

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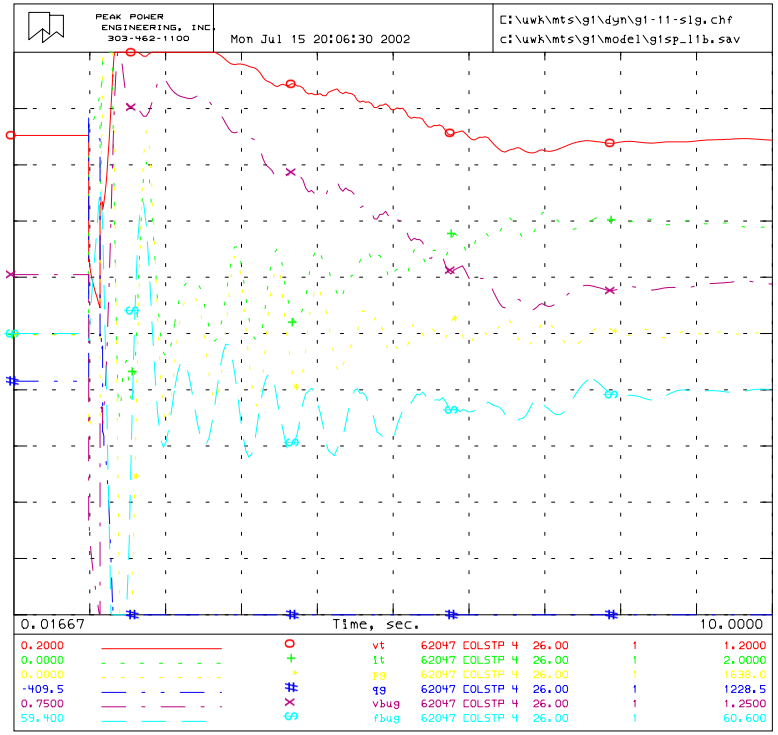

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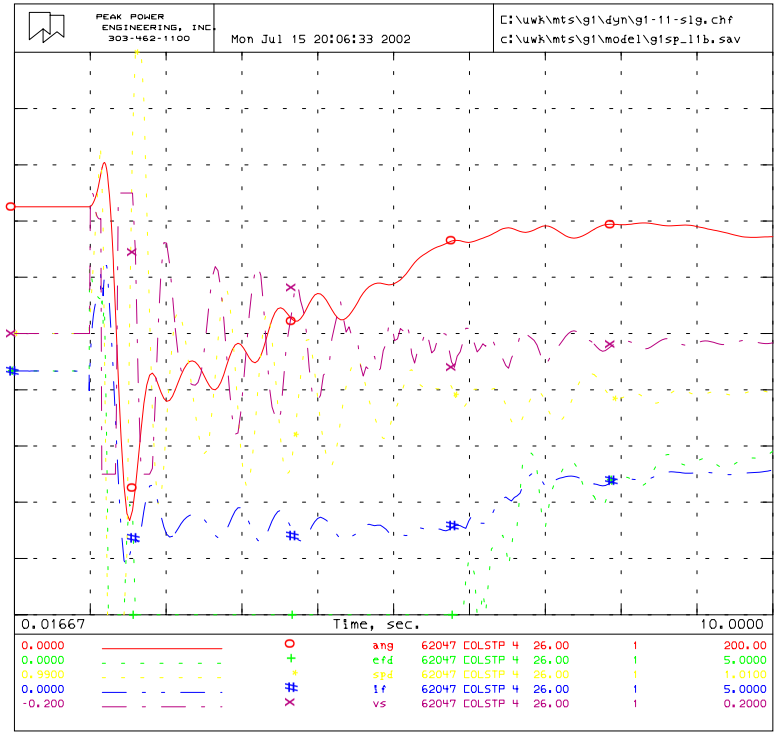

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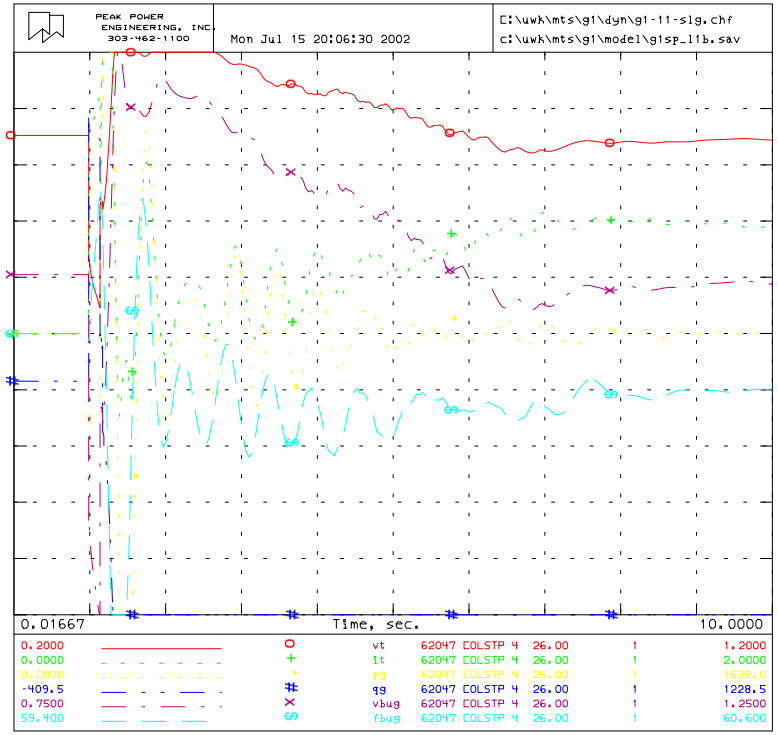

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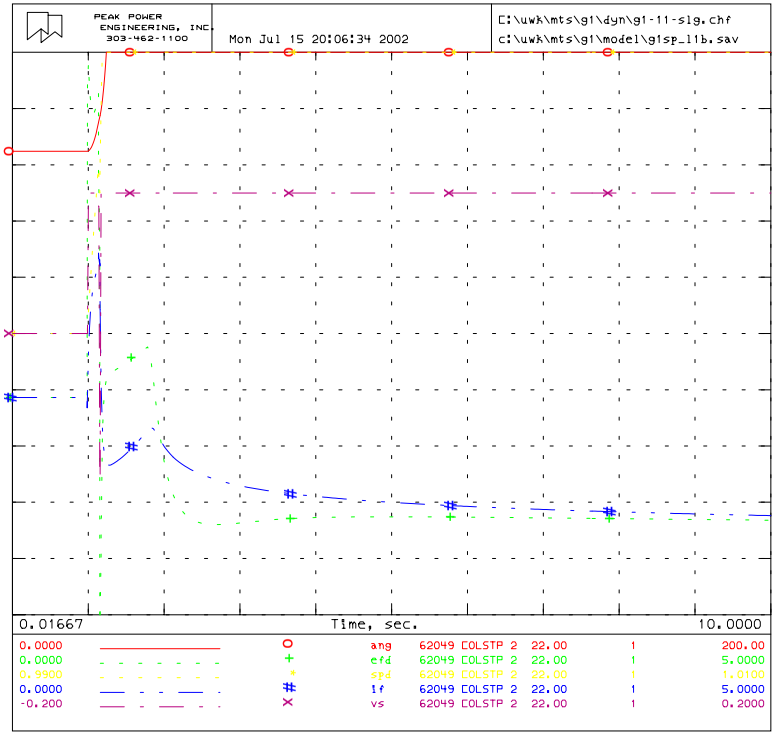

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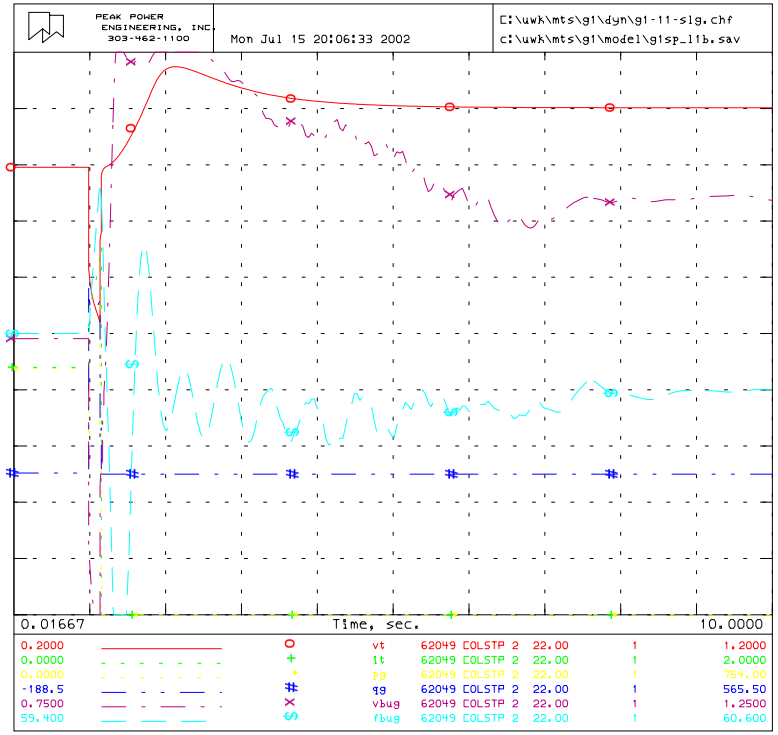

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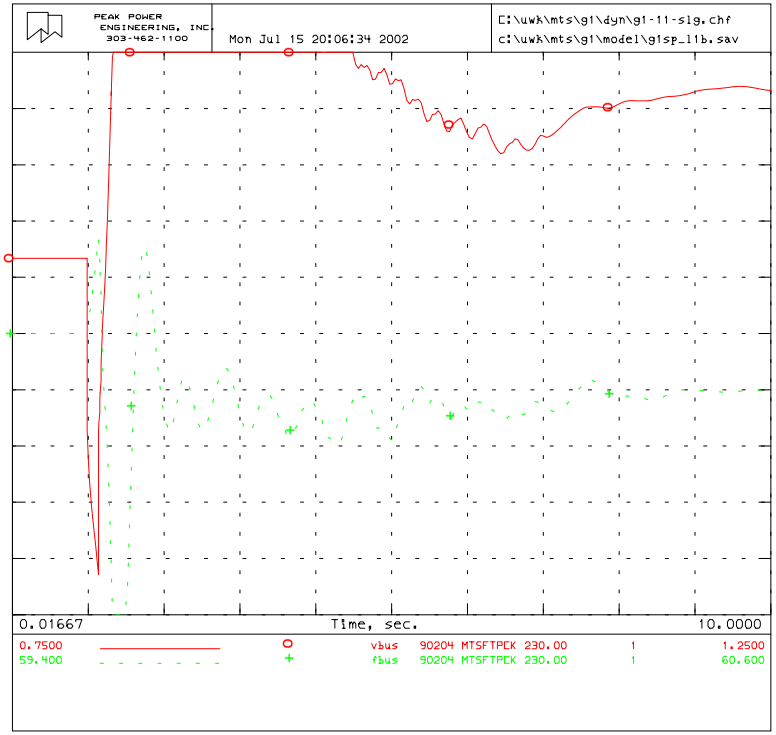

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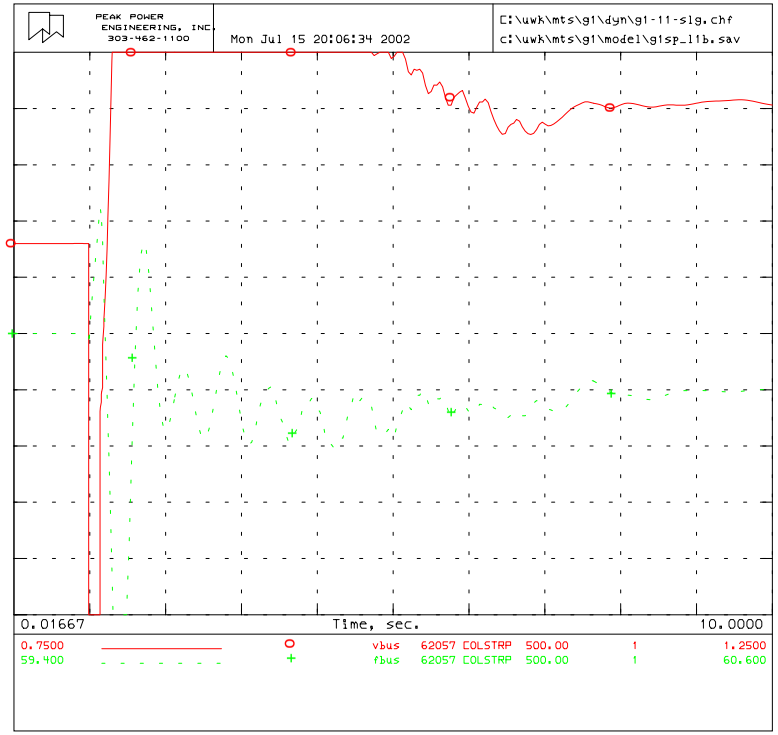

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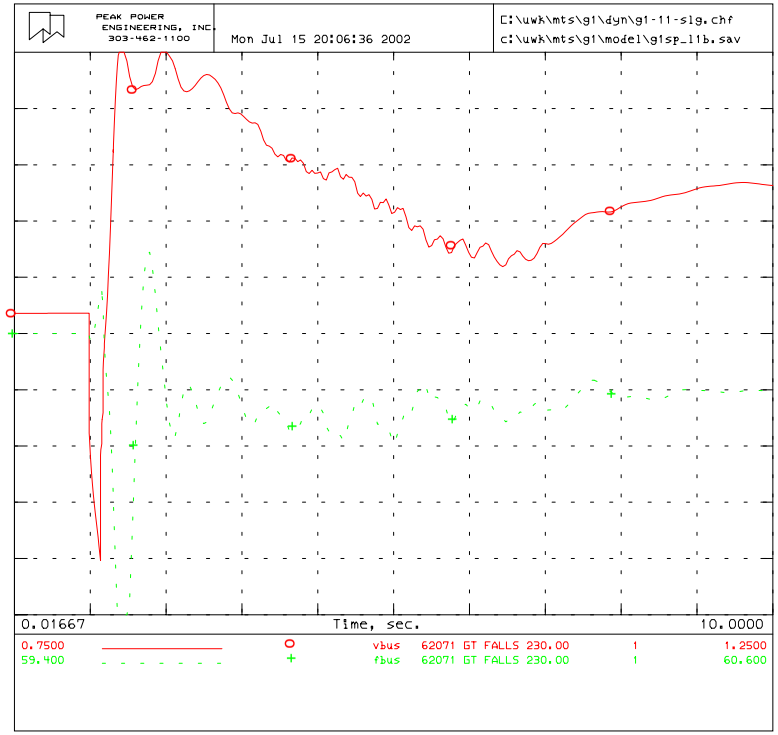

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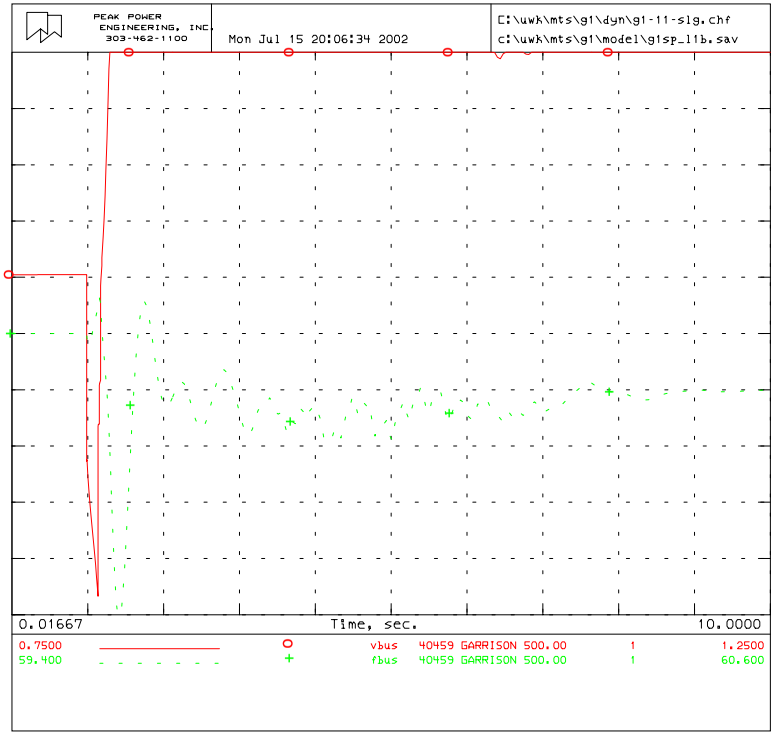

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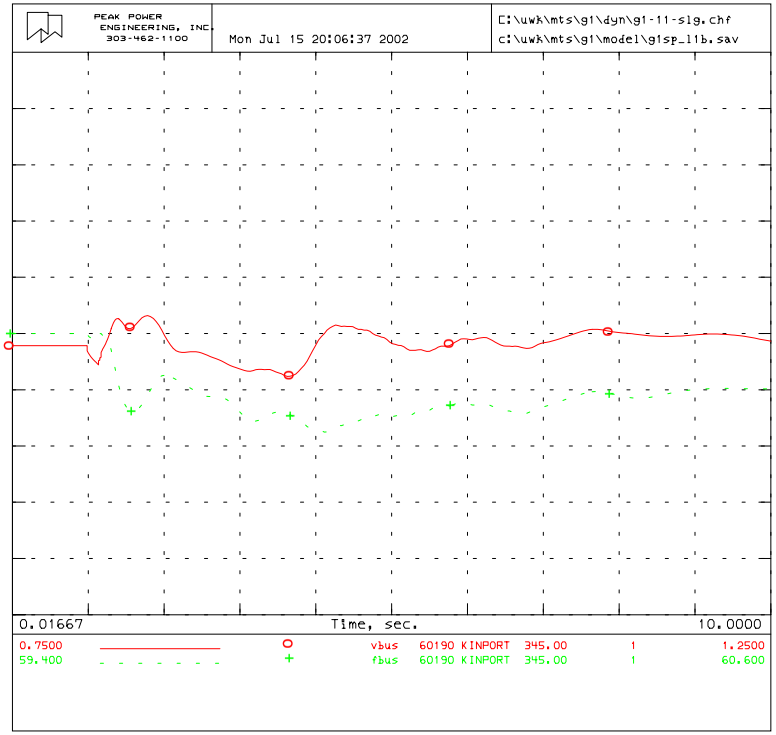

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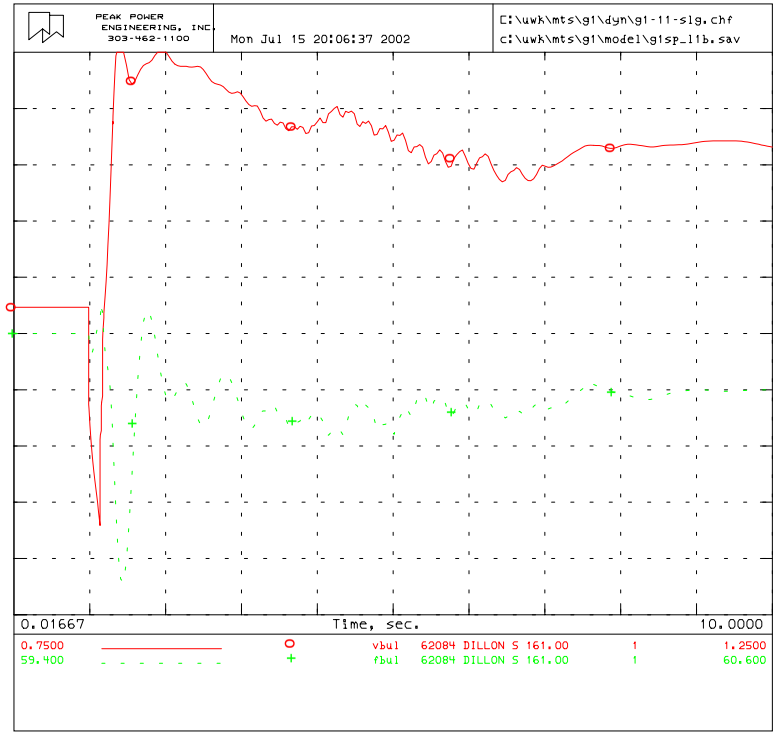

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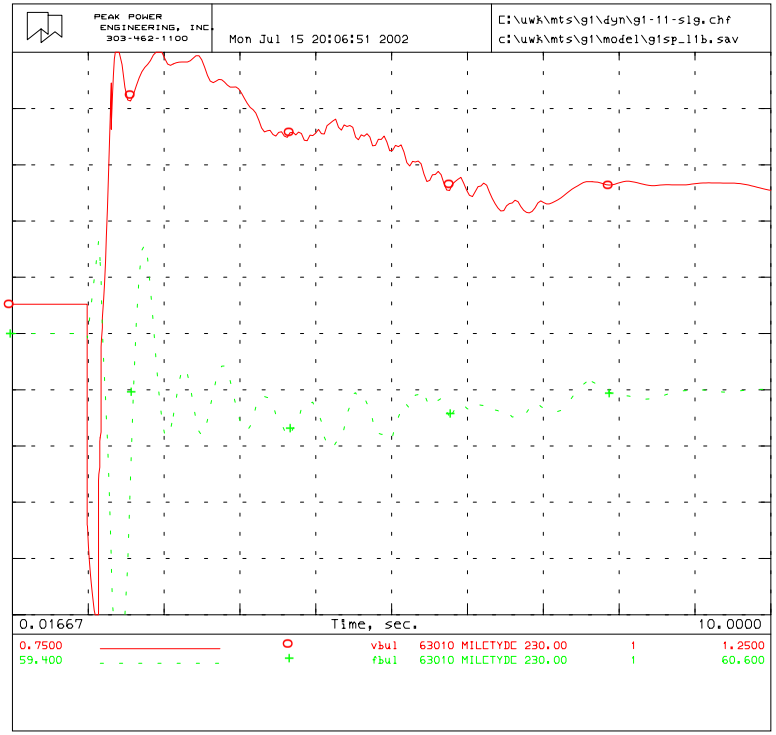

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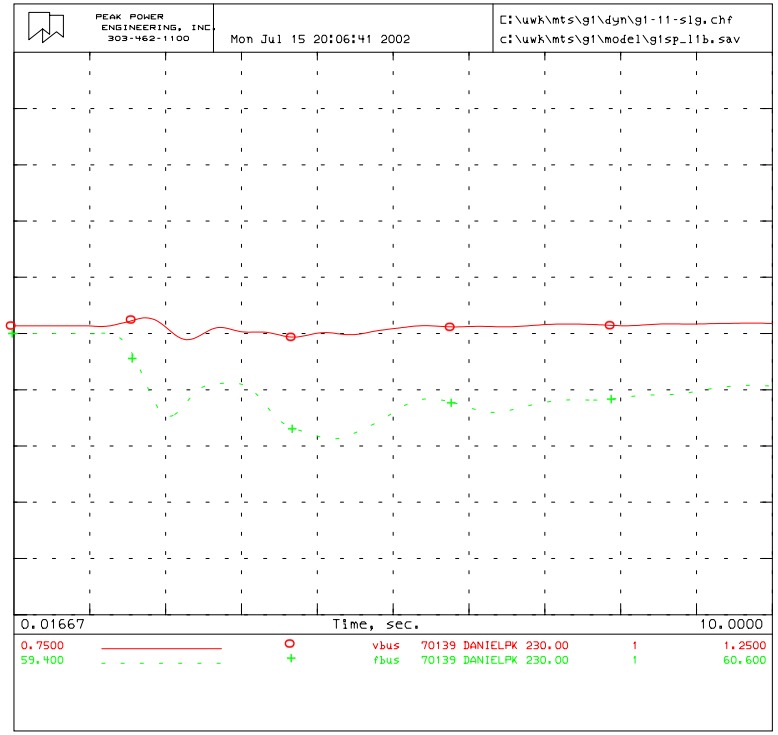

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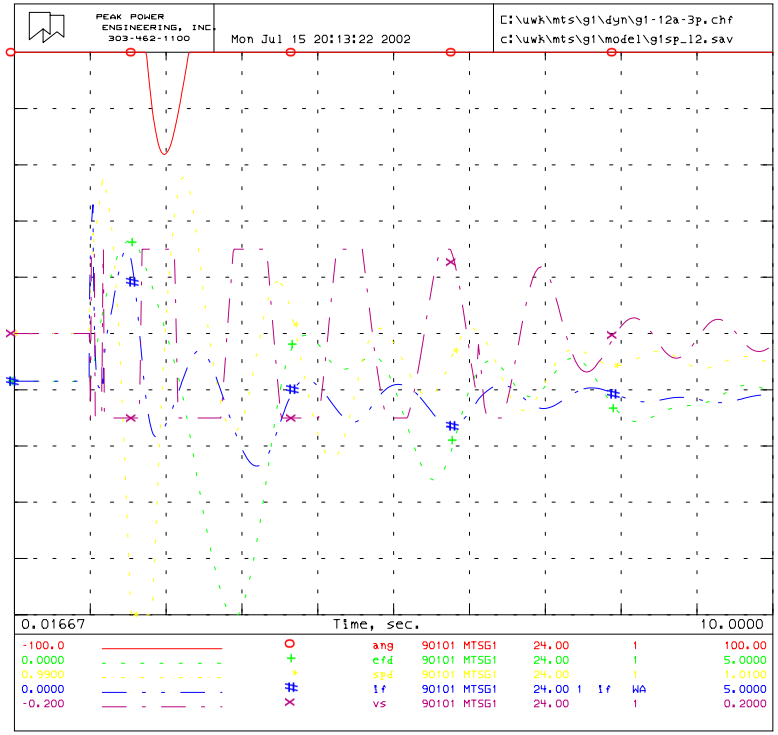

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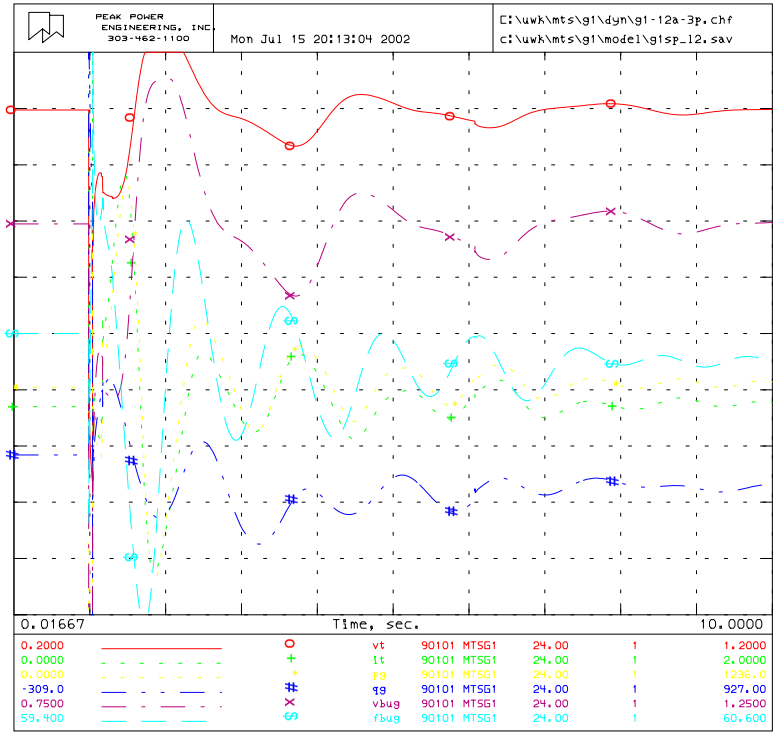

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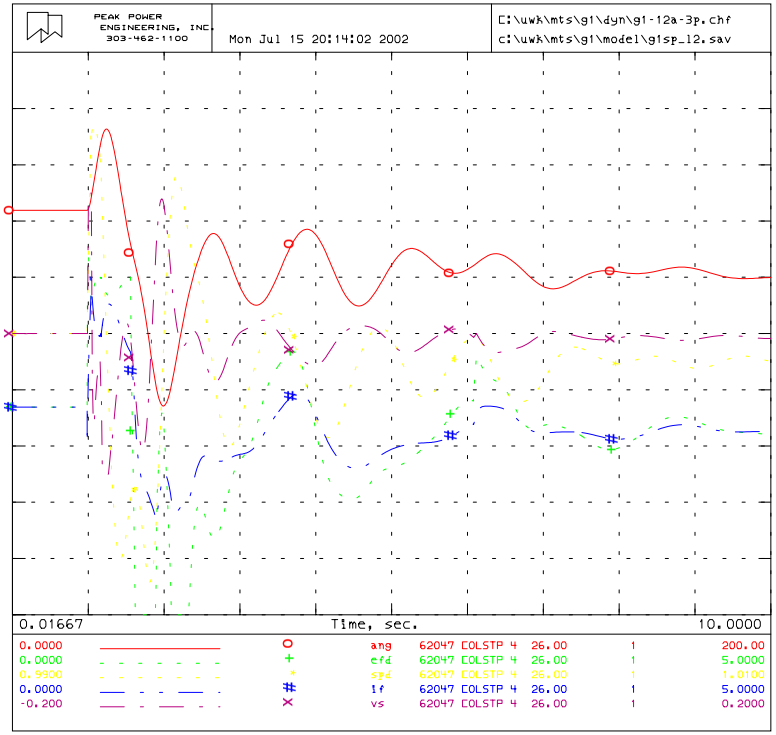

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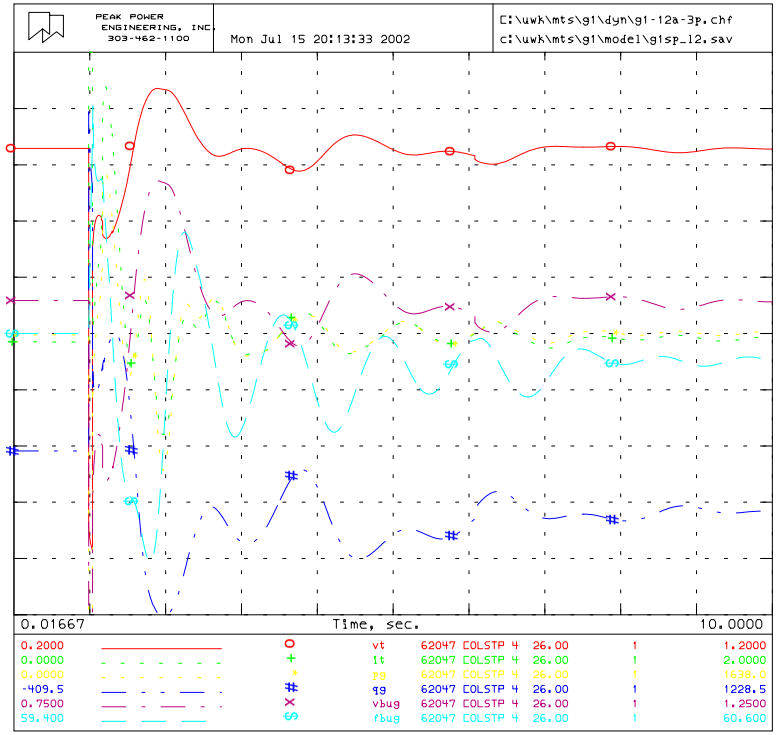

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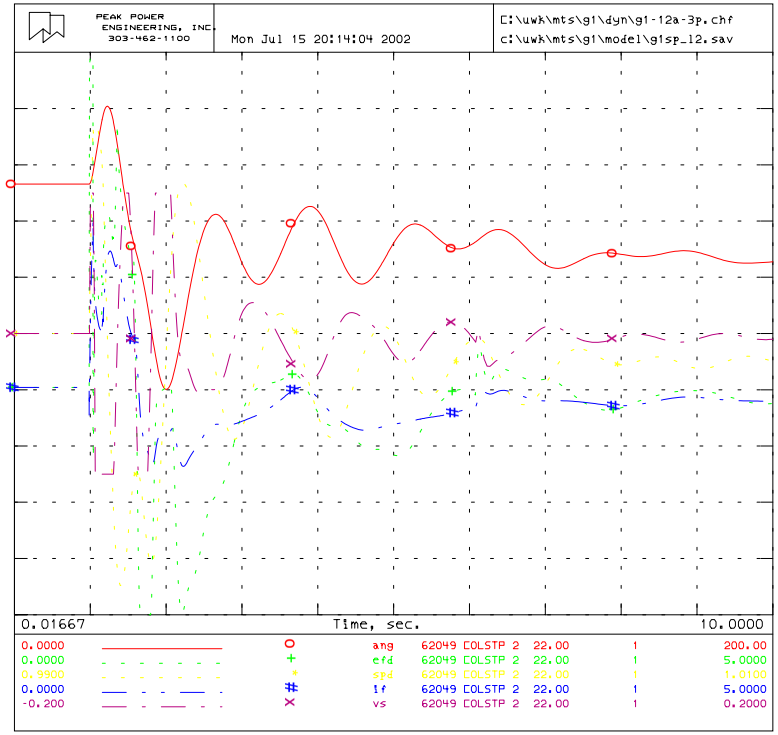

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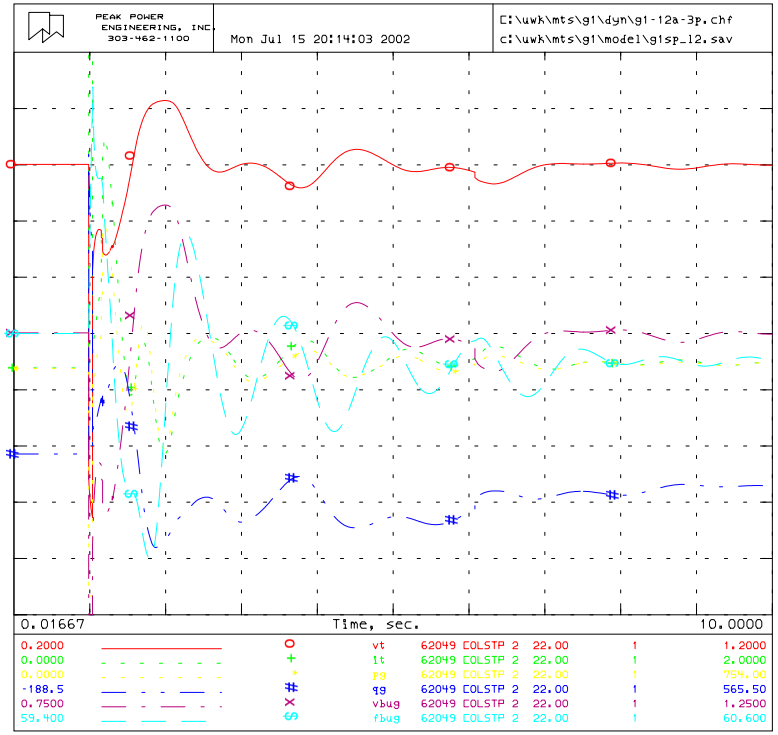

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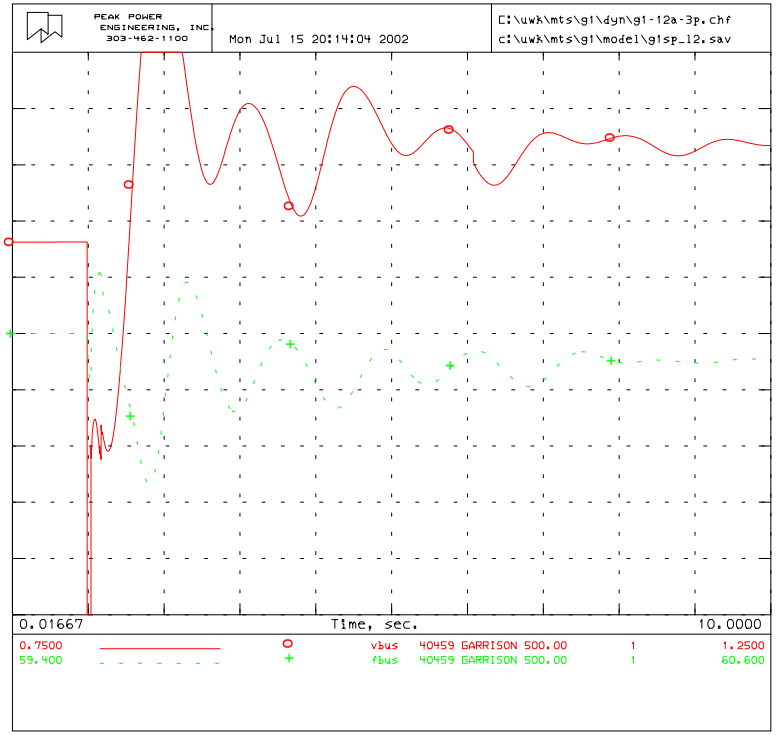

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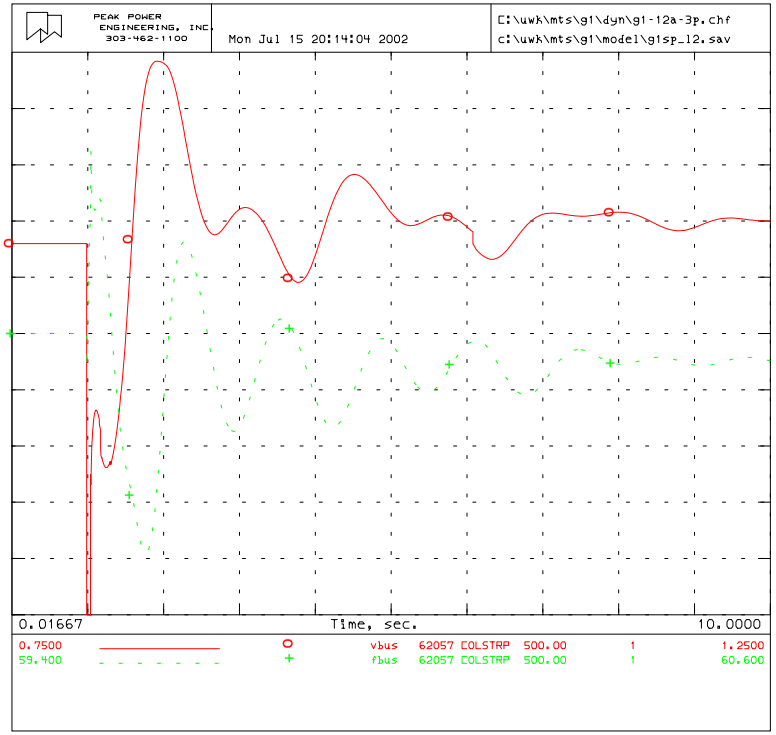

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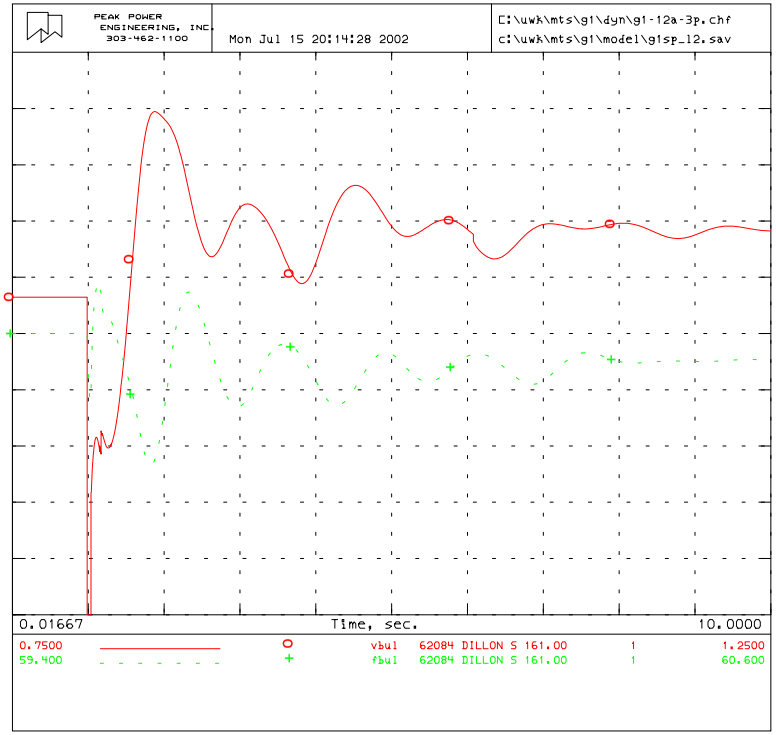

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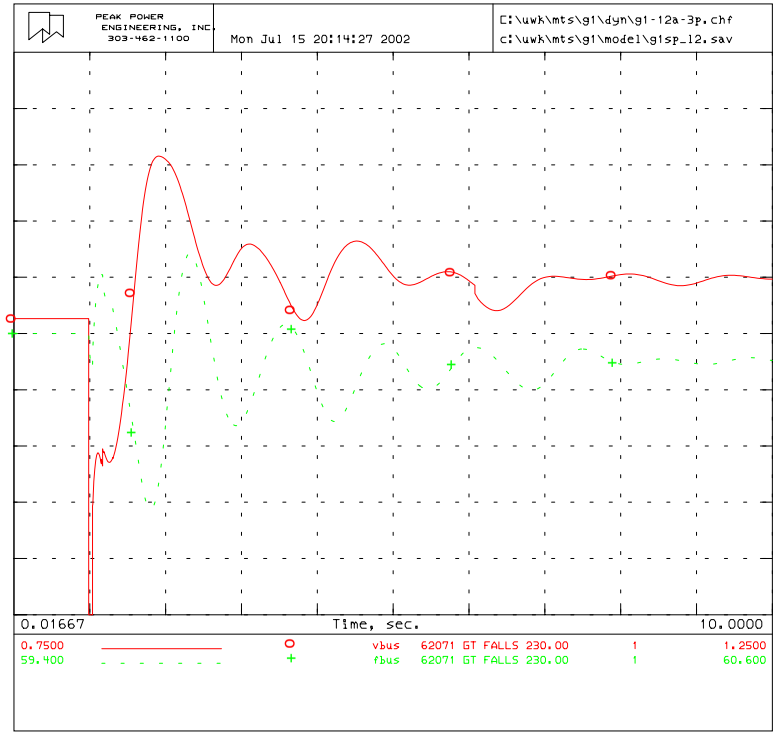

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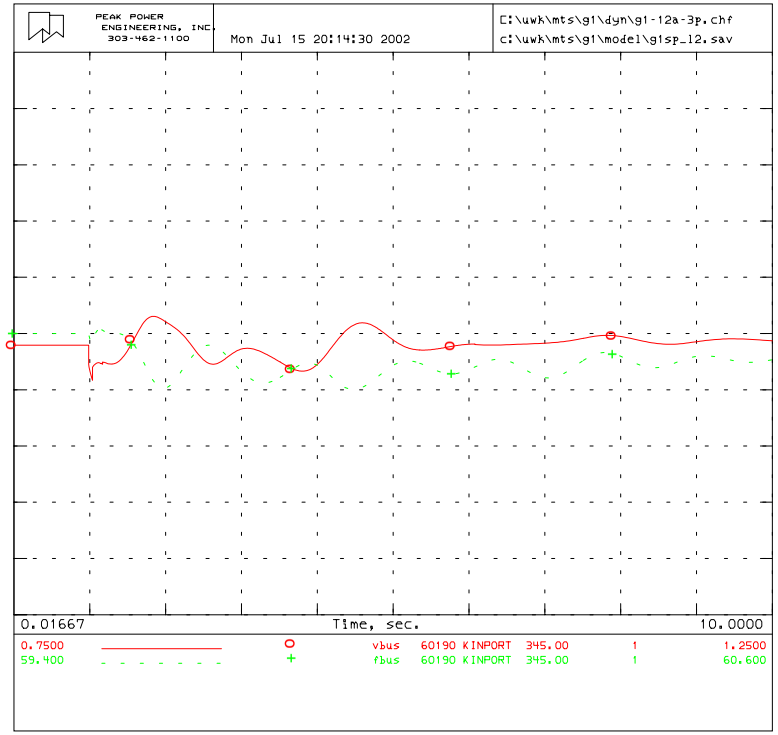

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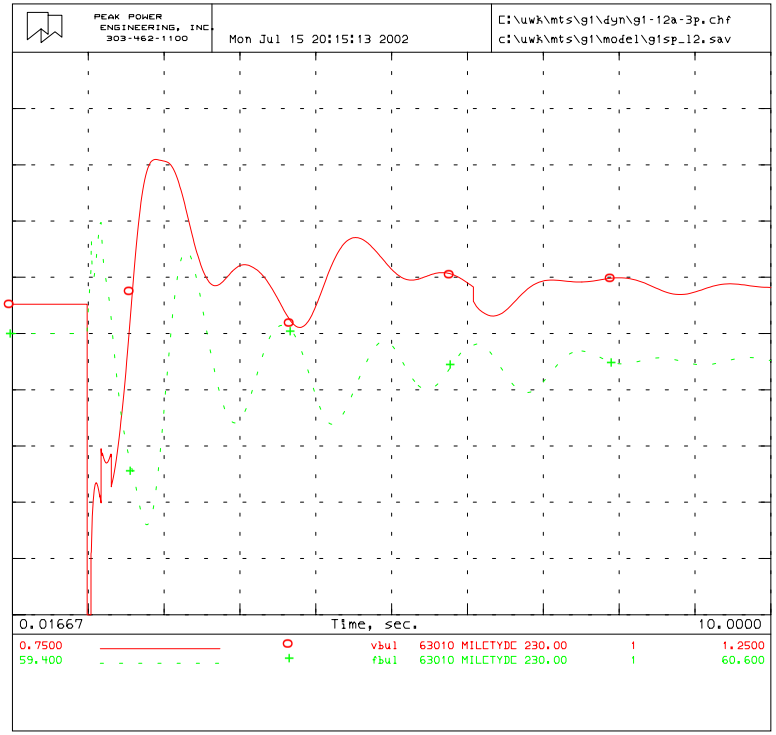

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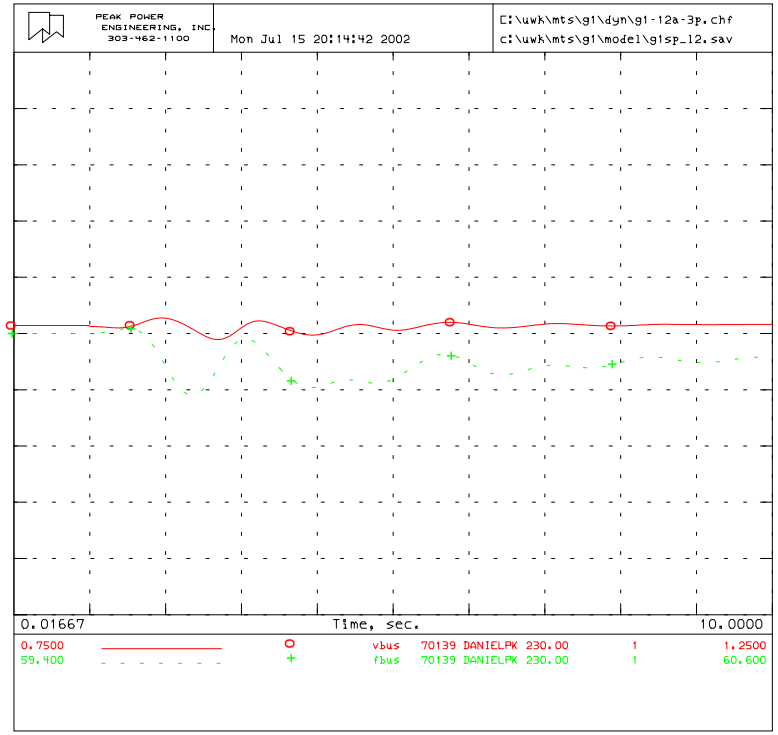

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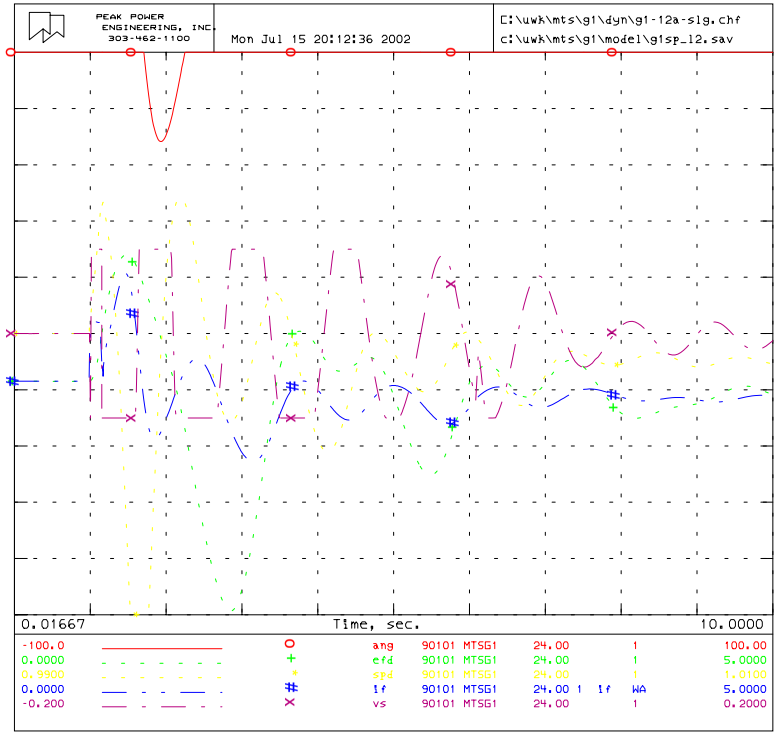

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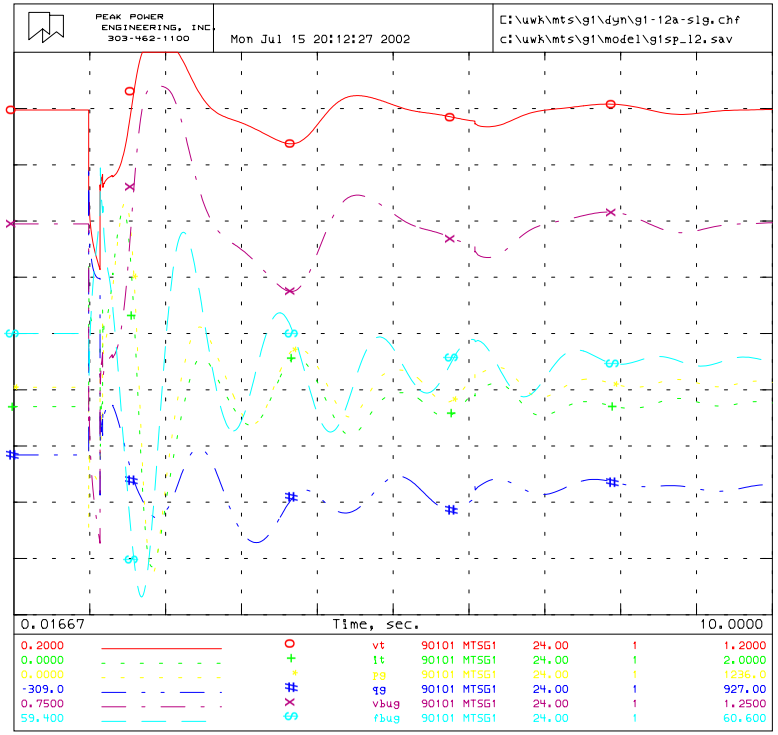

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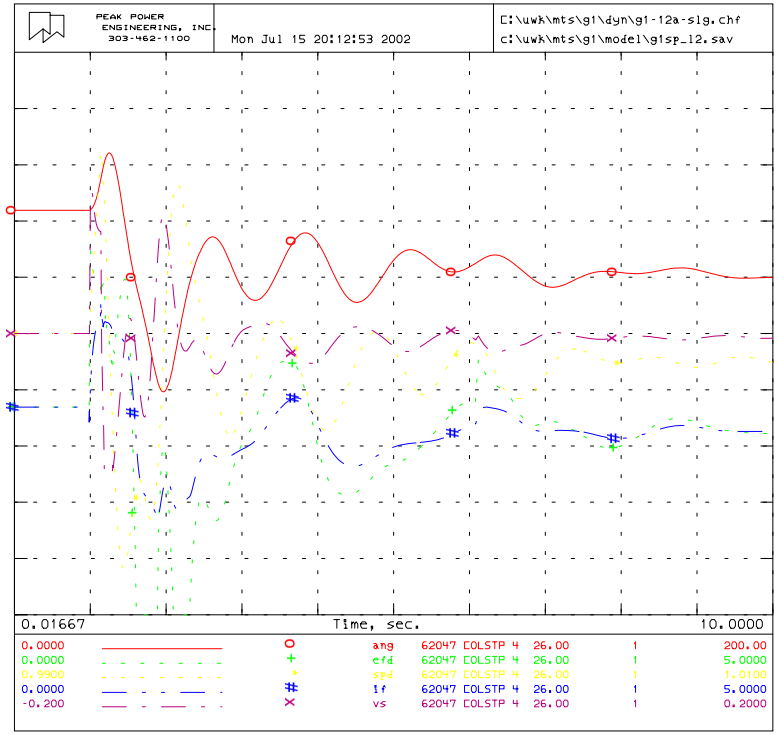

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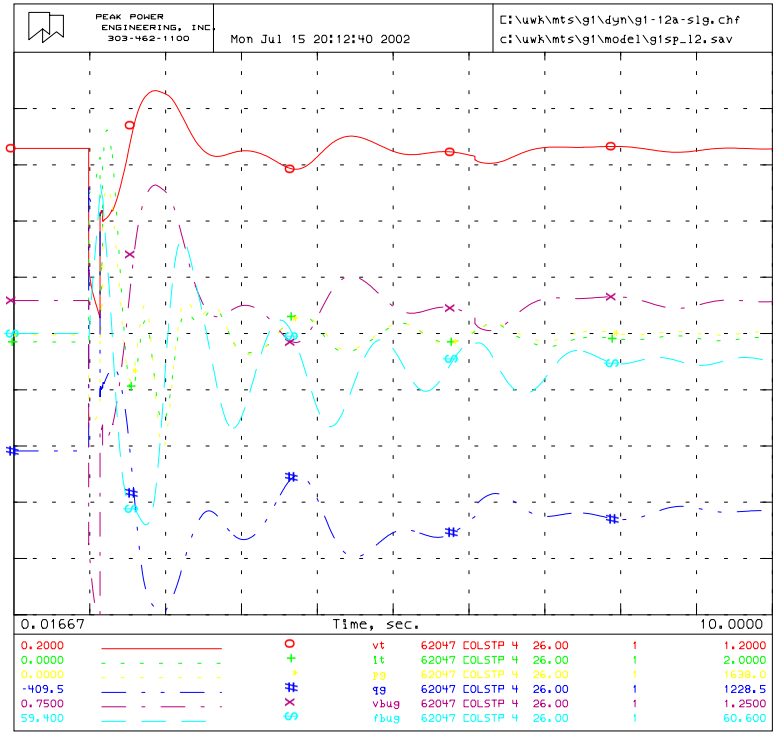

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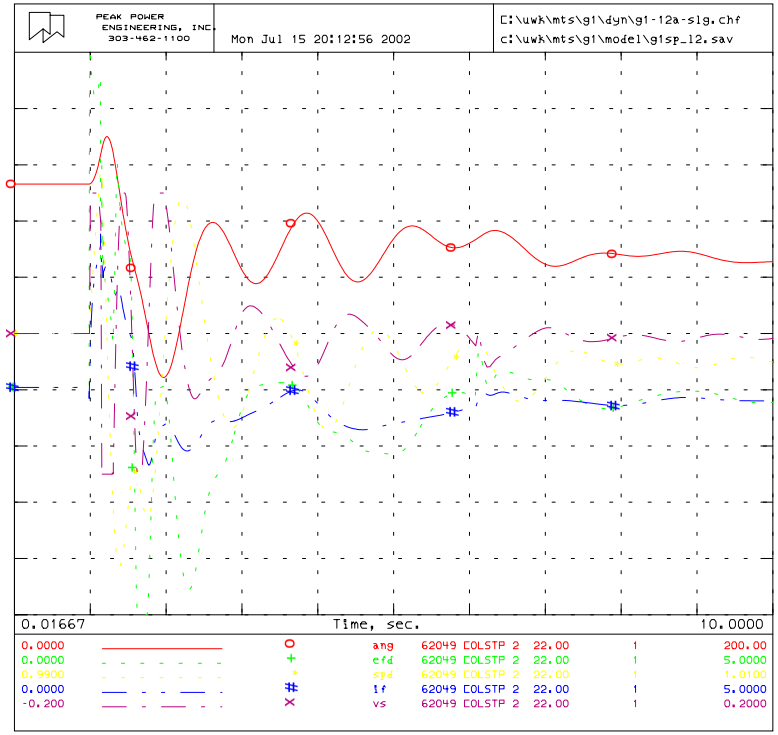

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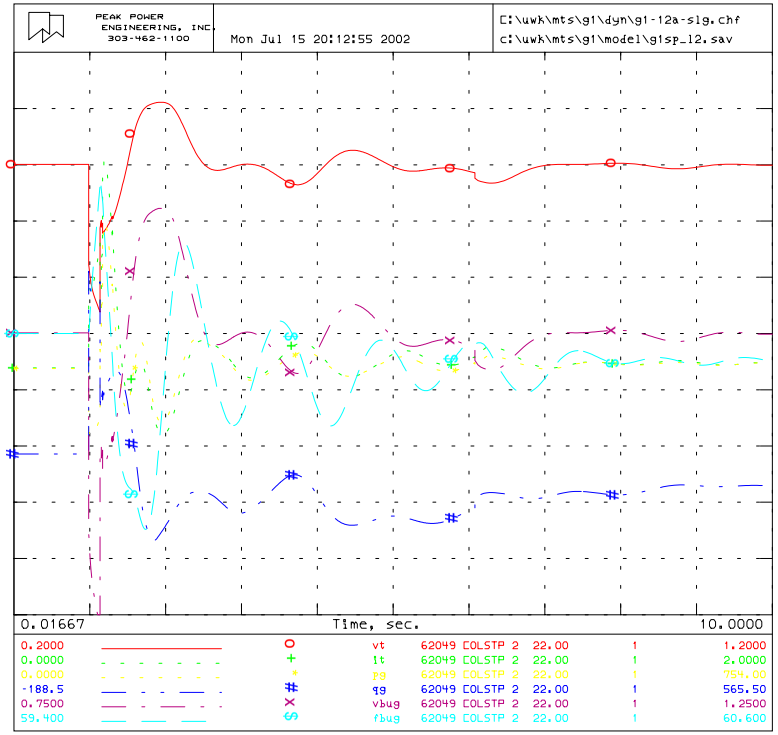

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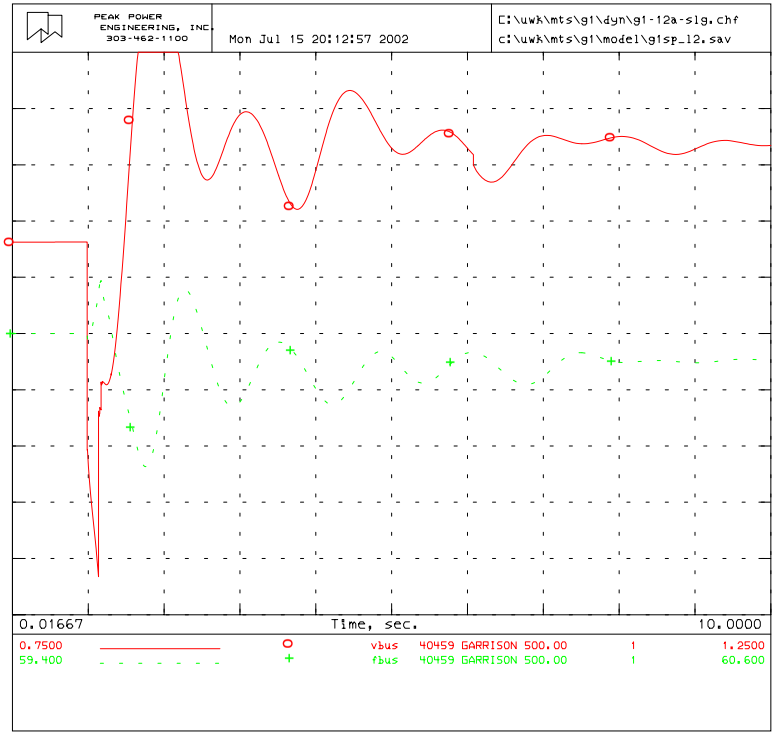

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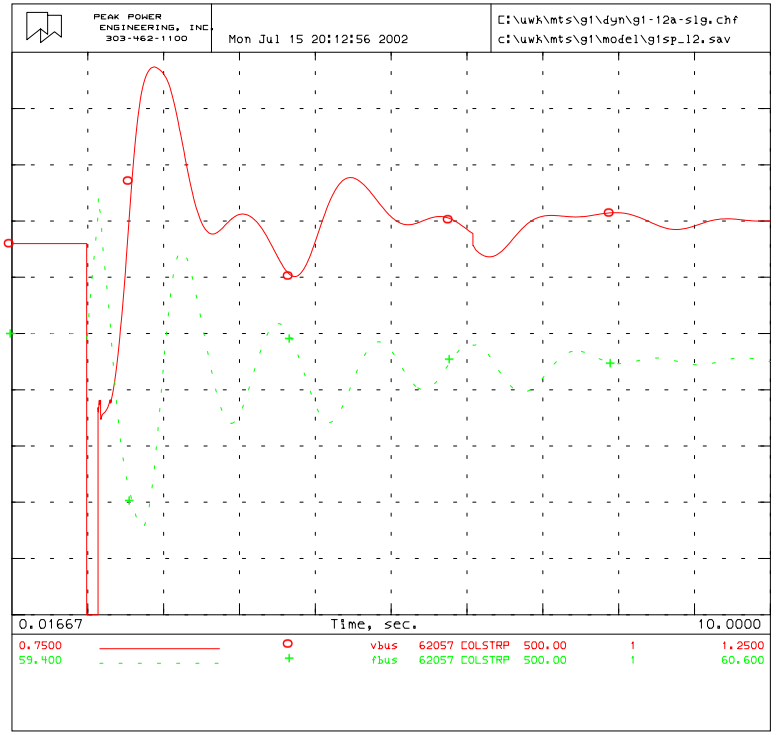

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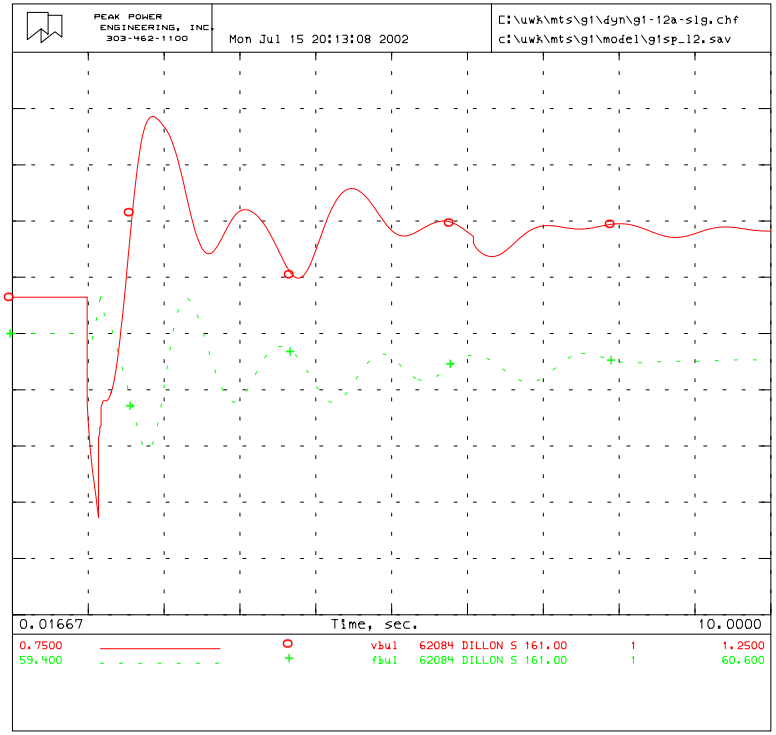

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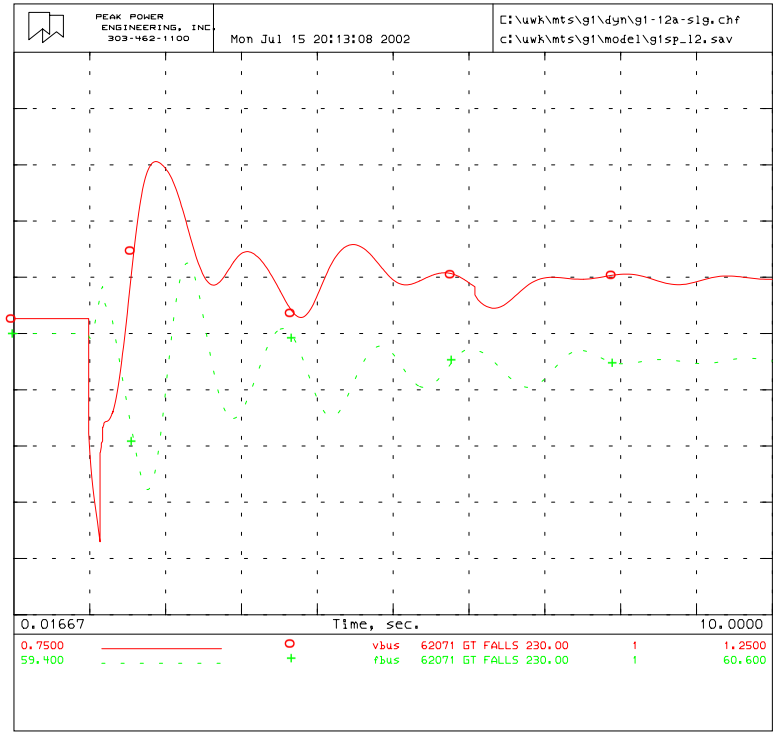

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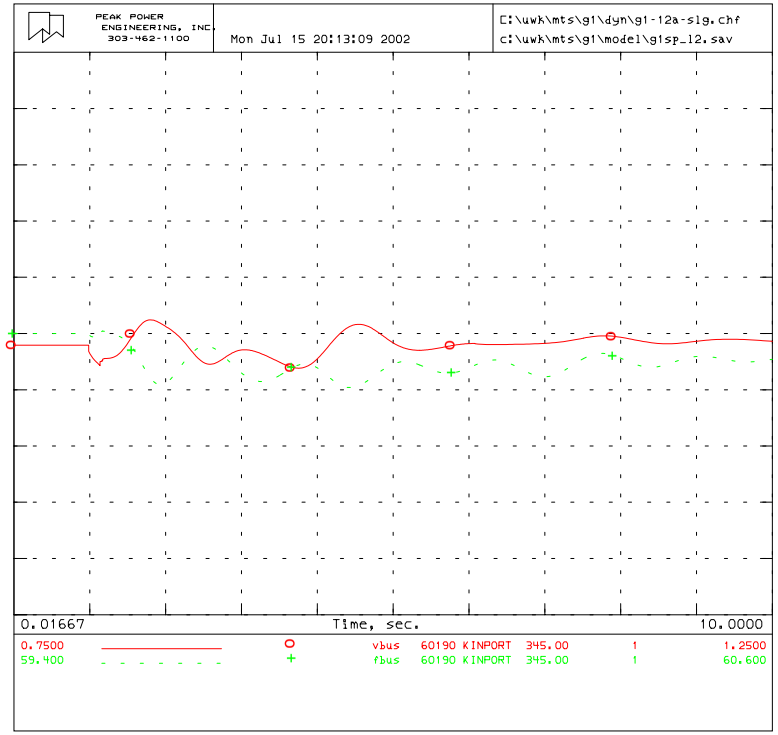

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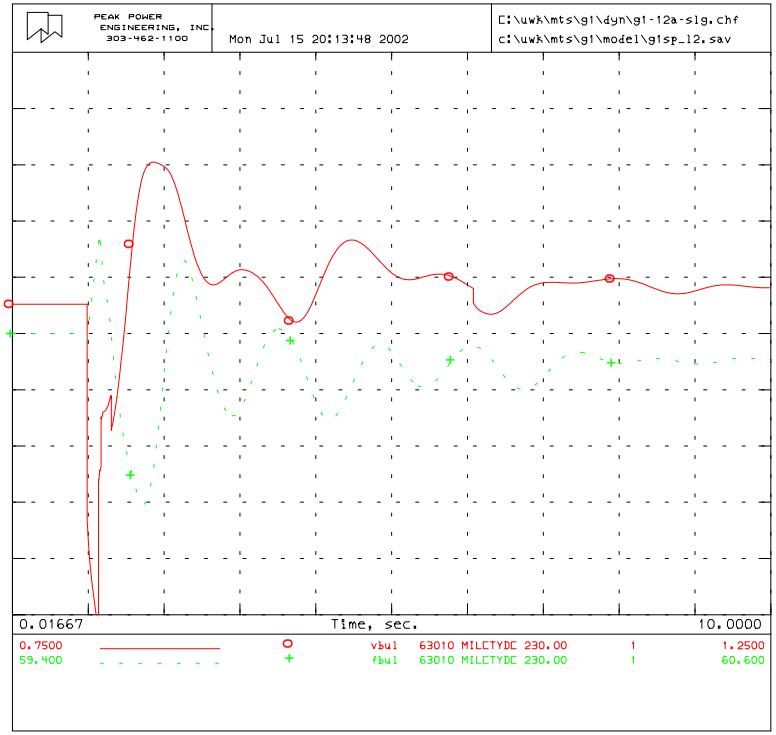

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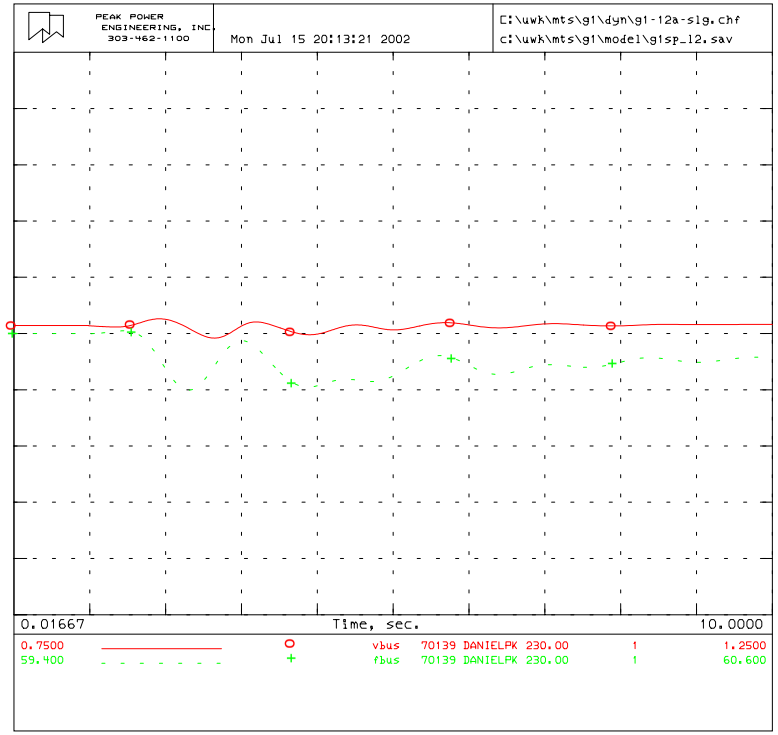

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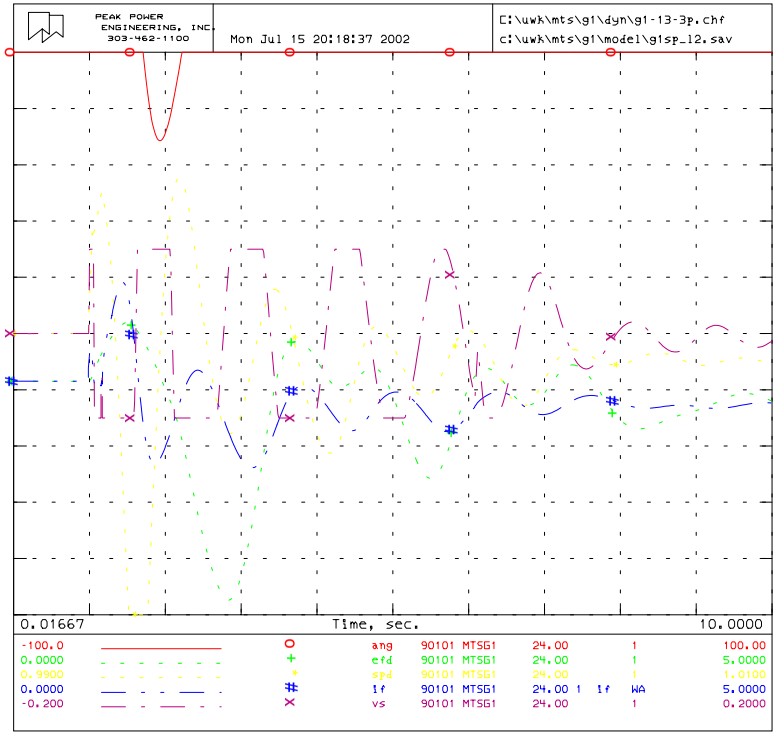

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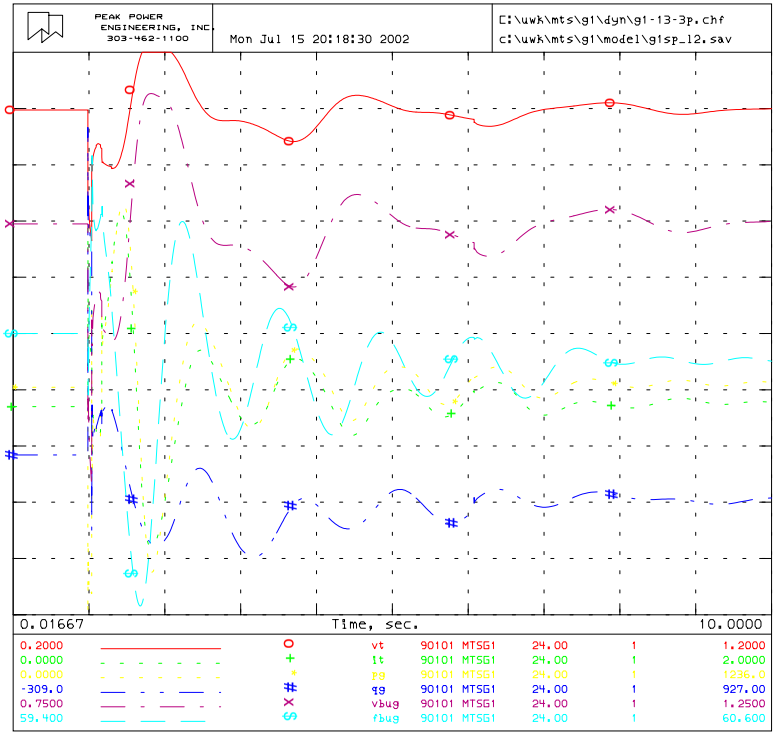

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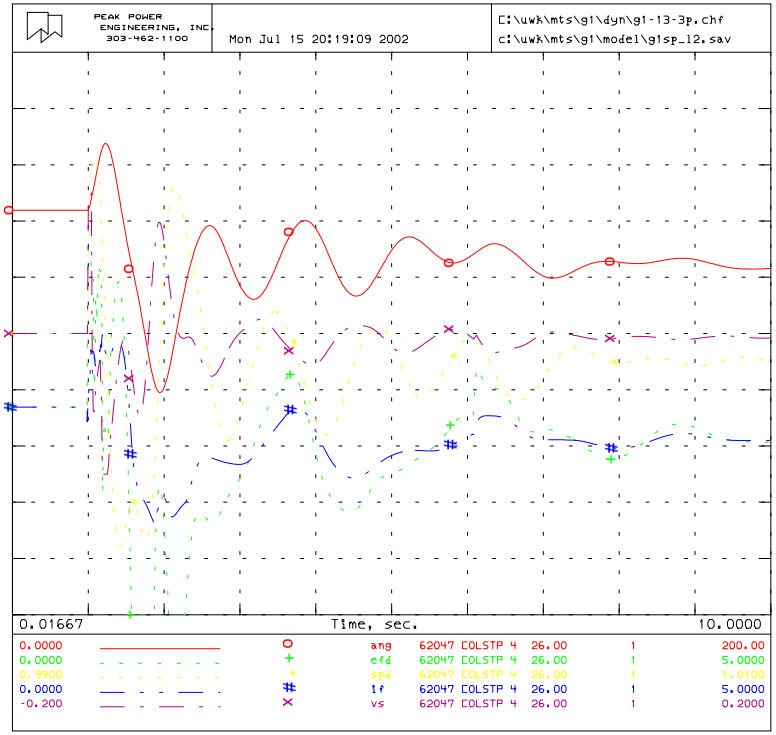

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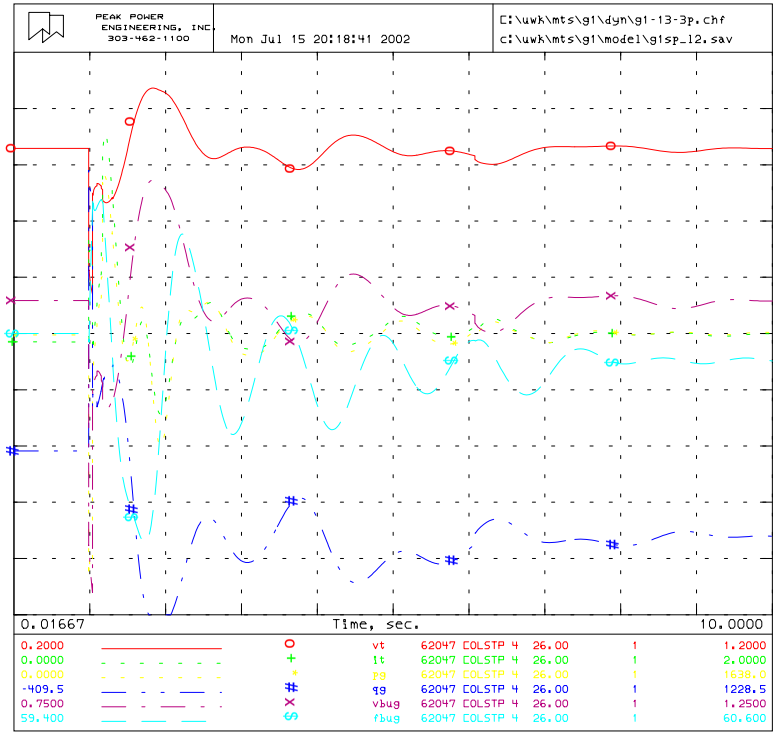

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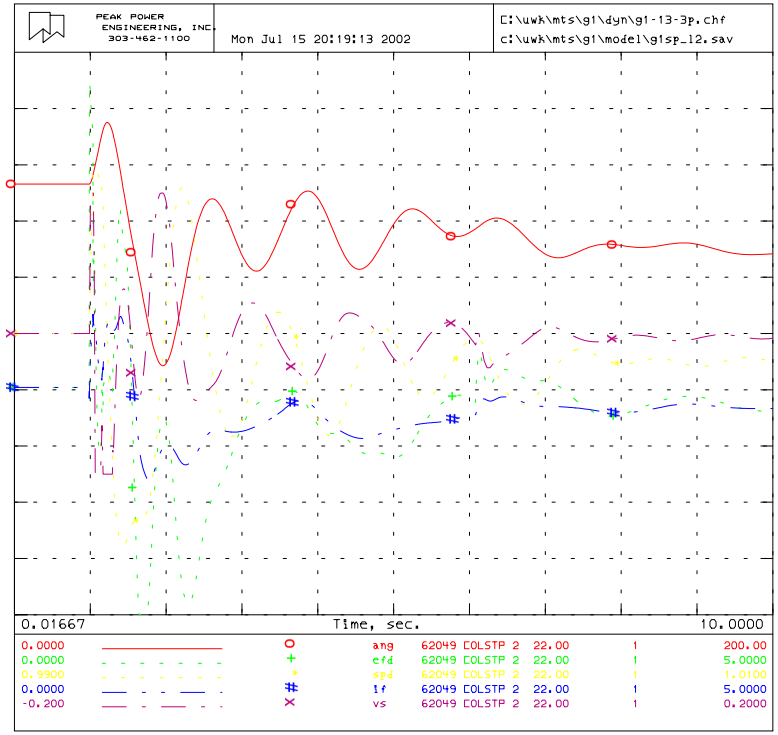

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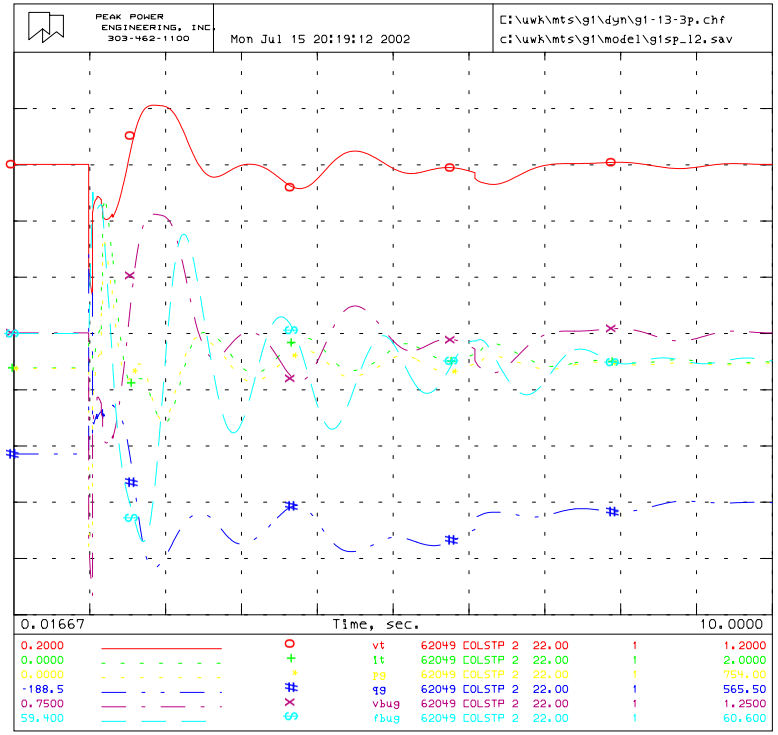

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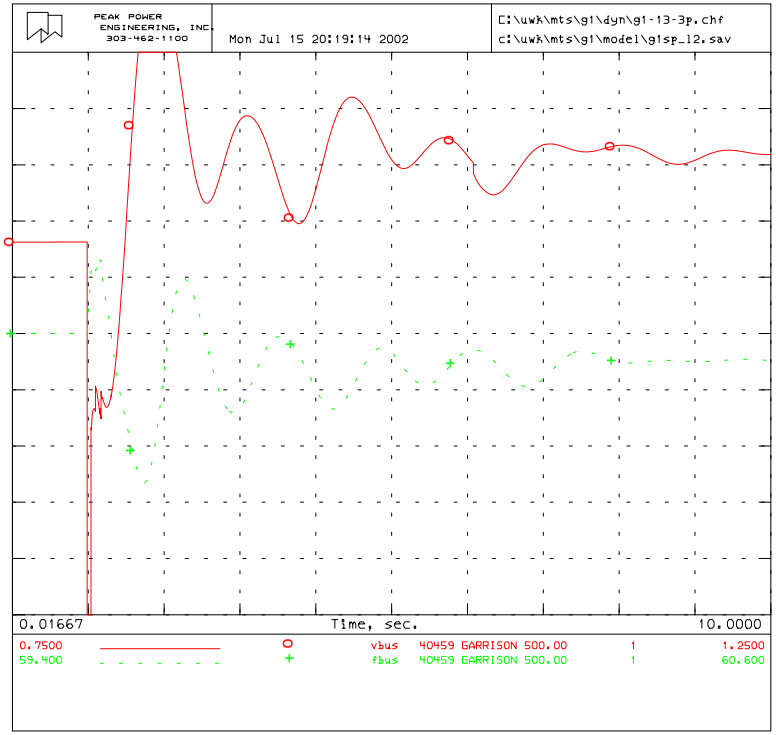

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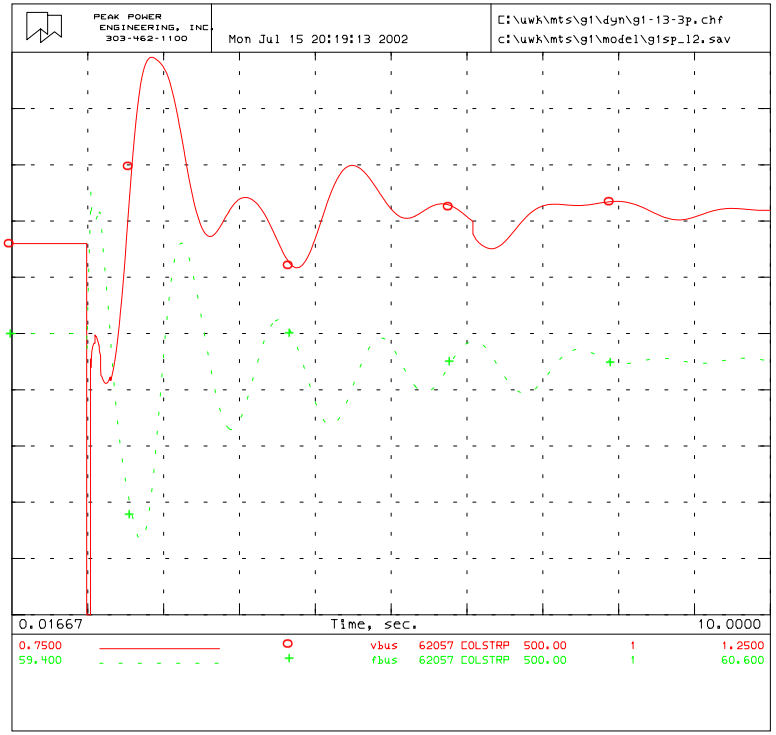

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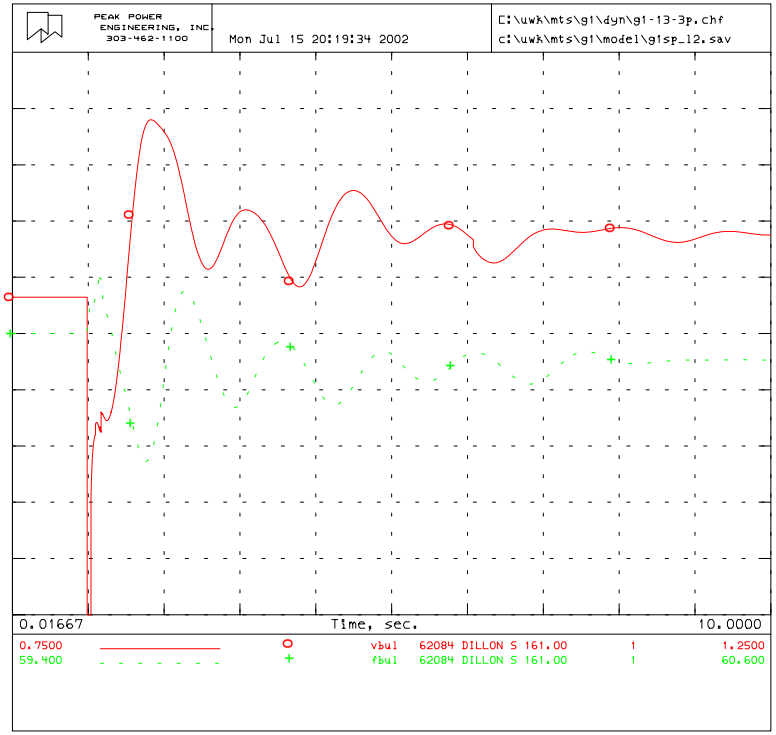

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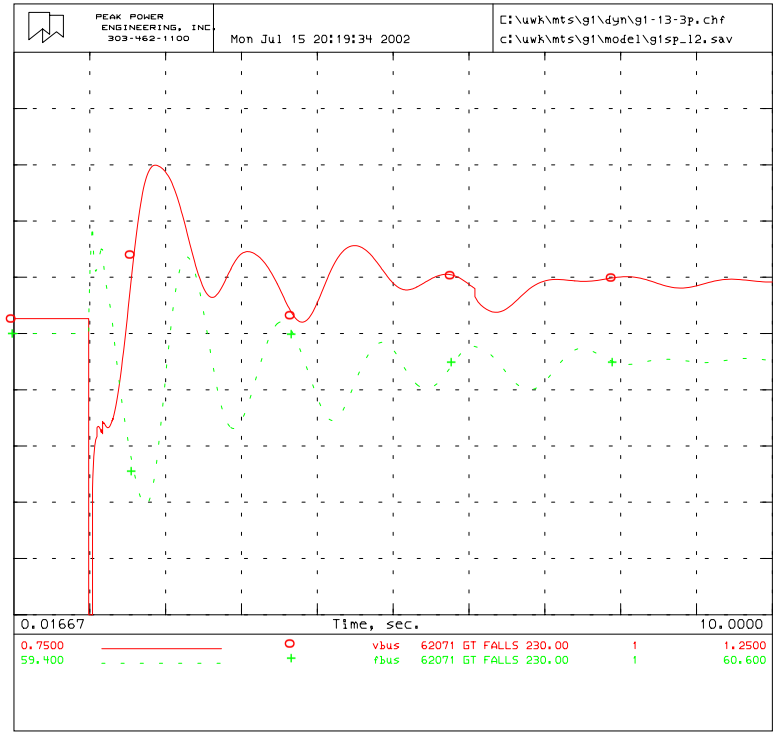

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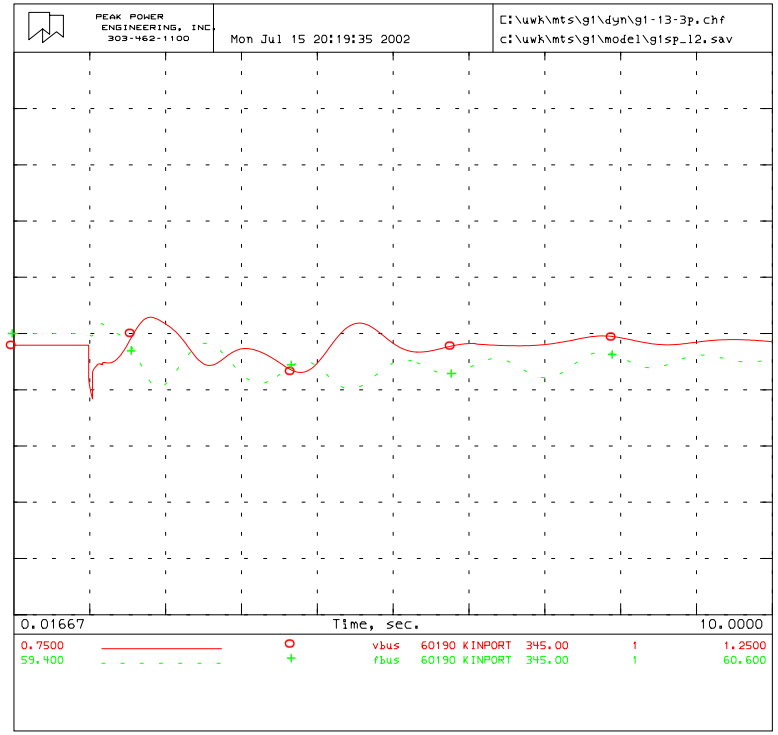

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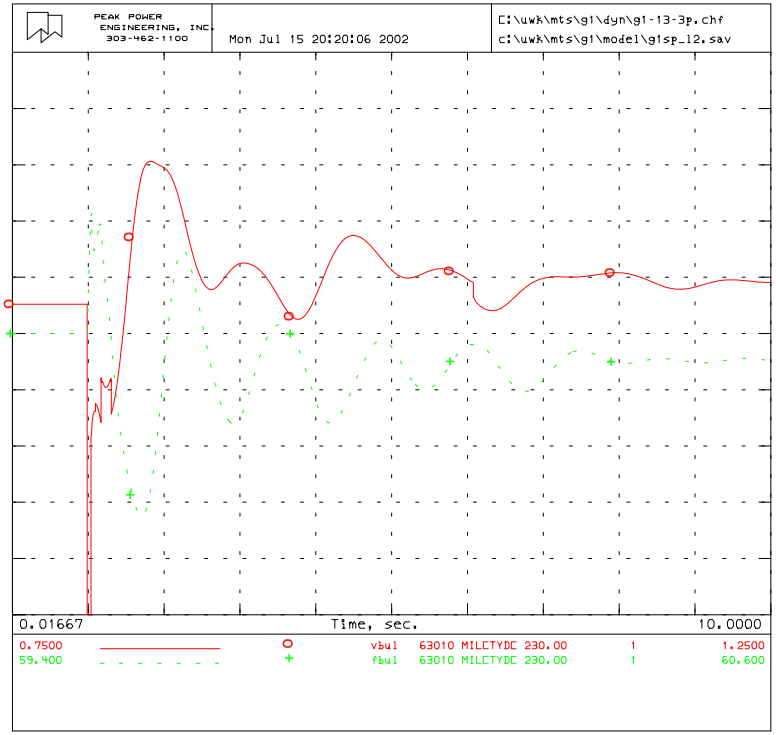

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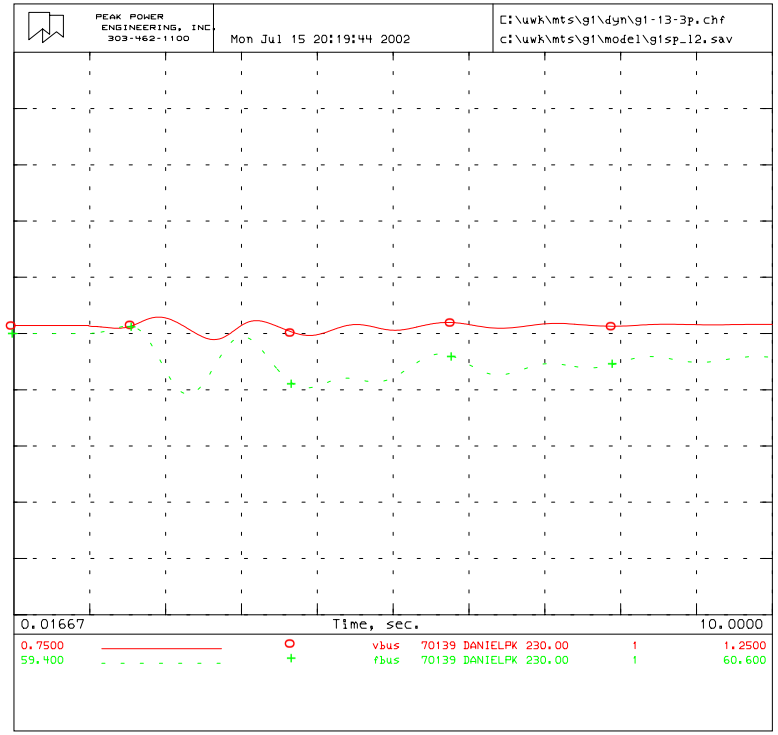

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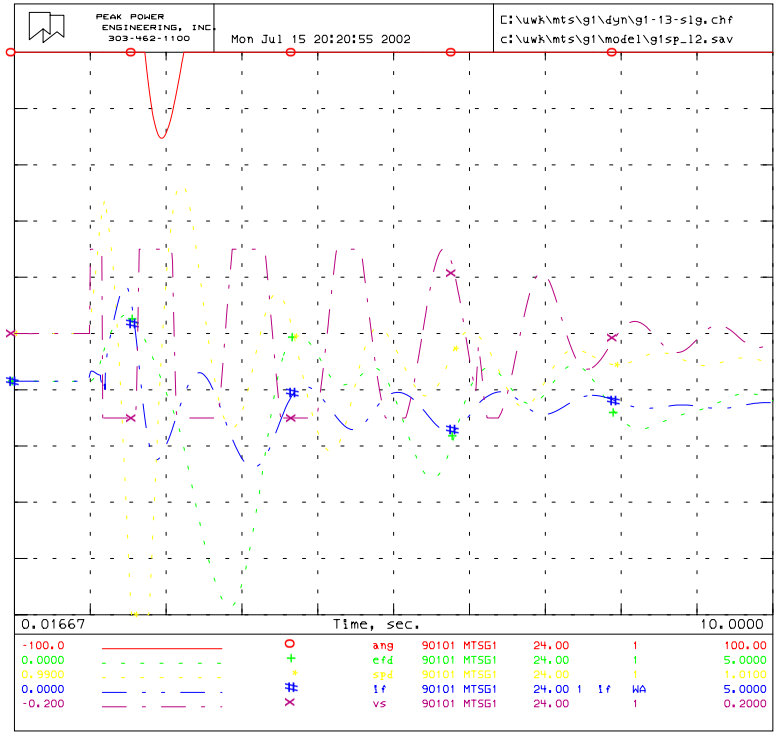

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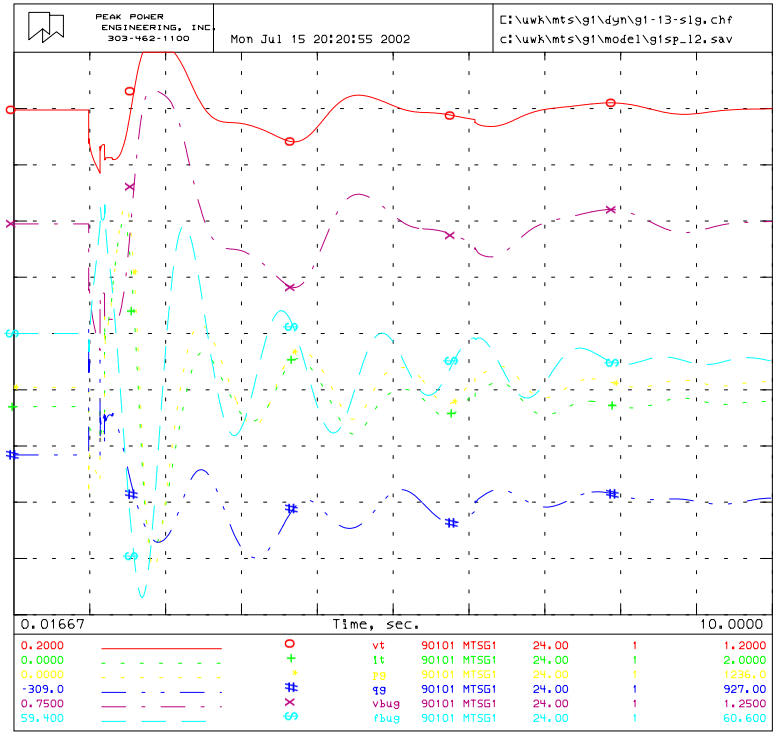

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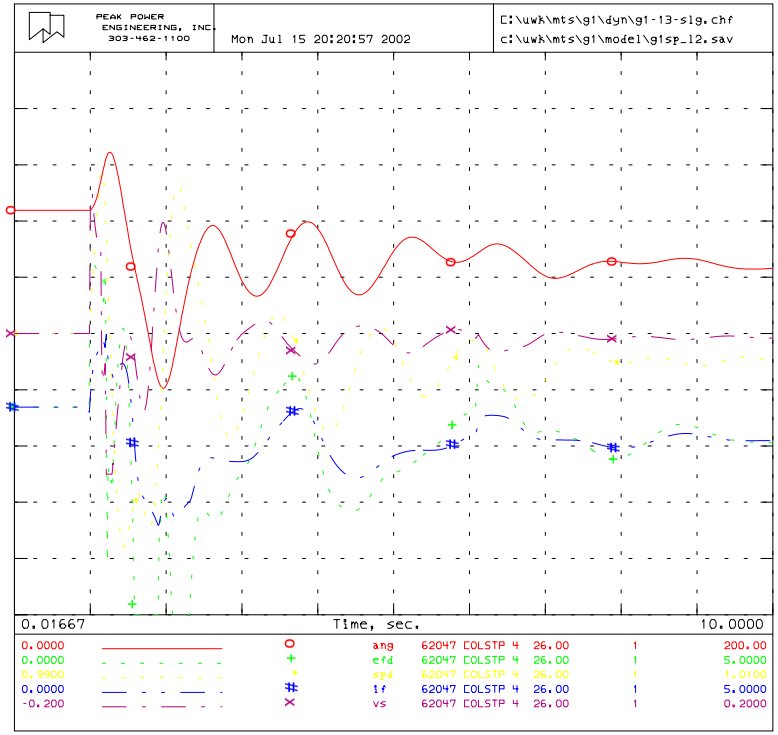

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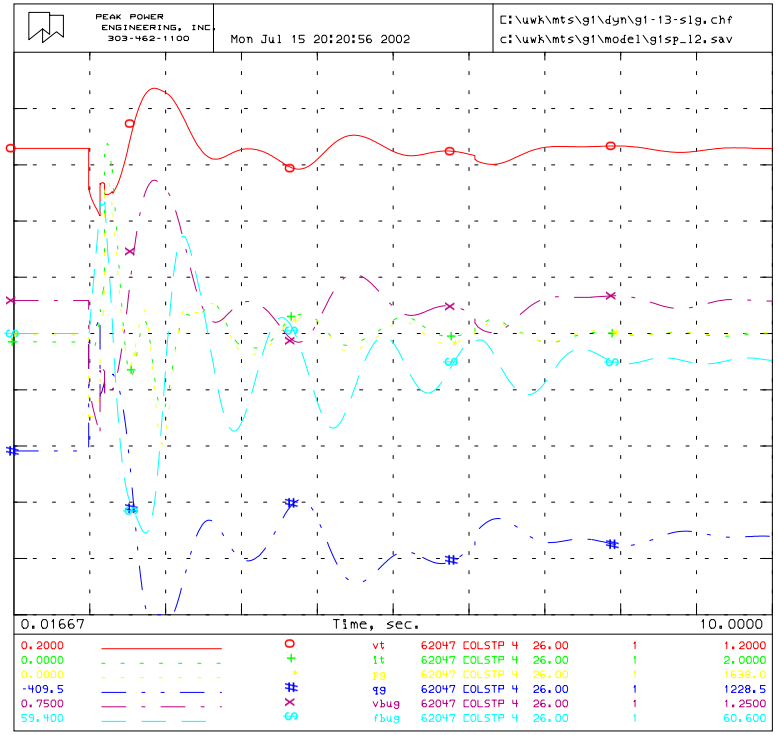

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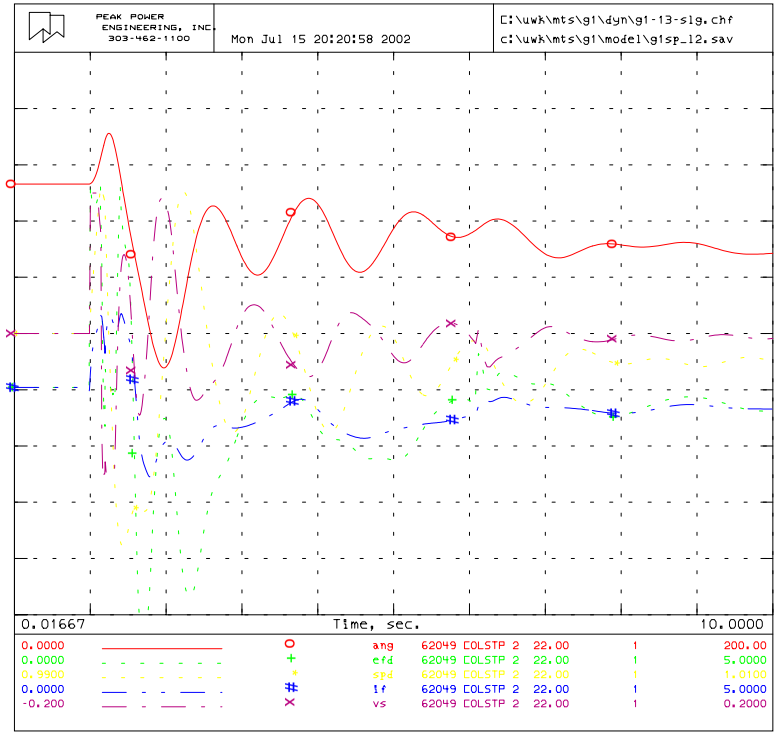

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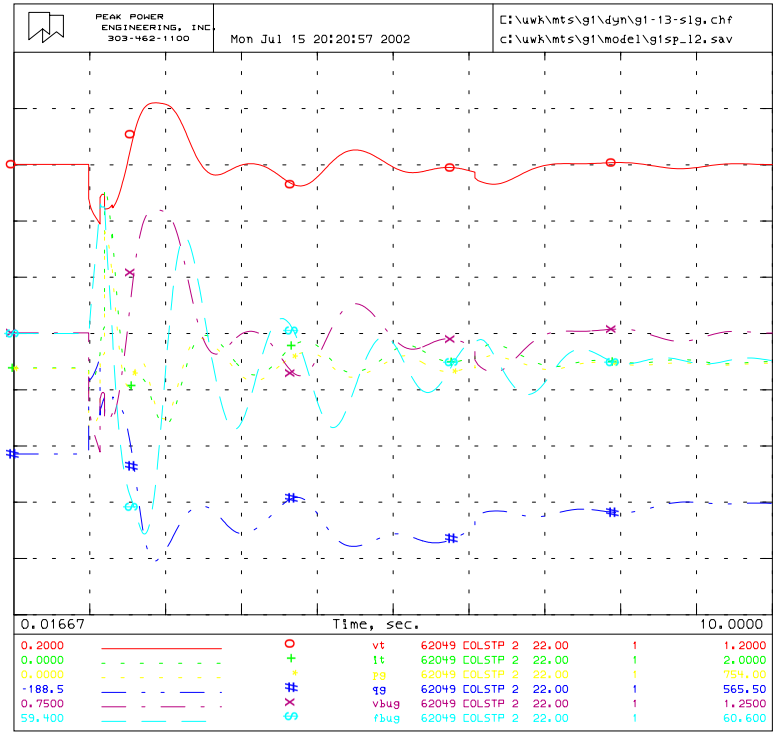

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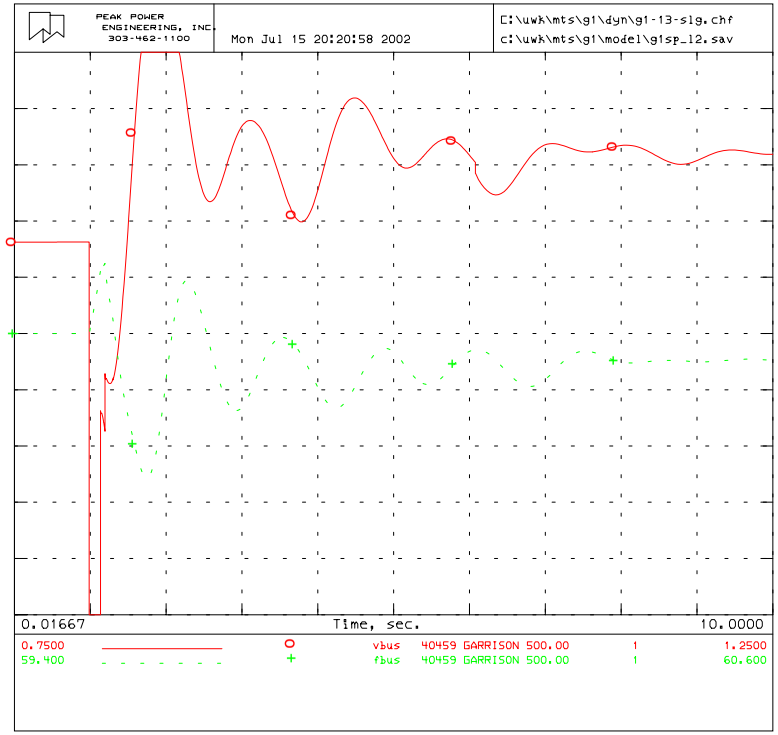
Clear Flt: 9 cyc, Trip Line "GARRISON" 500 to "HOT SPR" 500

STUDY BY PEAK POWER ENGINEERING, INC.

HISTORY FILE BASED ON WSCC 2002 LS2B APPROVED OPERATING CASE
NOVEMBER 27, 2001



MONTANA TRANSMISSION STUDY
WAPA UGP, JUNE 2002
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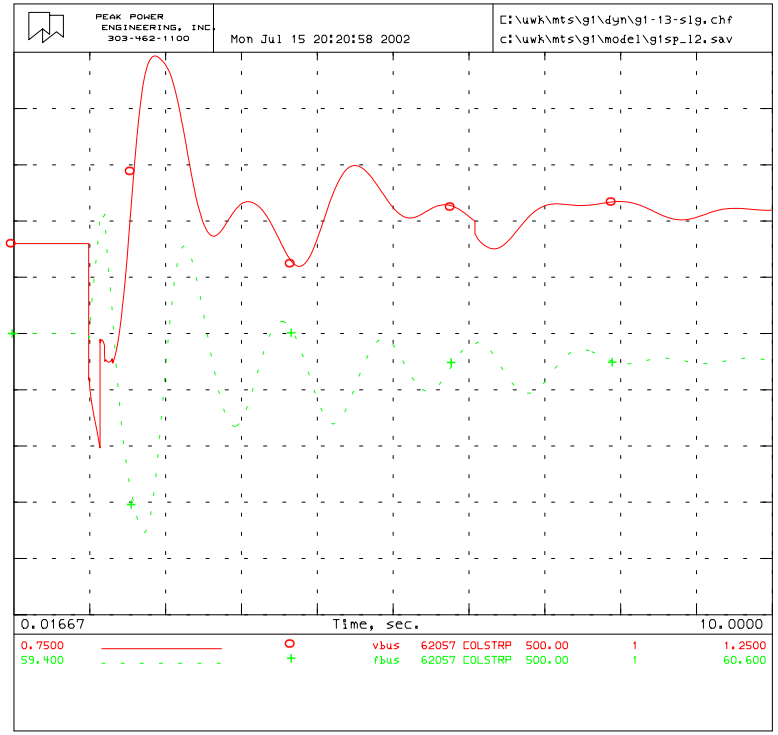

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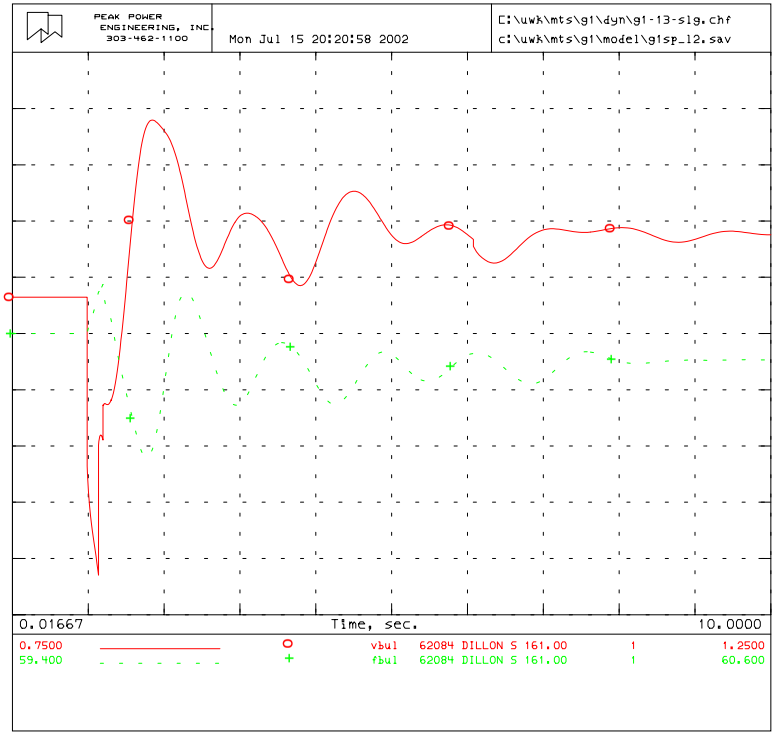

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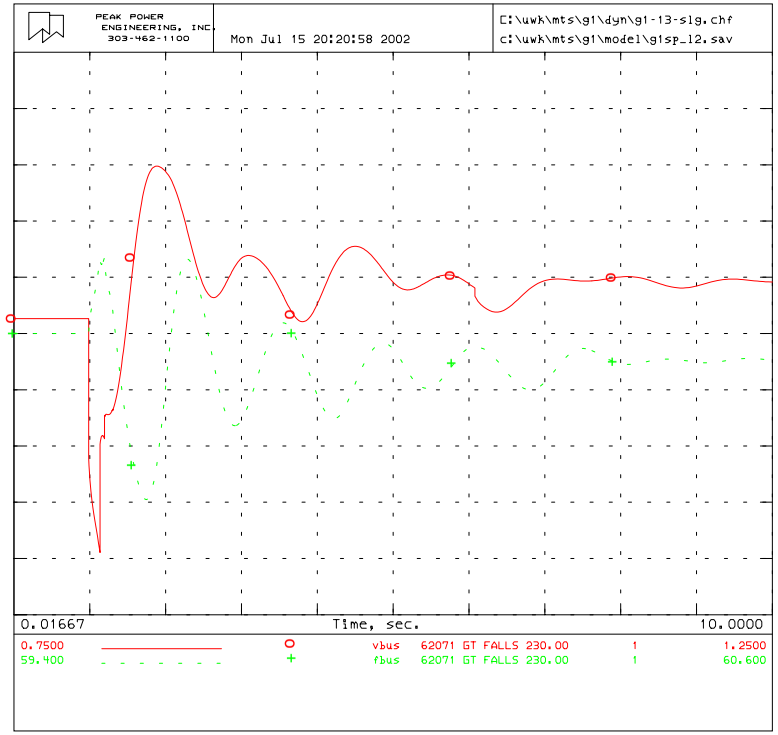

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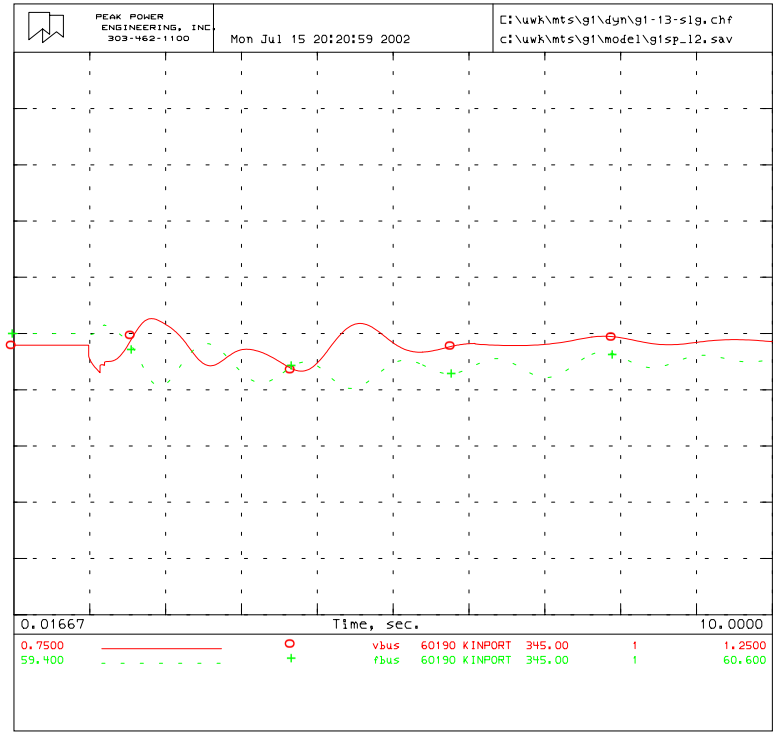

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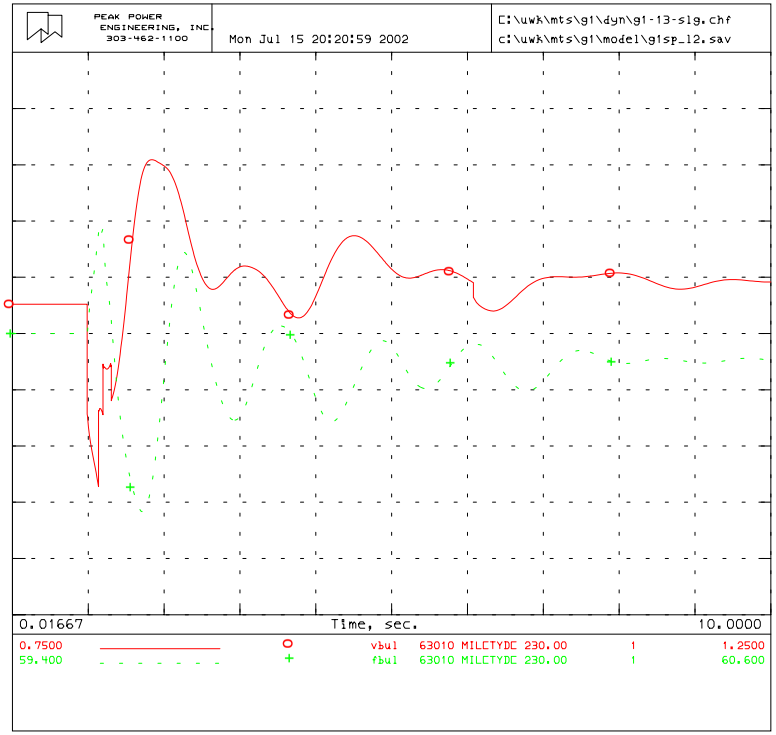

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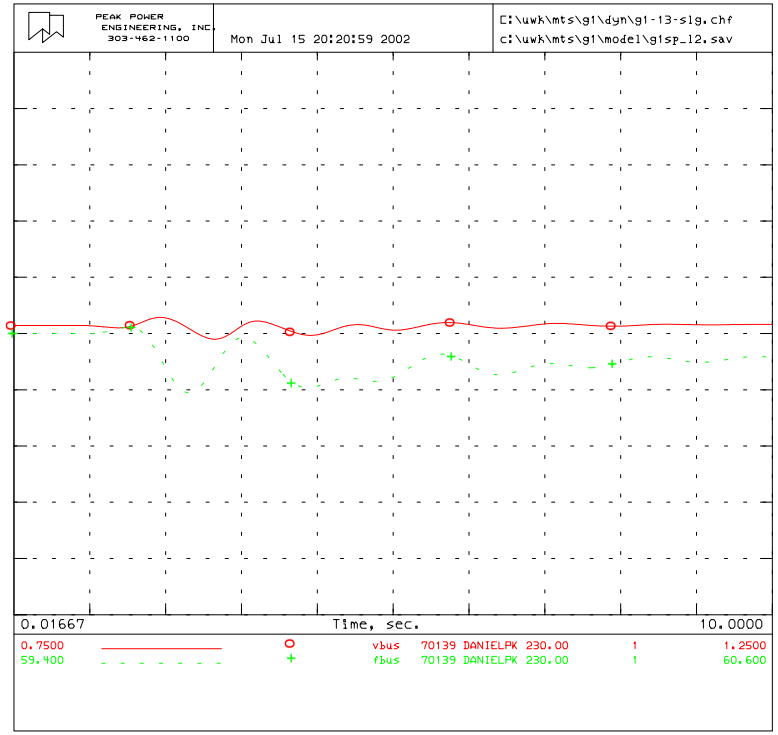

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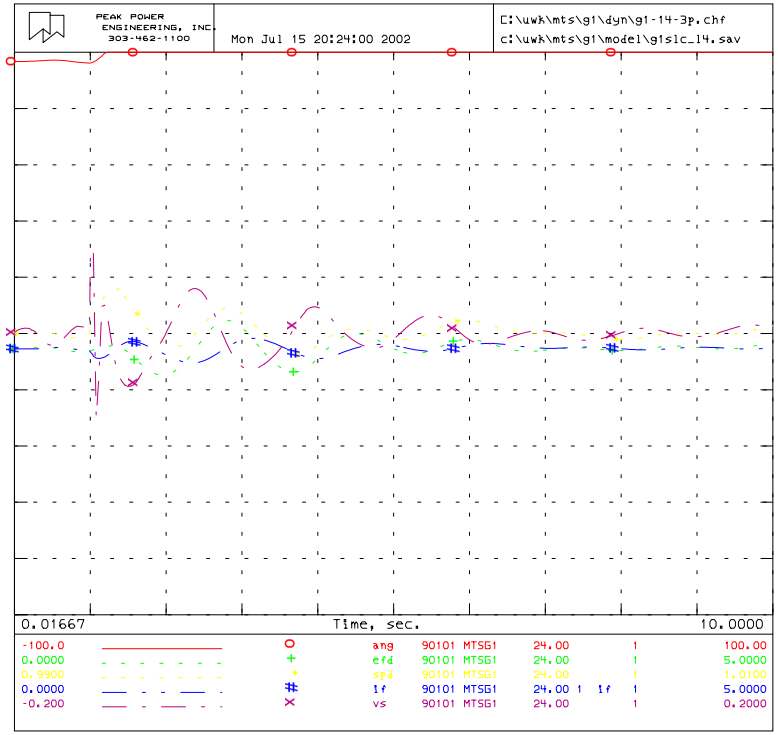

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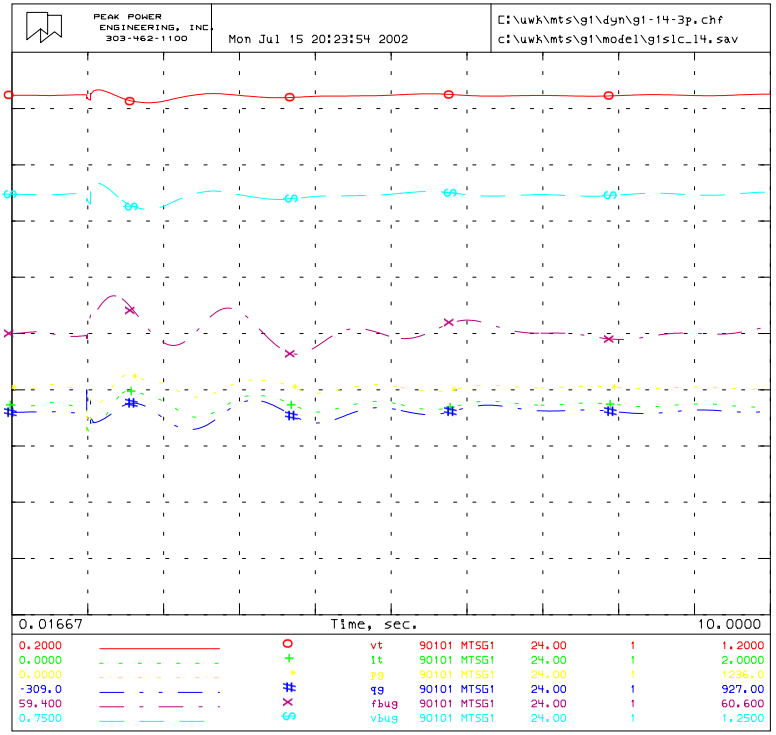

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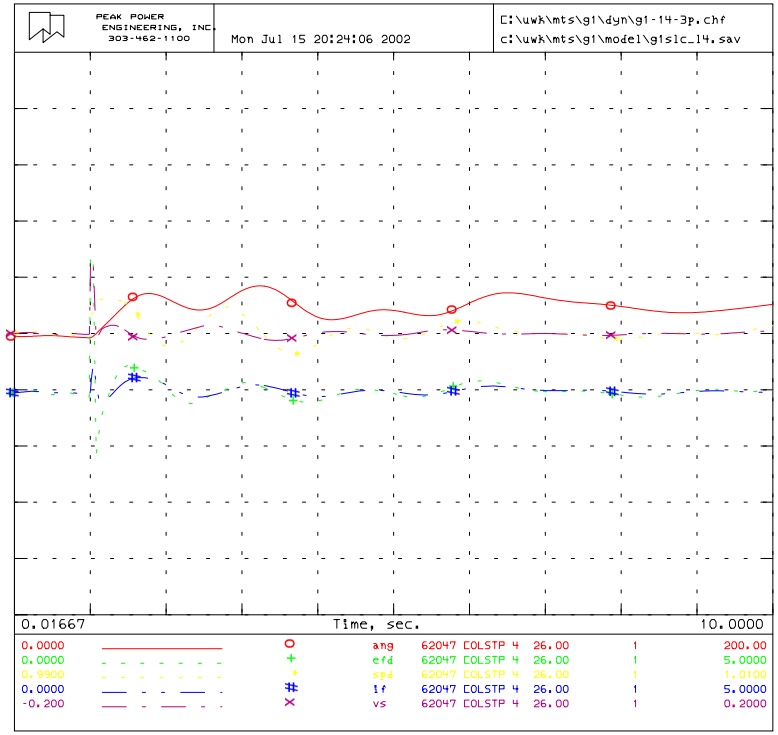

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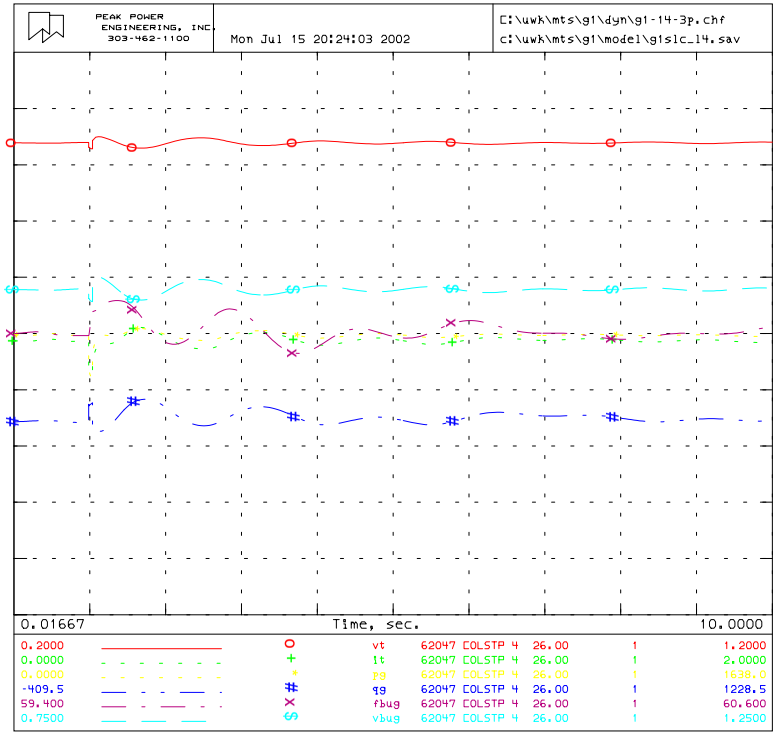

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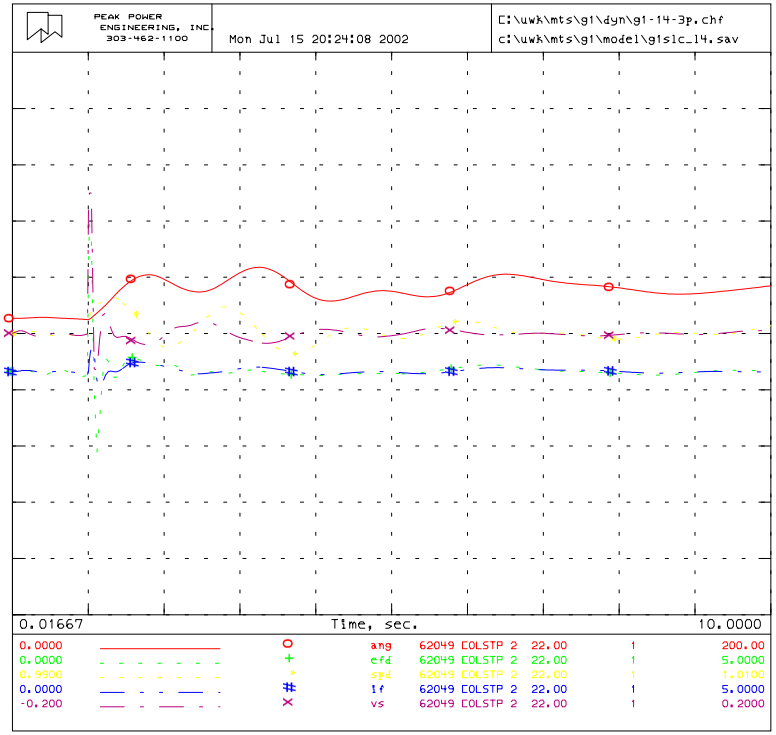

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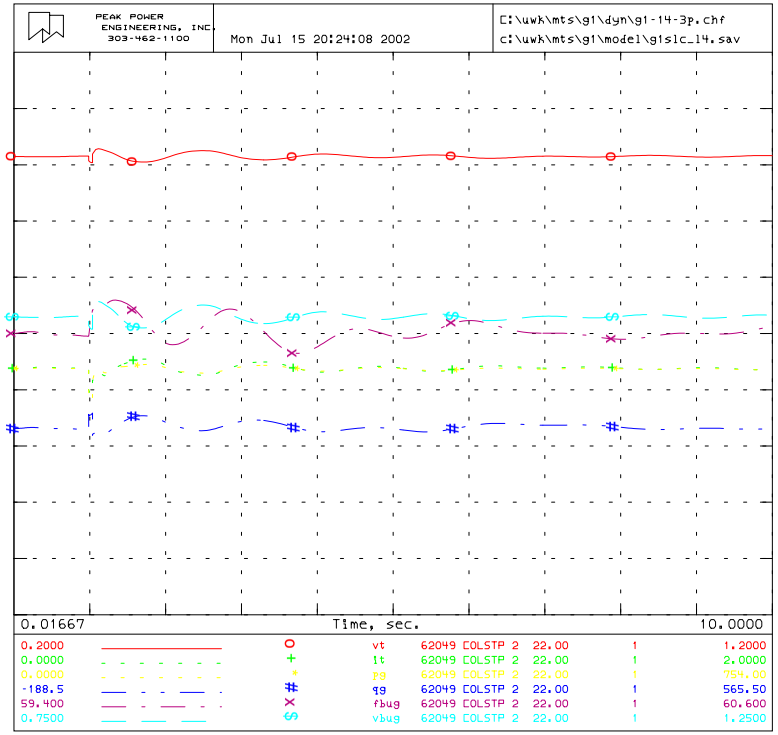

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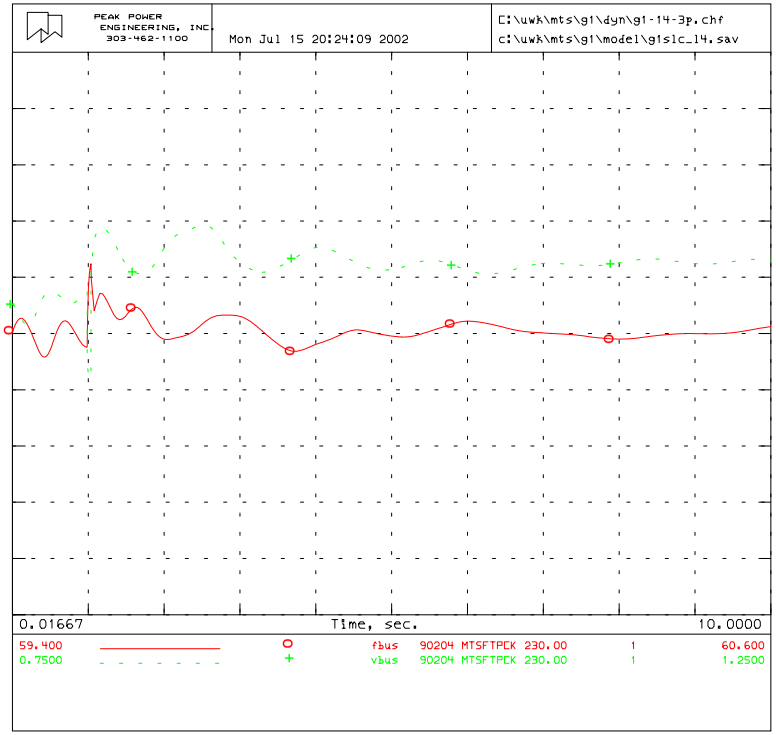

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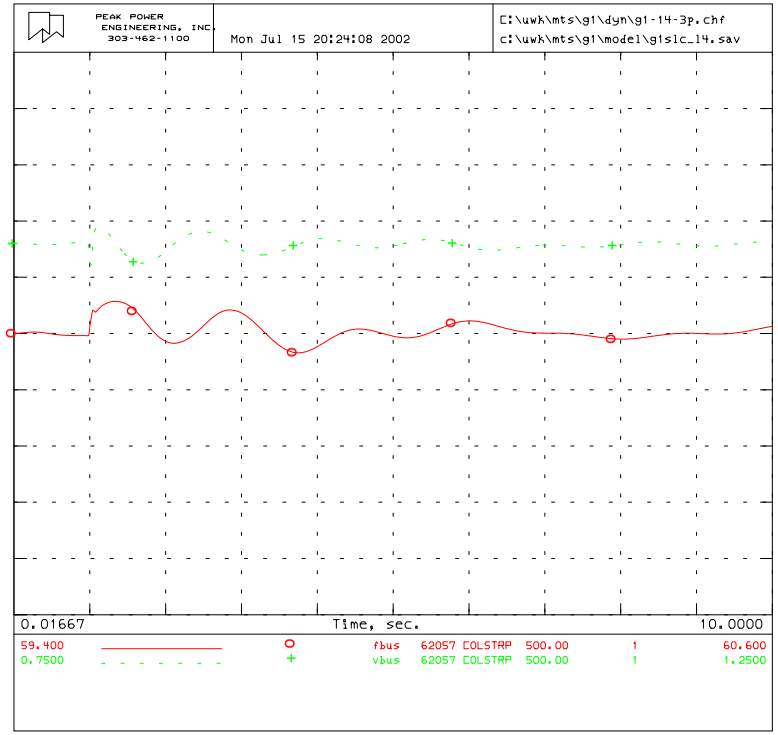

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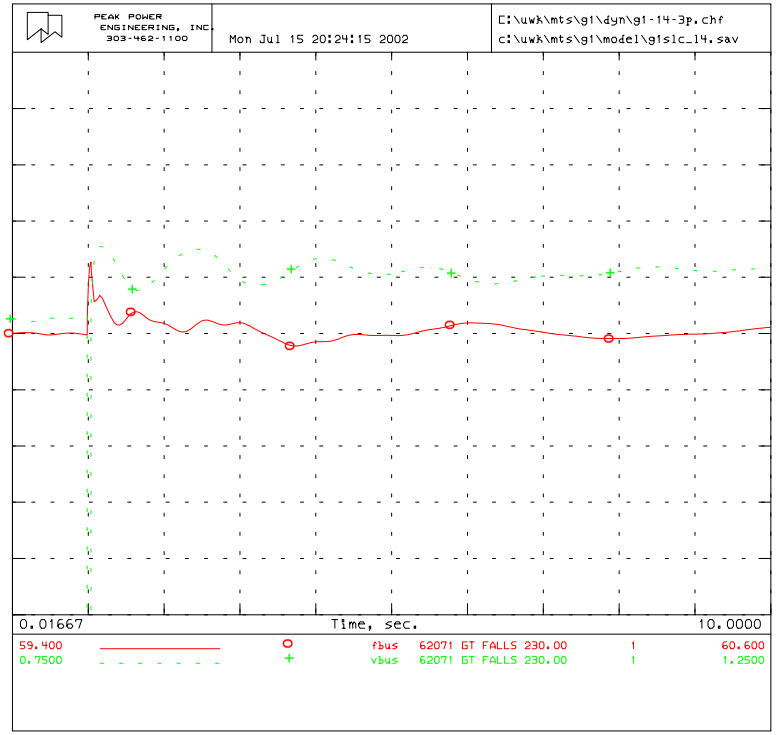

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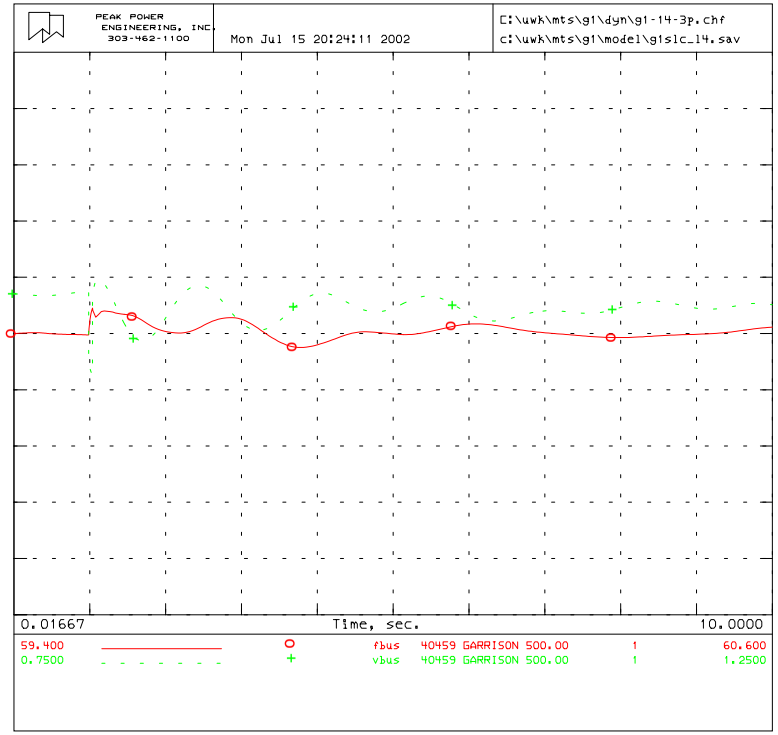

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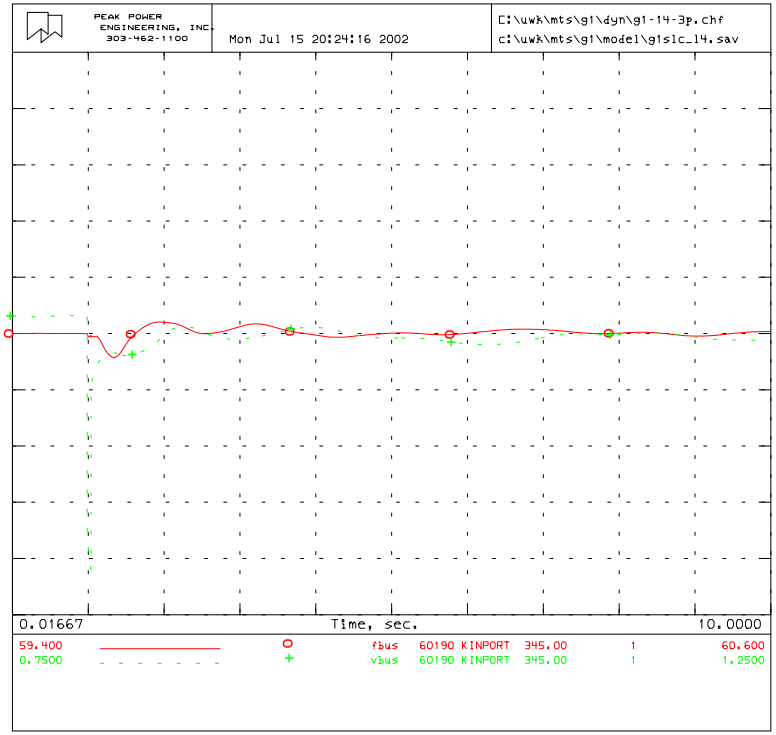

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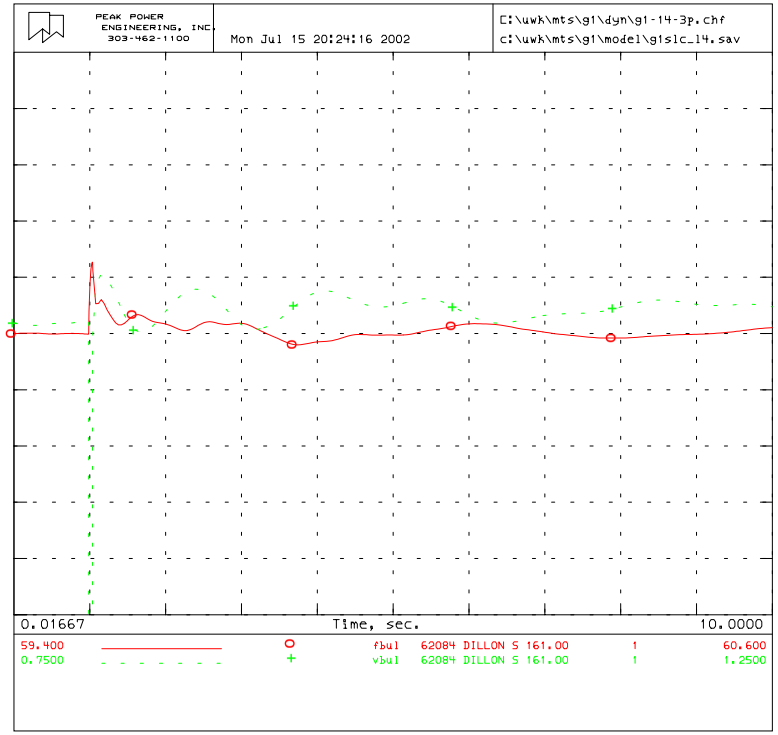

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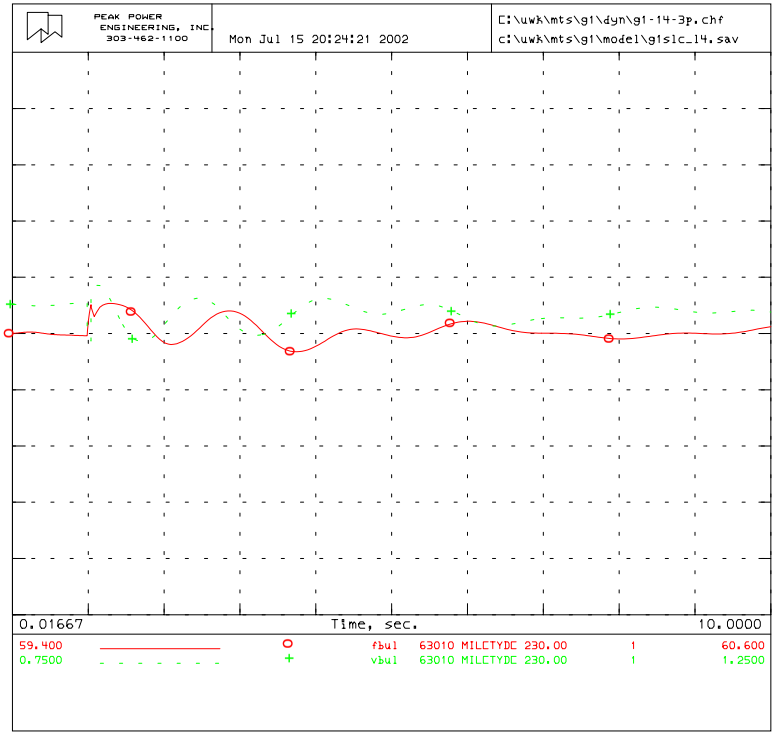

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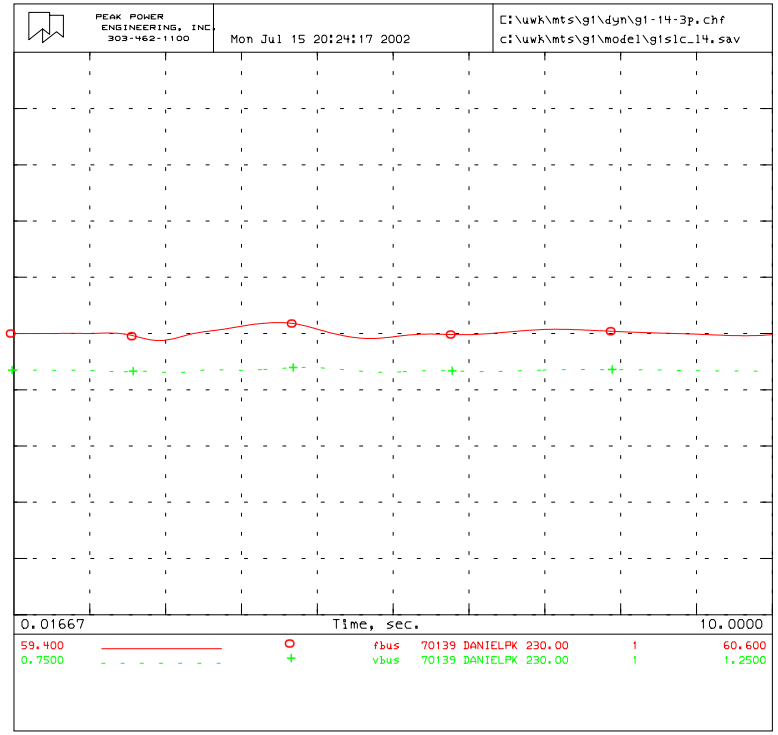

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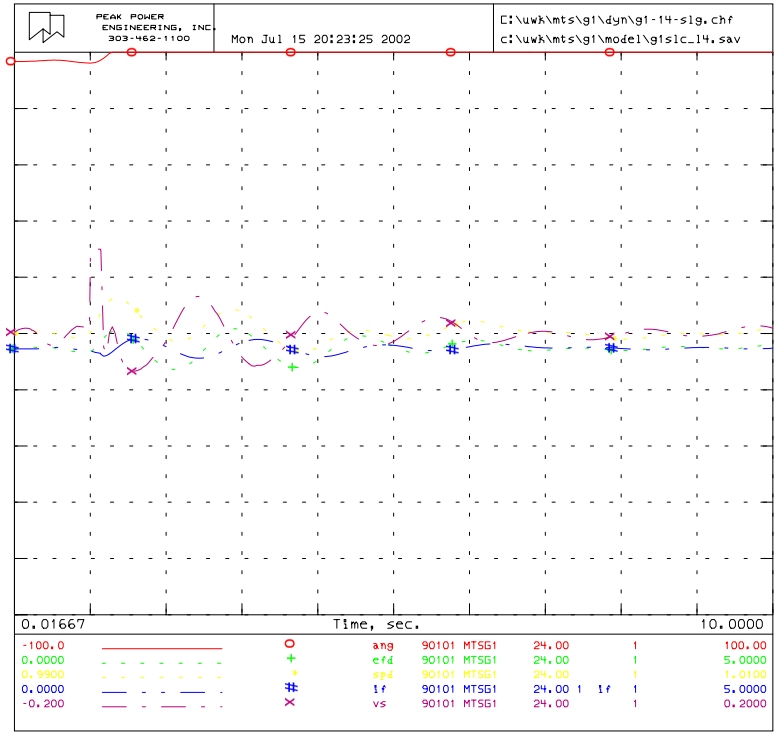

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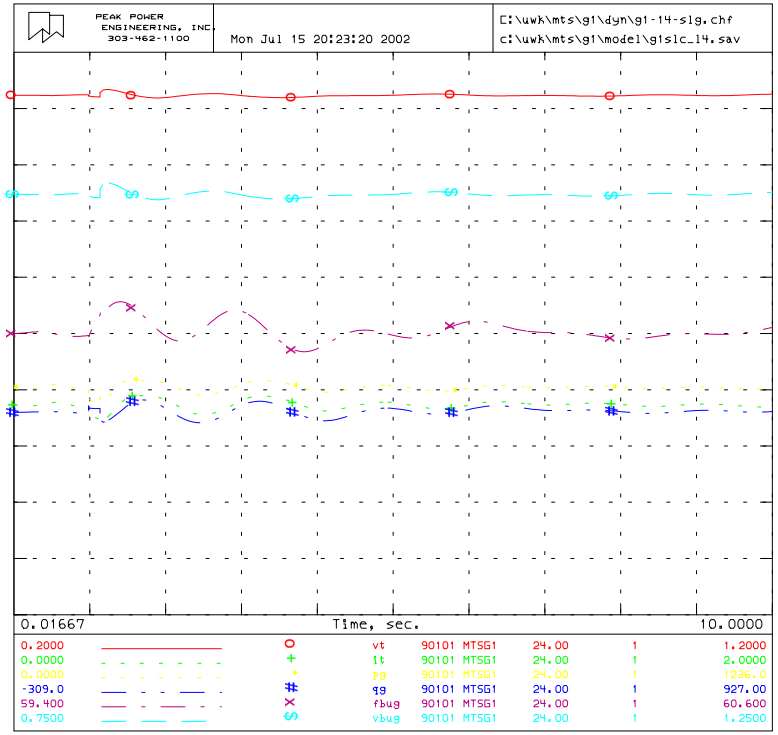

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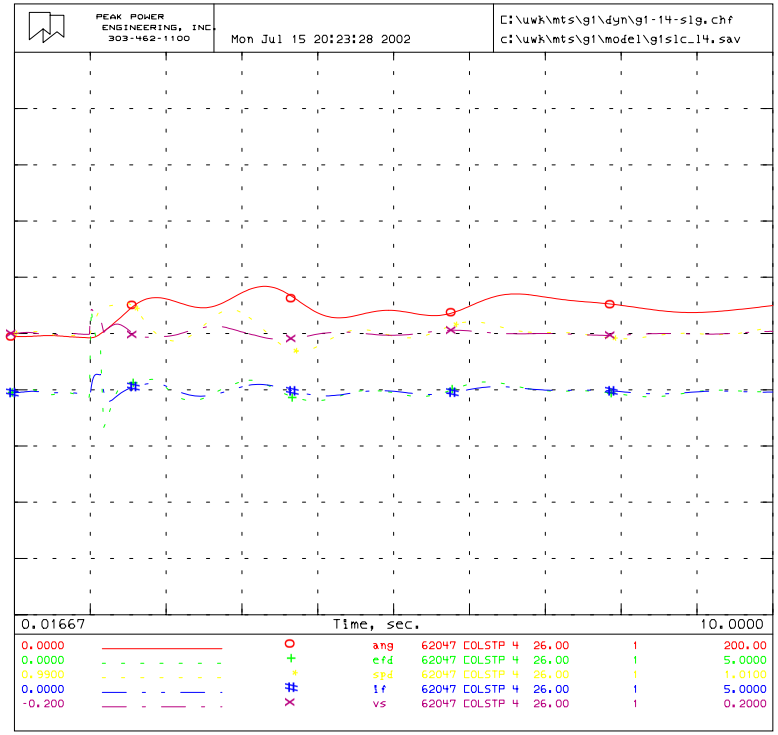

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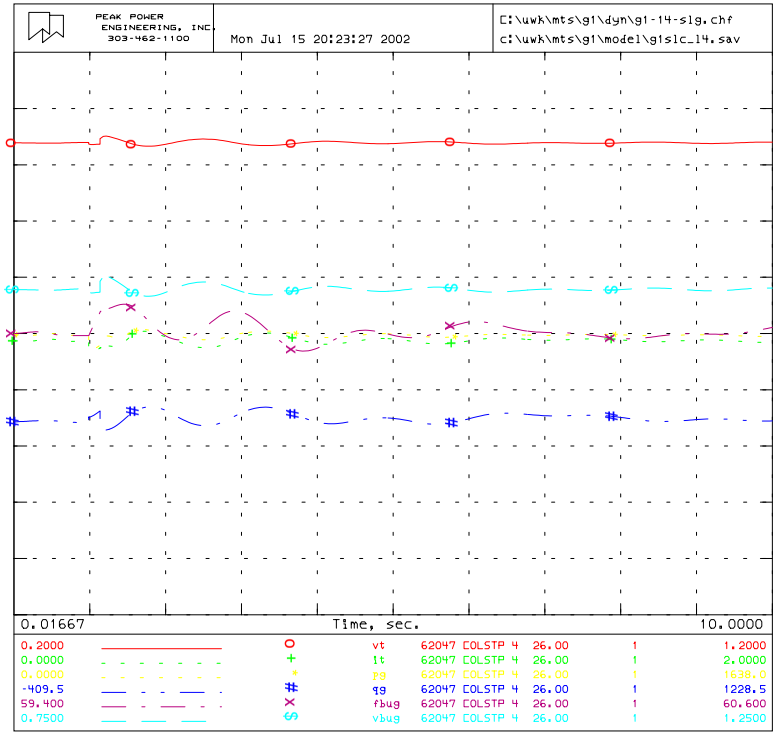

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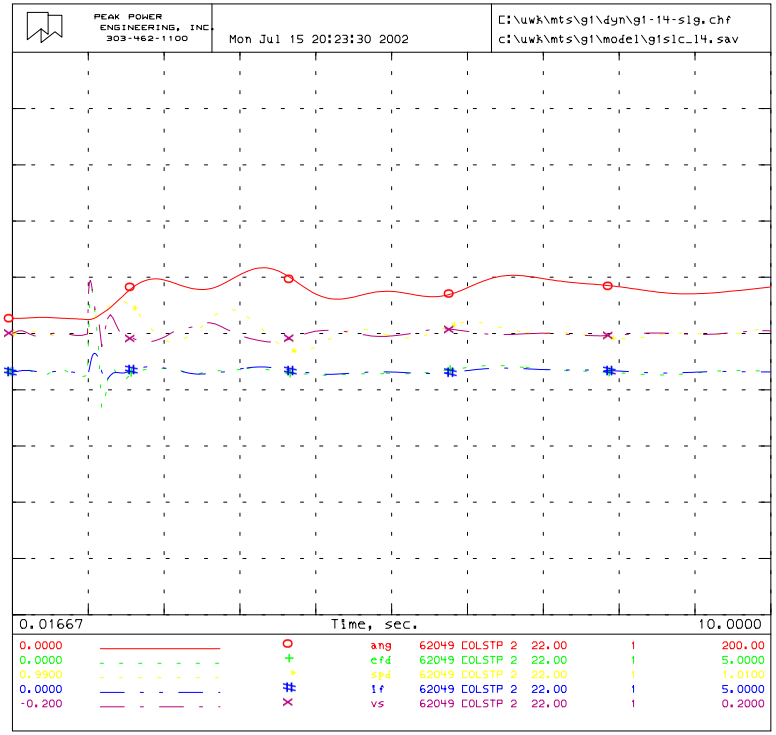

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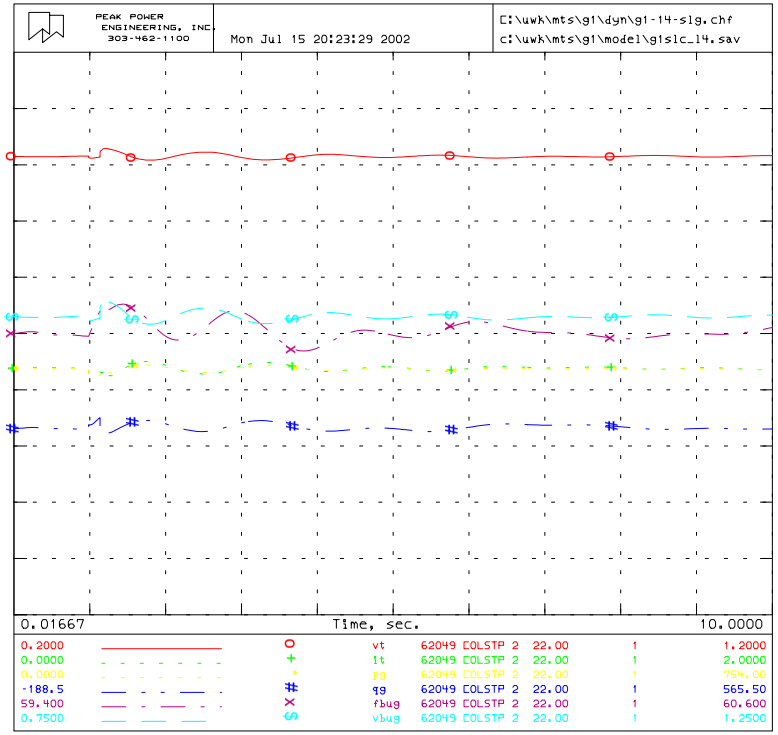

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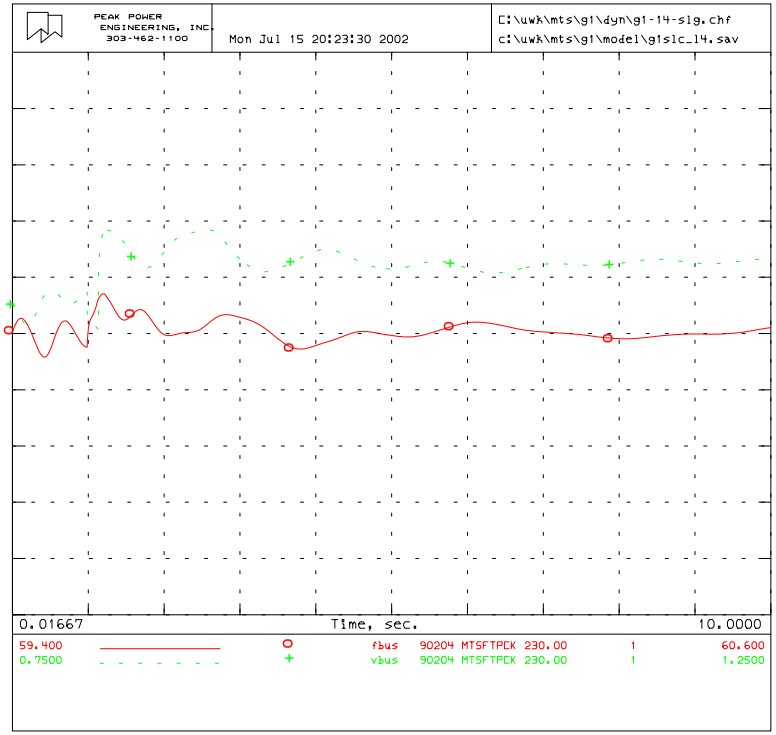

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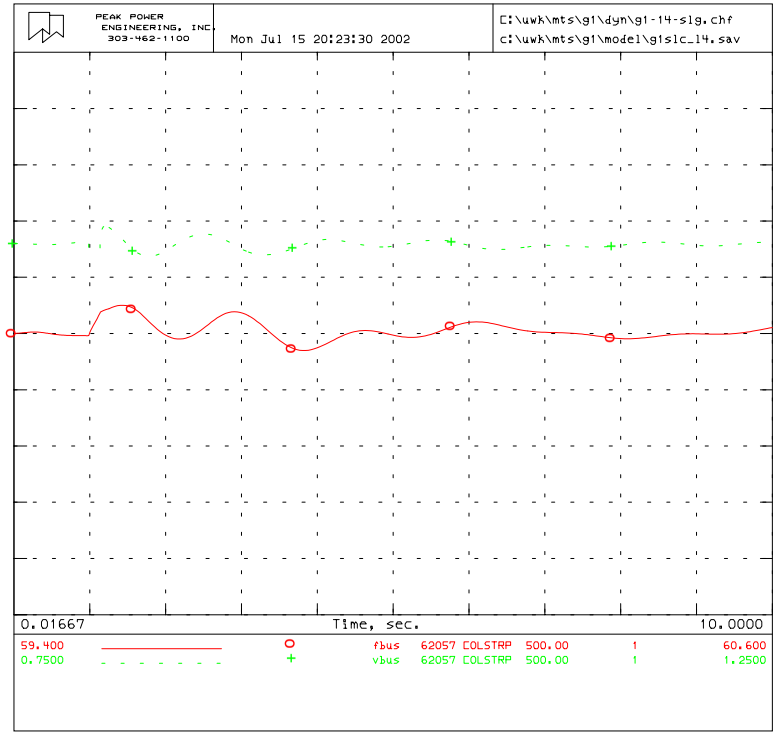

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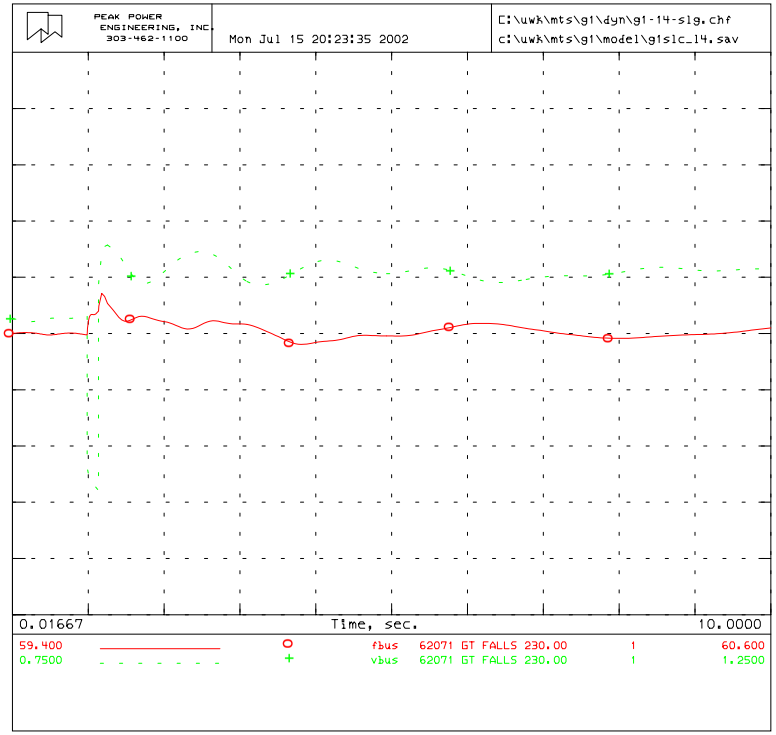

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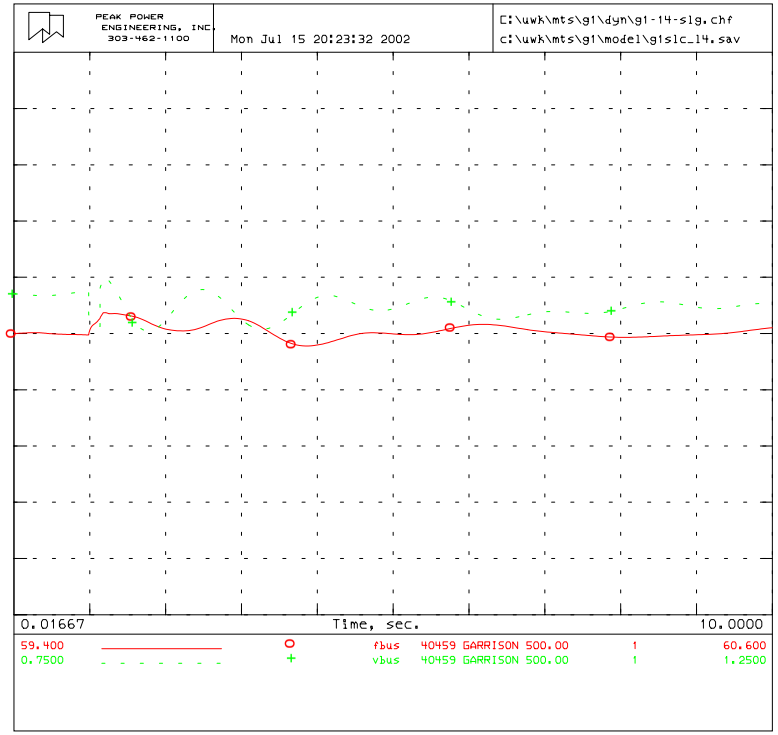

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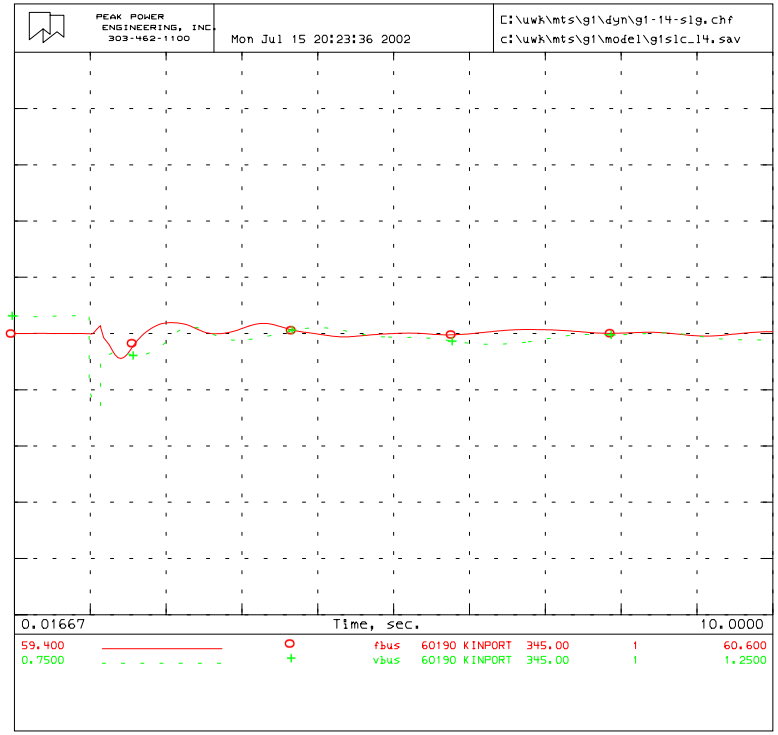

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Clear Flt: 9 cyc, Trip Line "MTSKINP" 500 to "MTSDILL" 500

STUDY BY PEAK POWER ENGINEERING, INC.

HISTORY FILE BASED ON WSCC 2002 HS3A APPROVED OPERATING CASE
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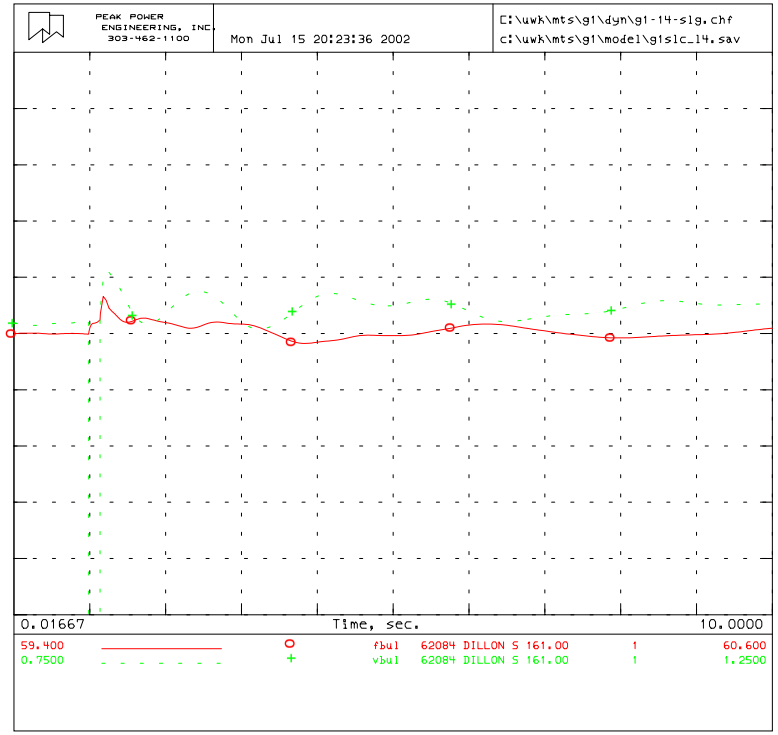

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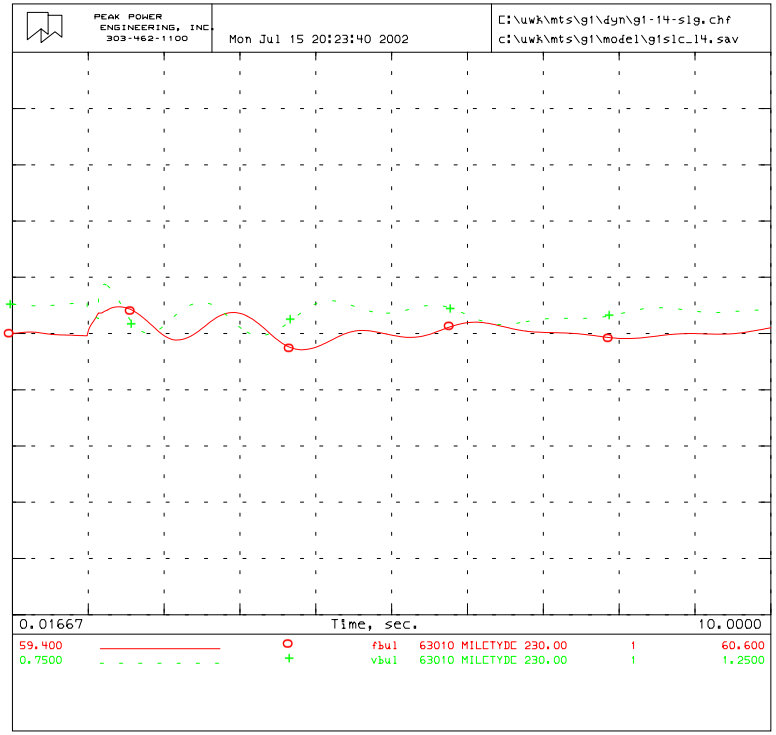

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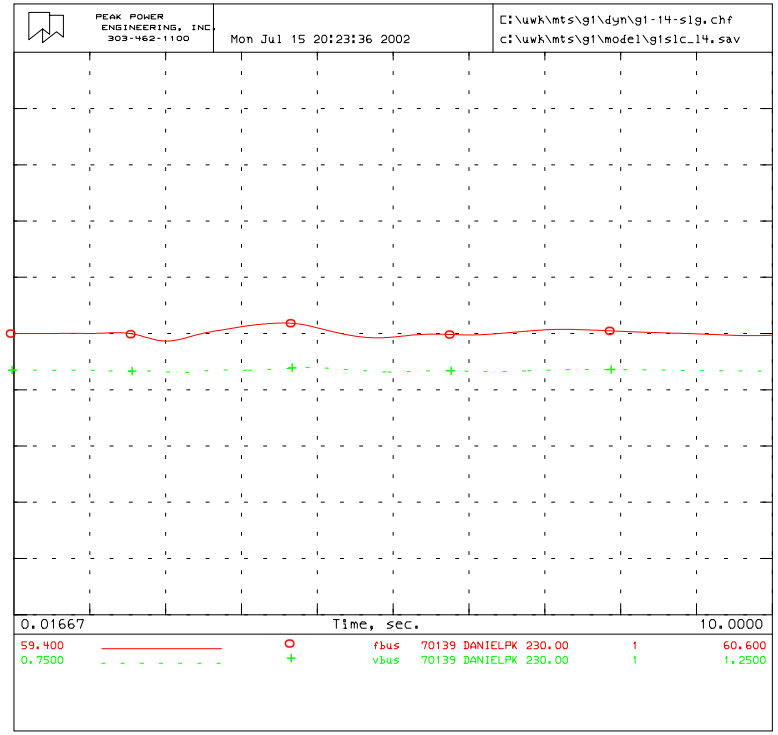

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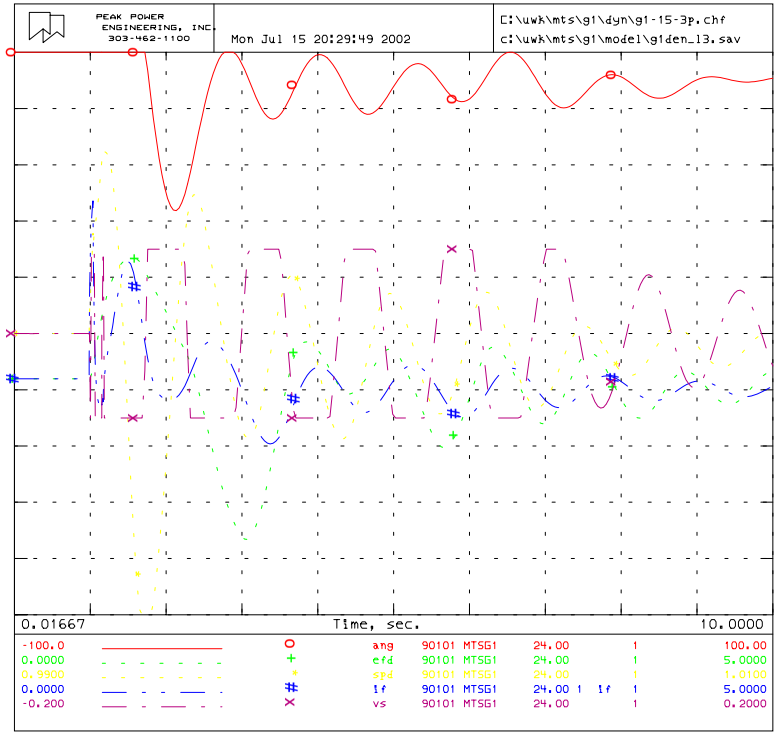

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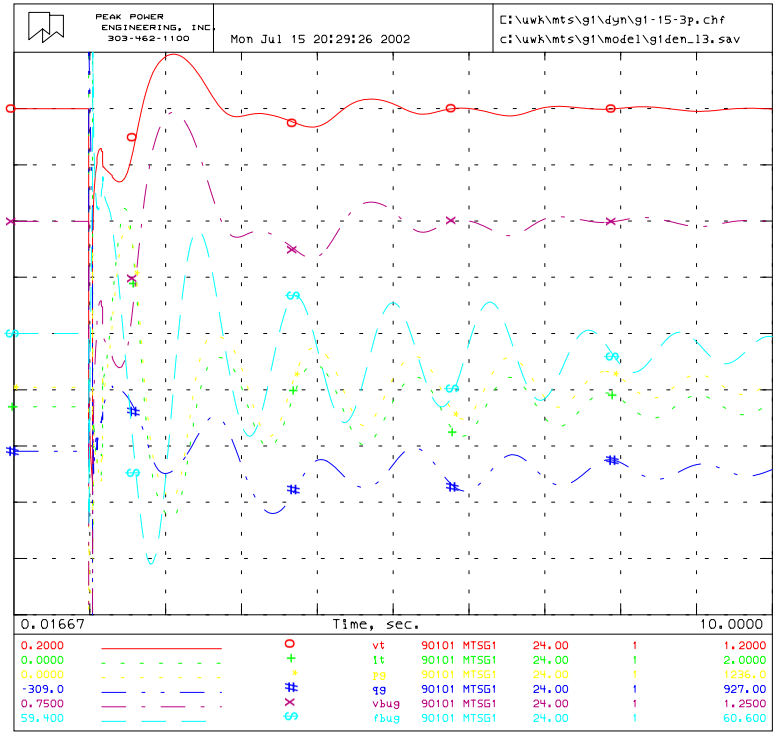

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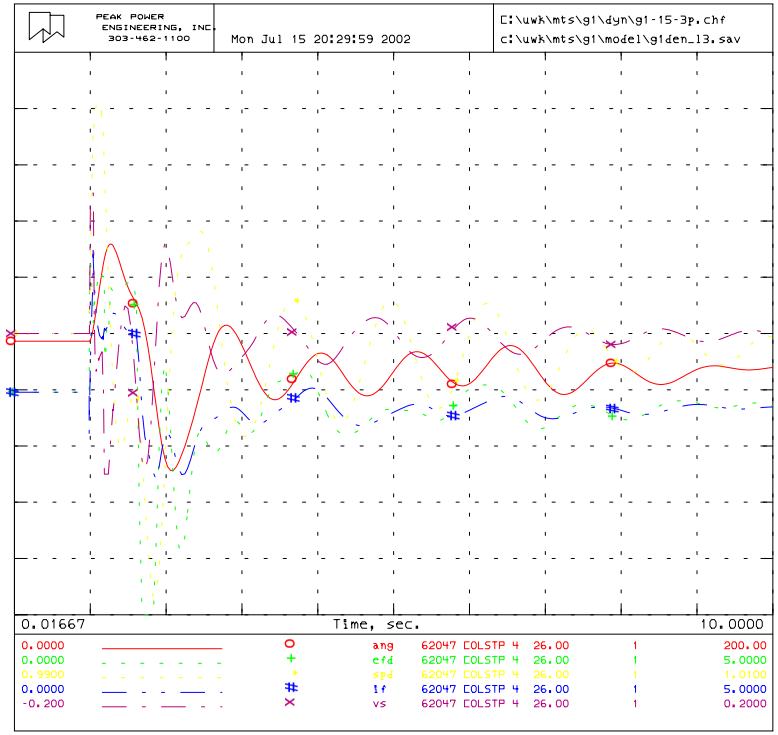

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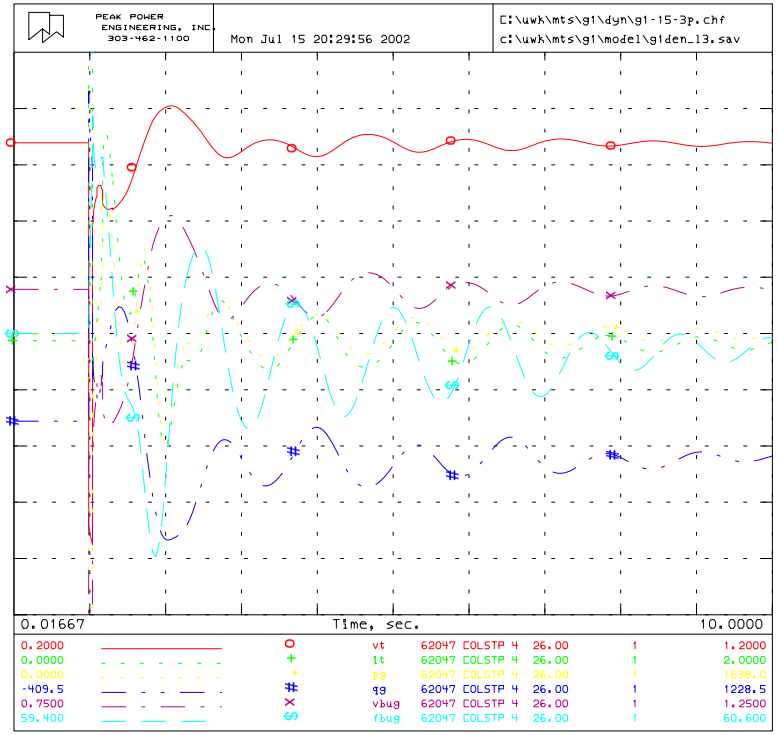

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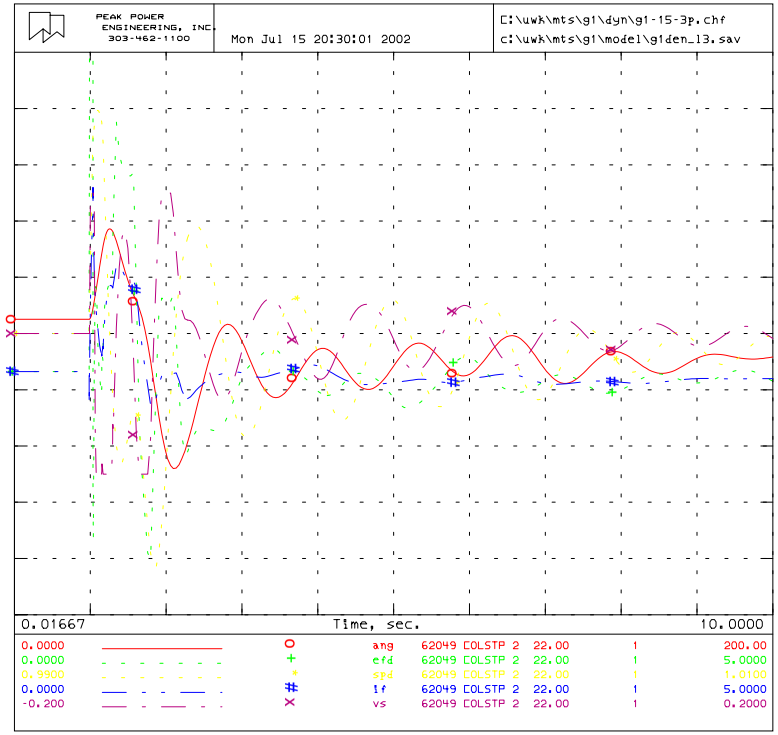

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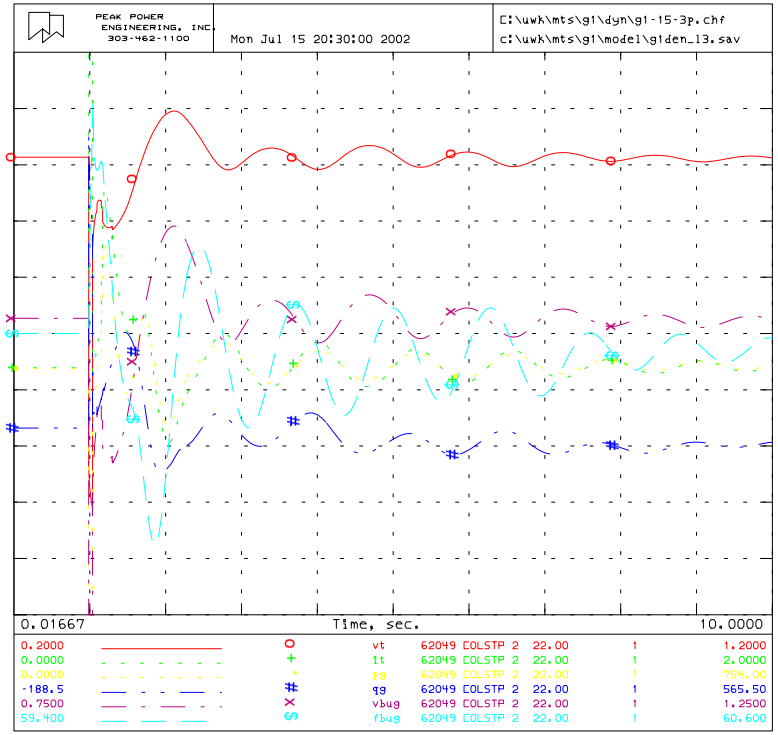

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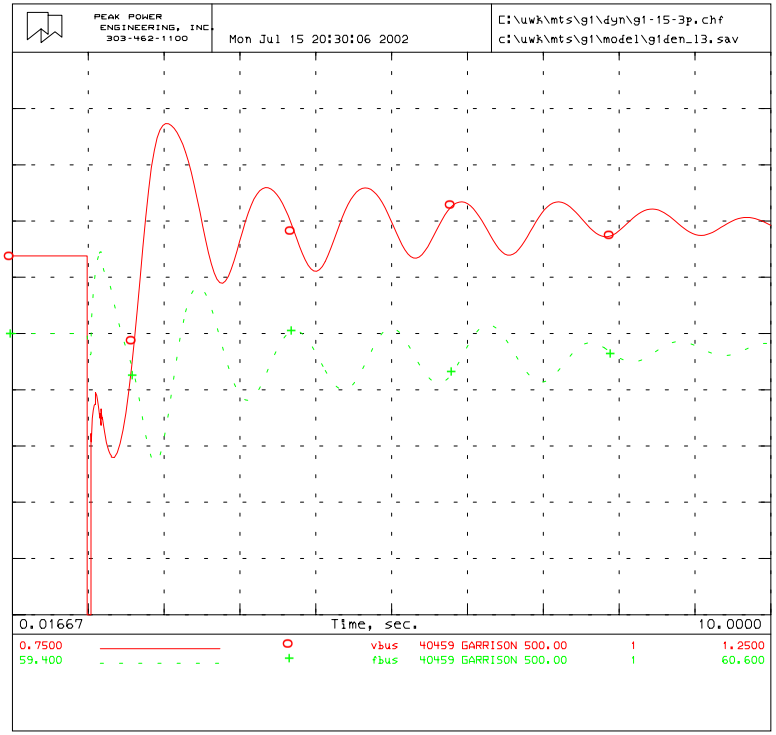

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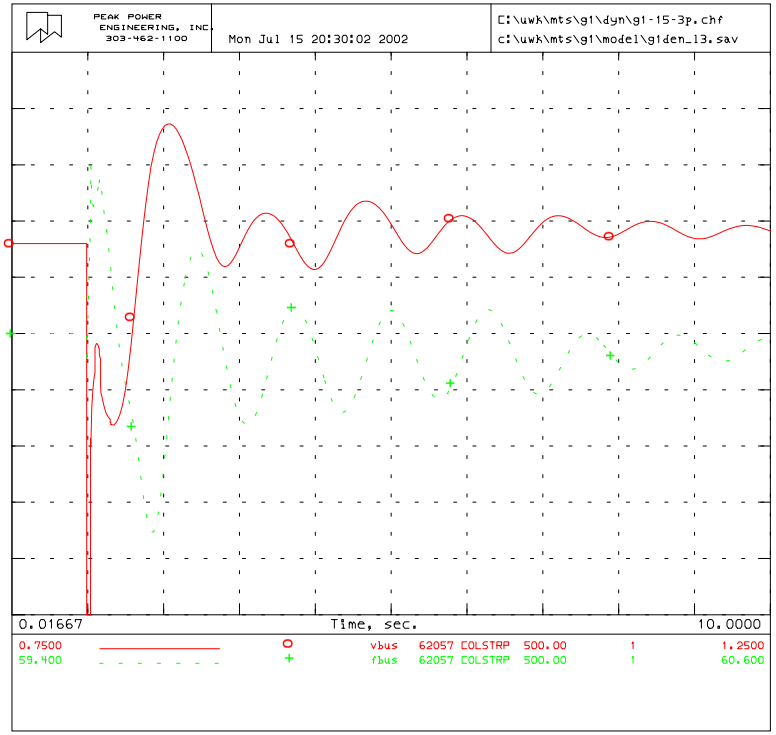

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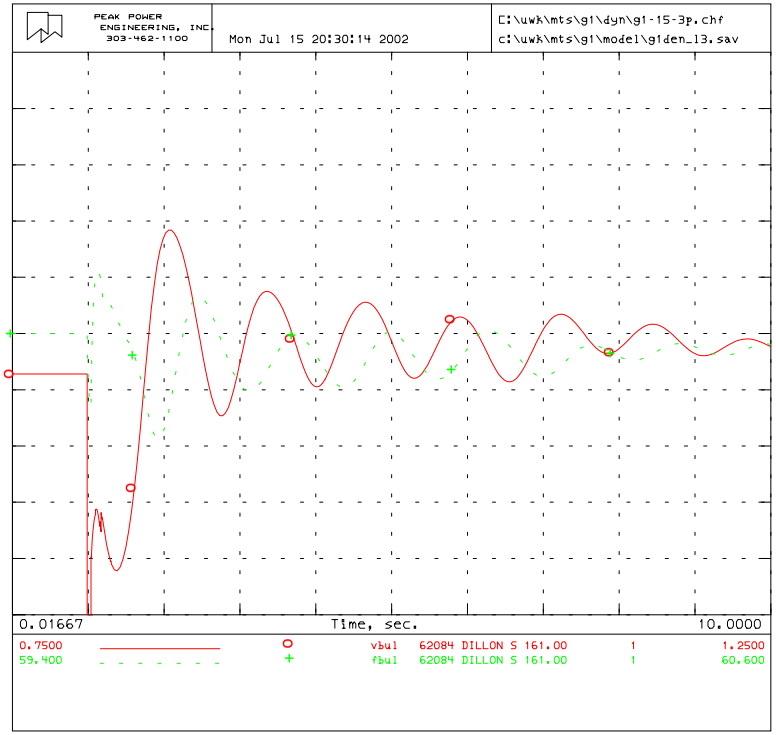

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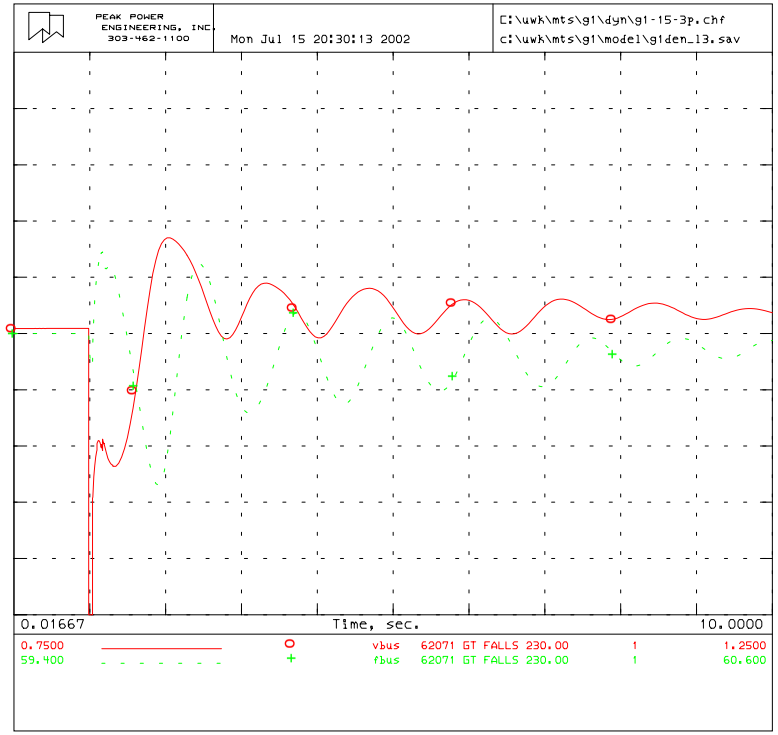

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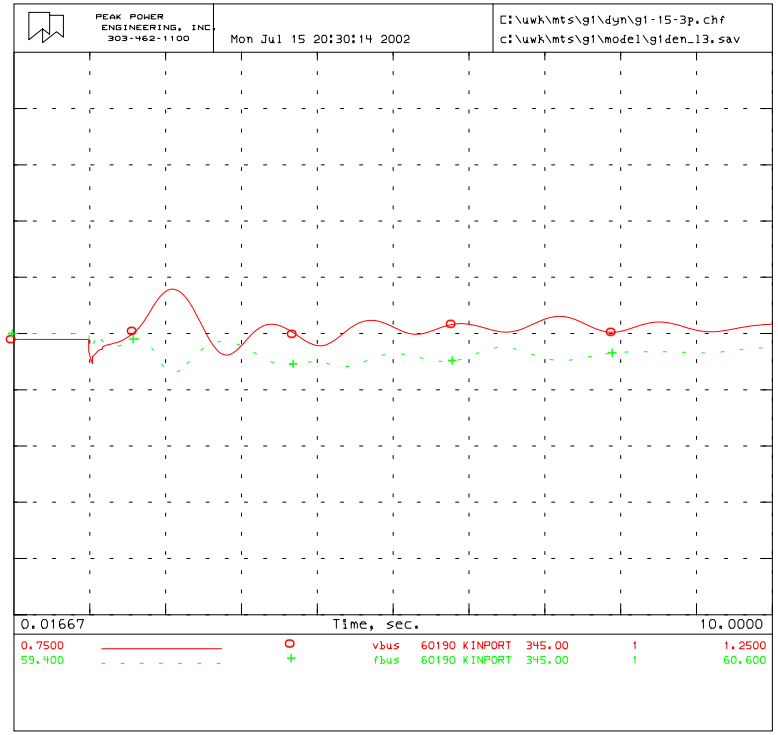

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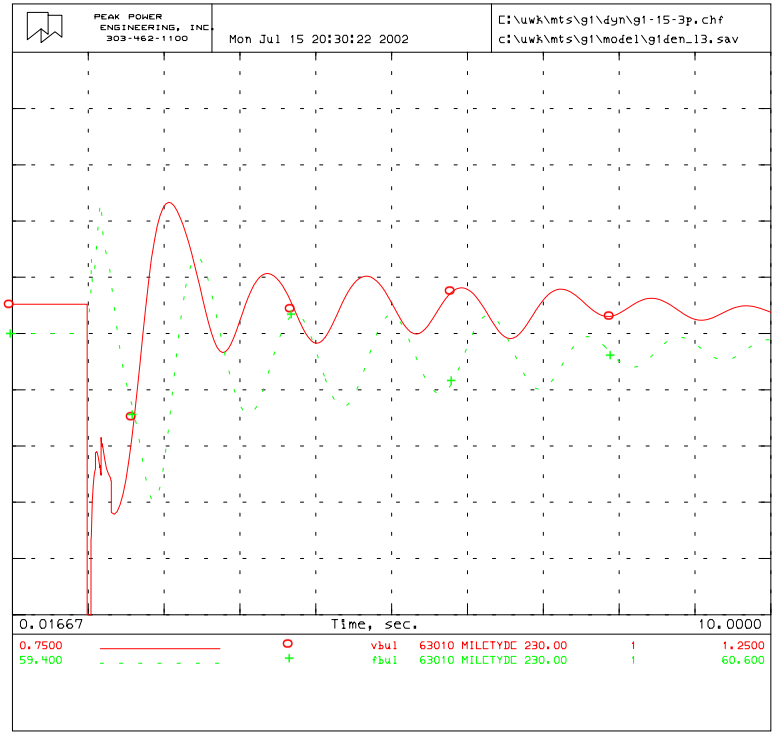

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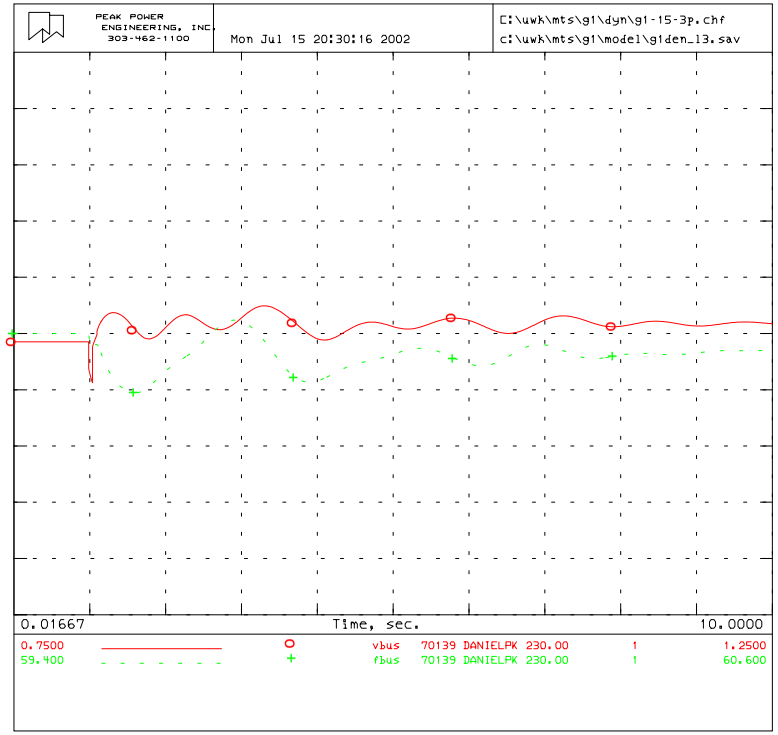

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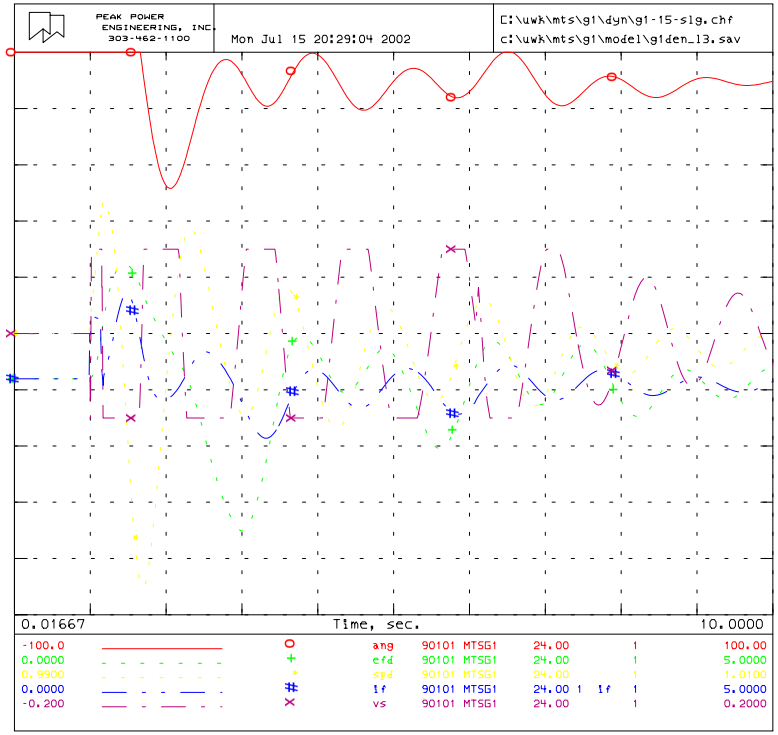

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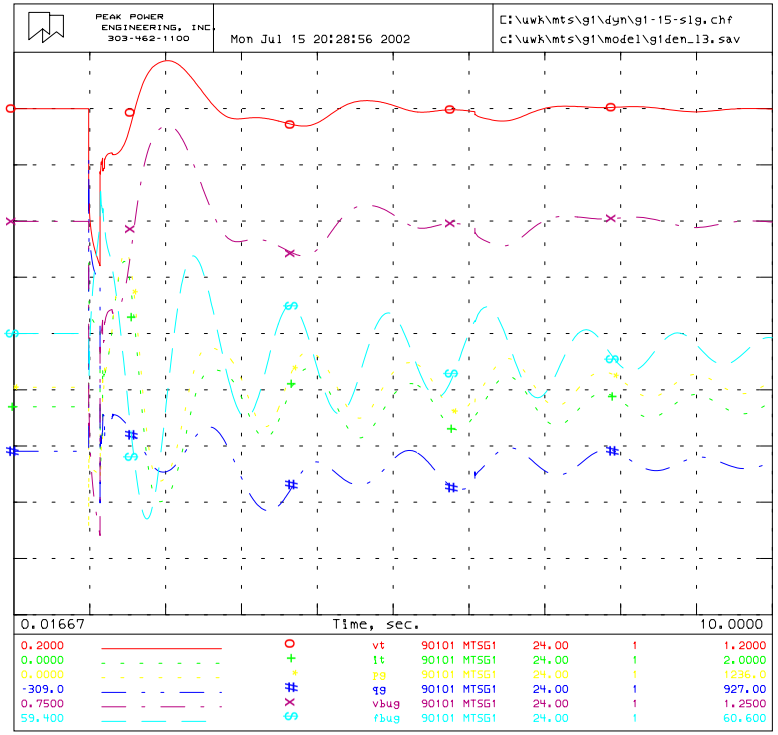

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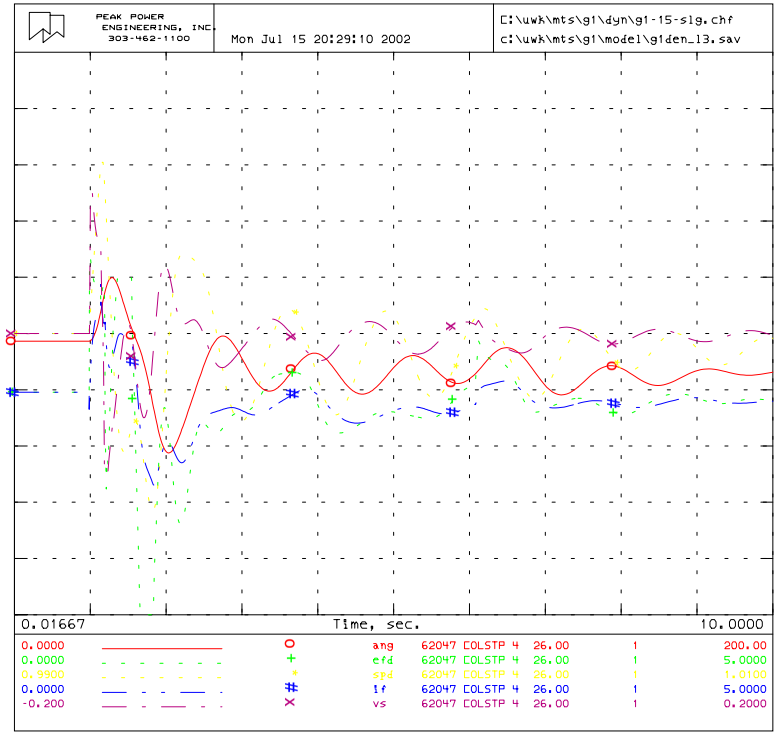

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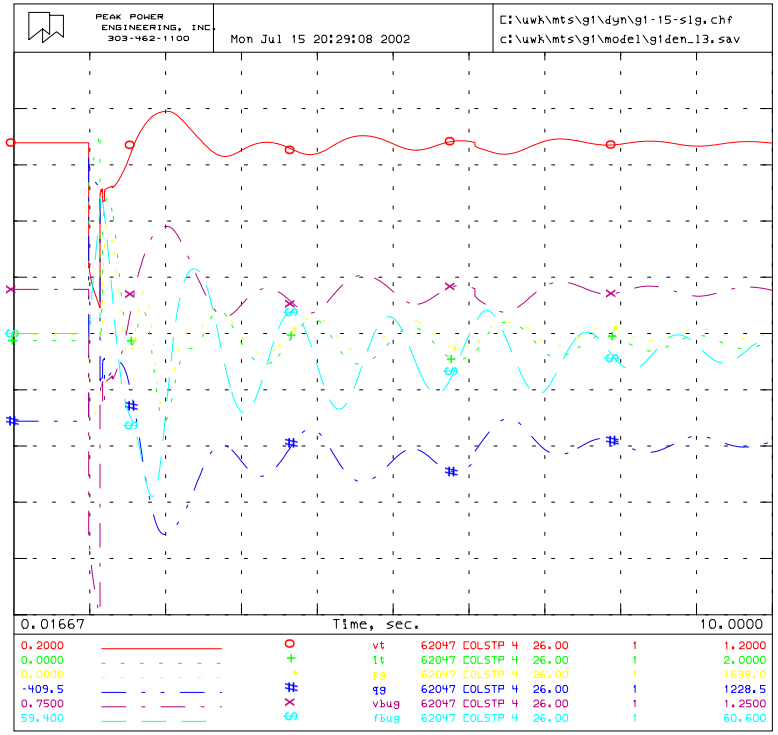

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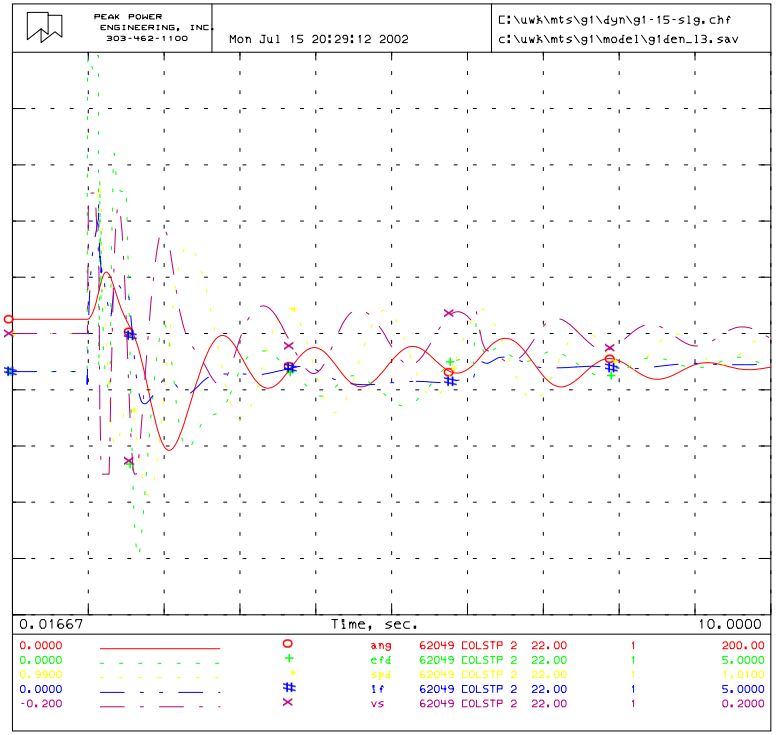

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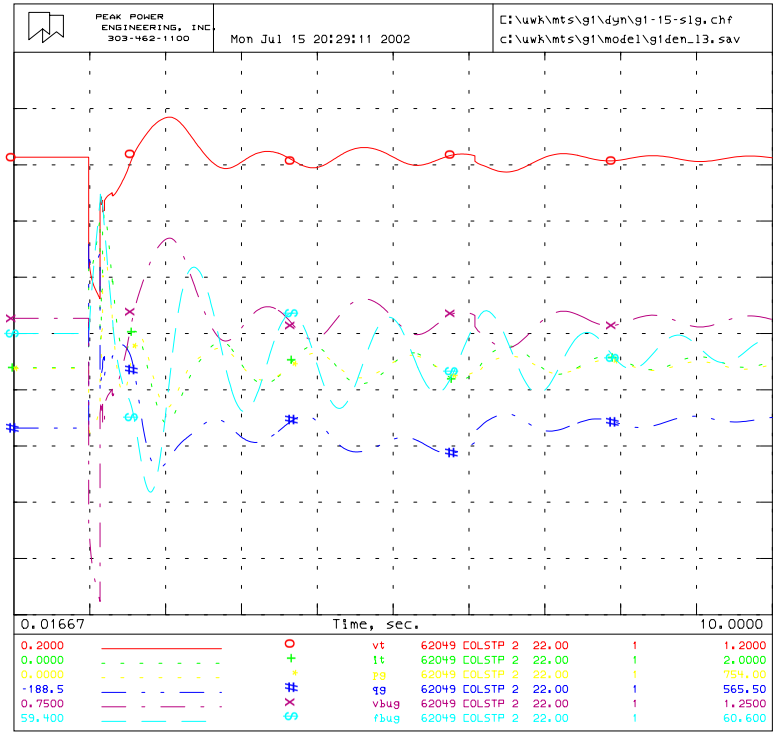

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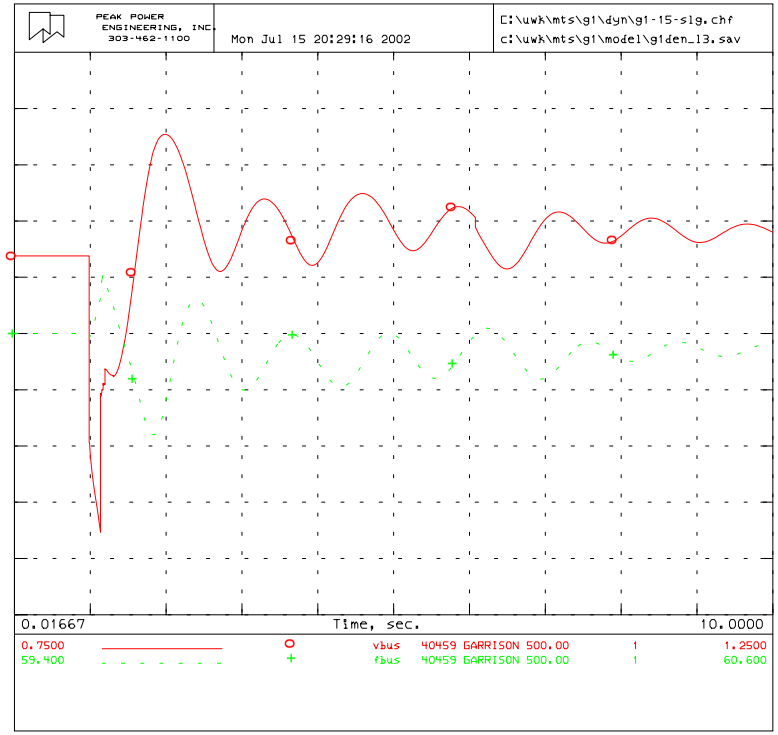

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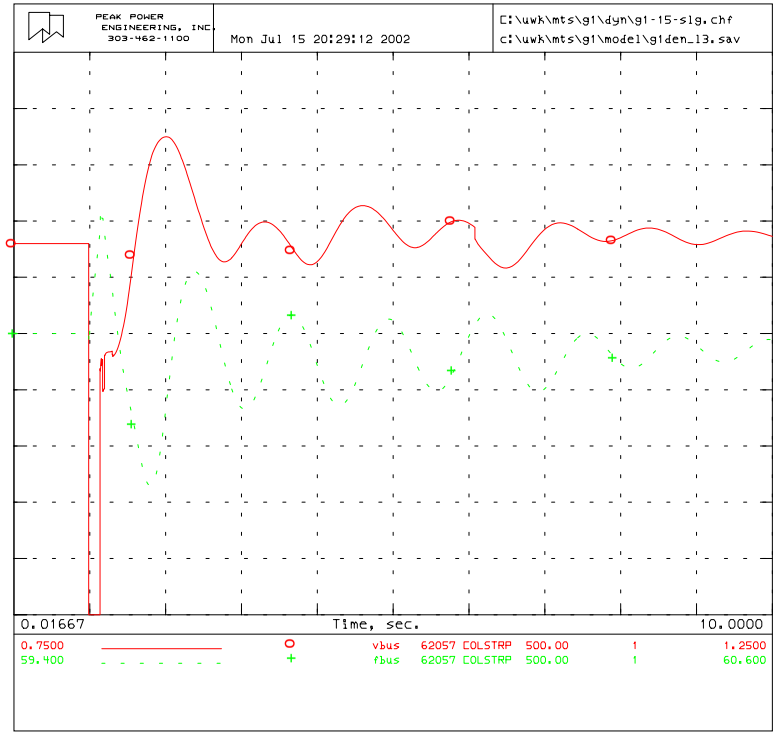

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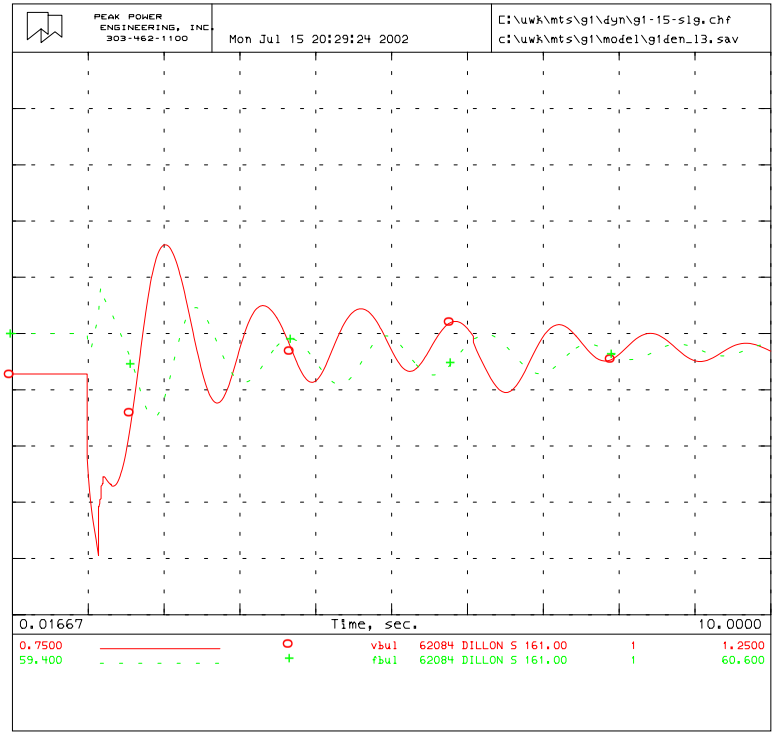

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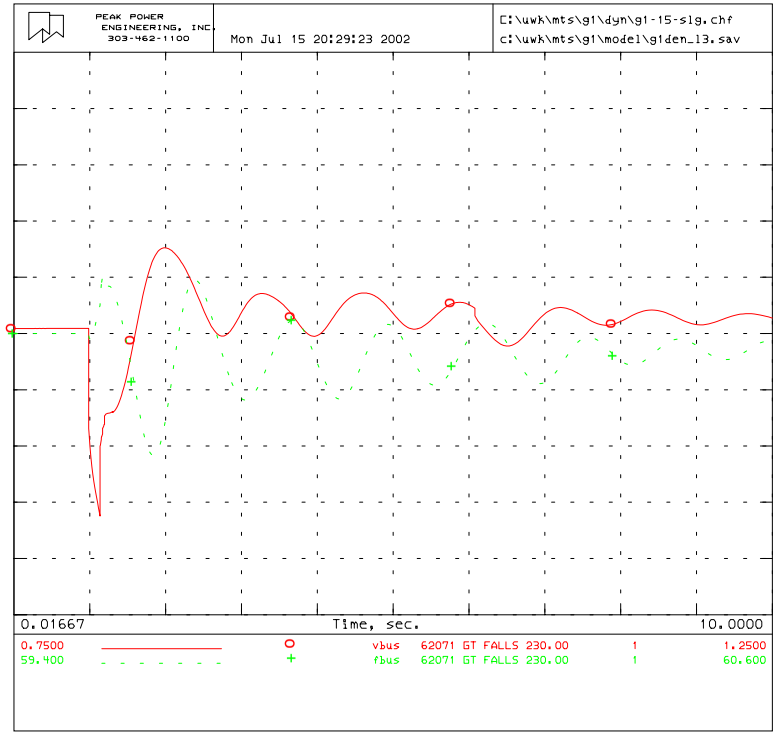

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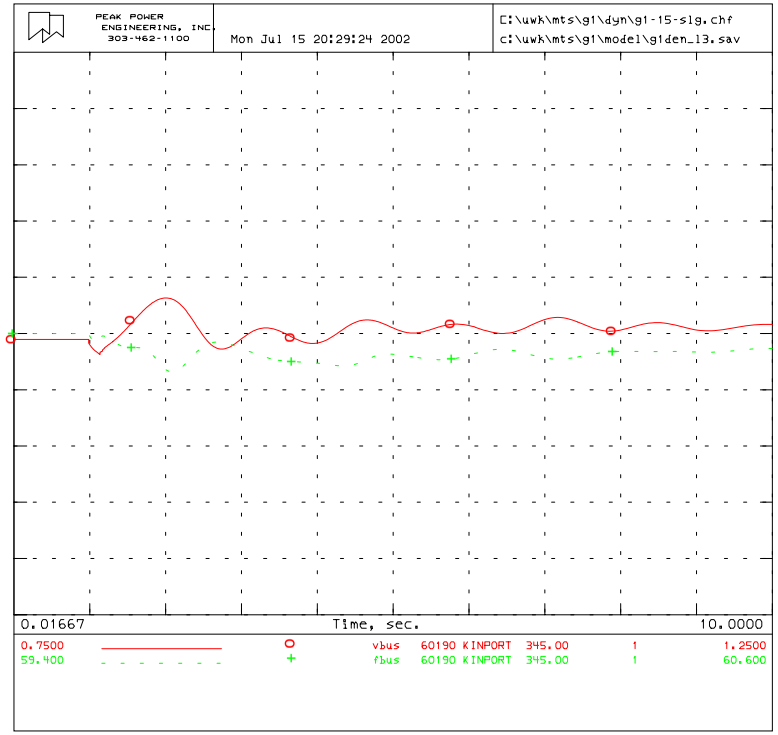

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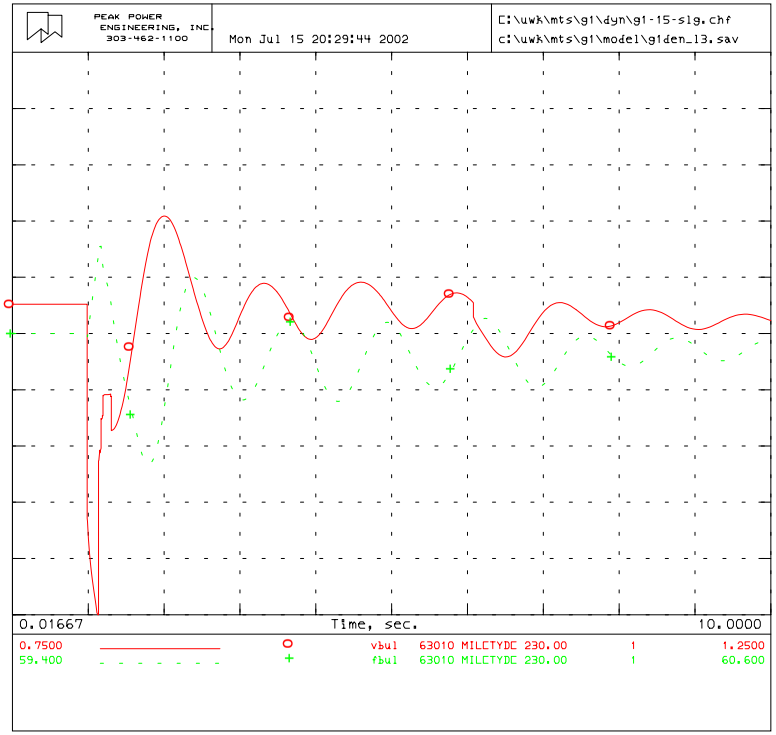

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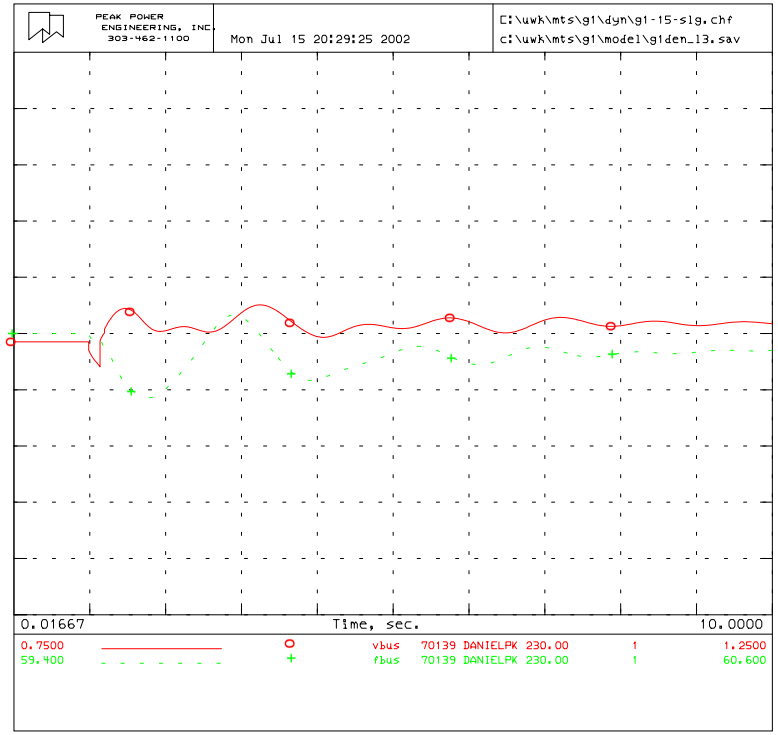

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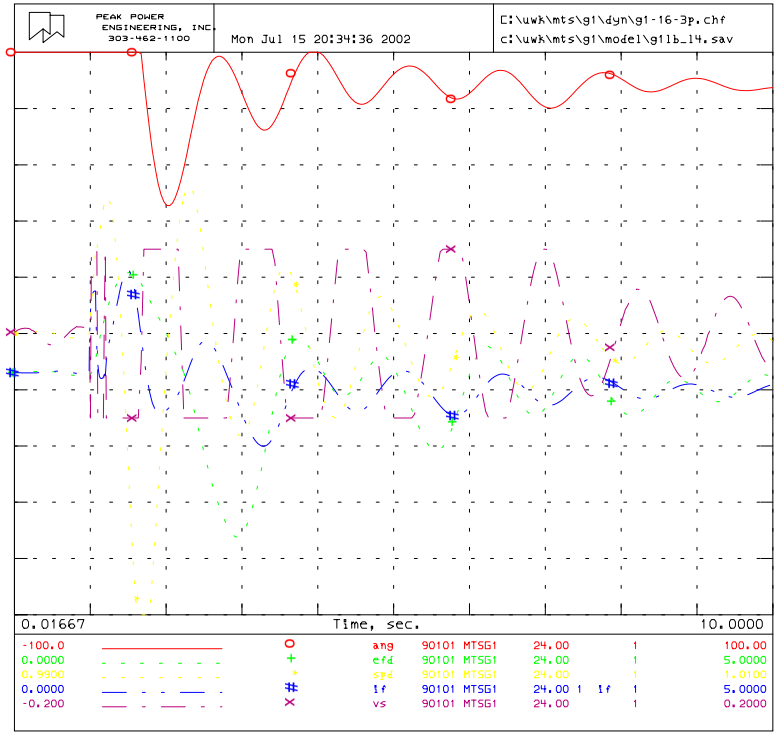

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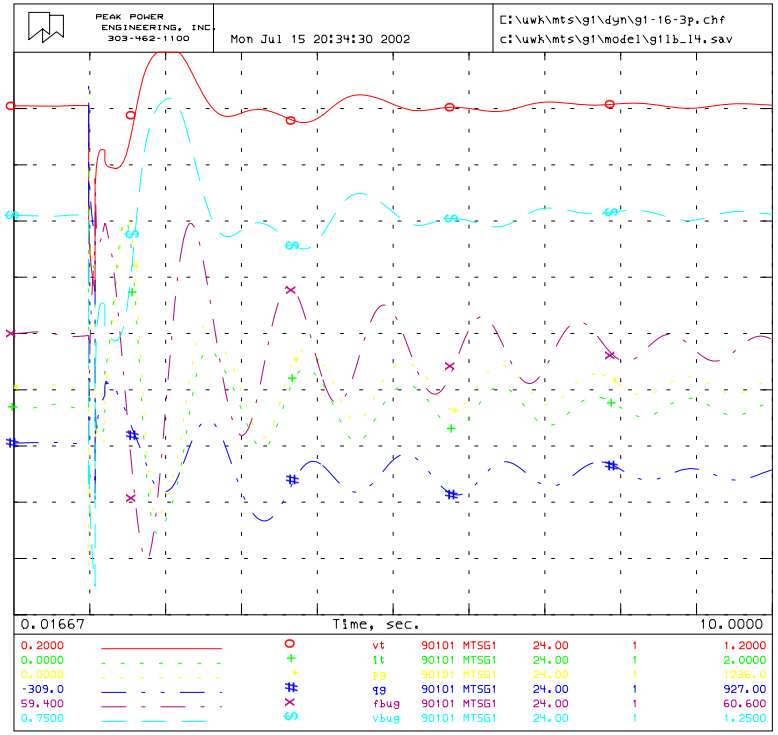

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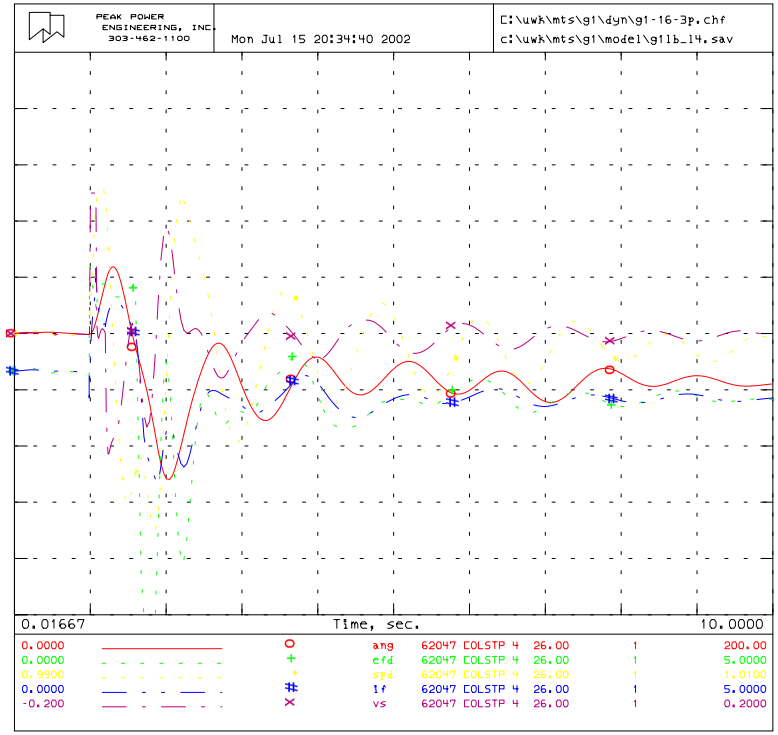

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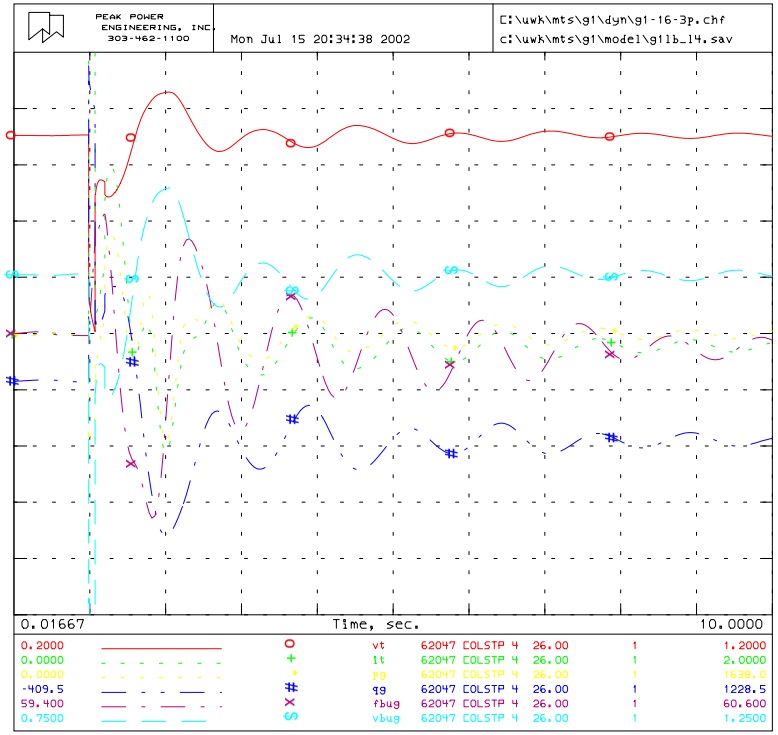

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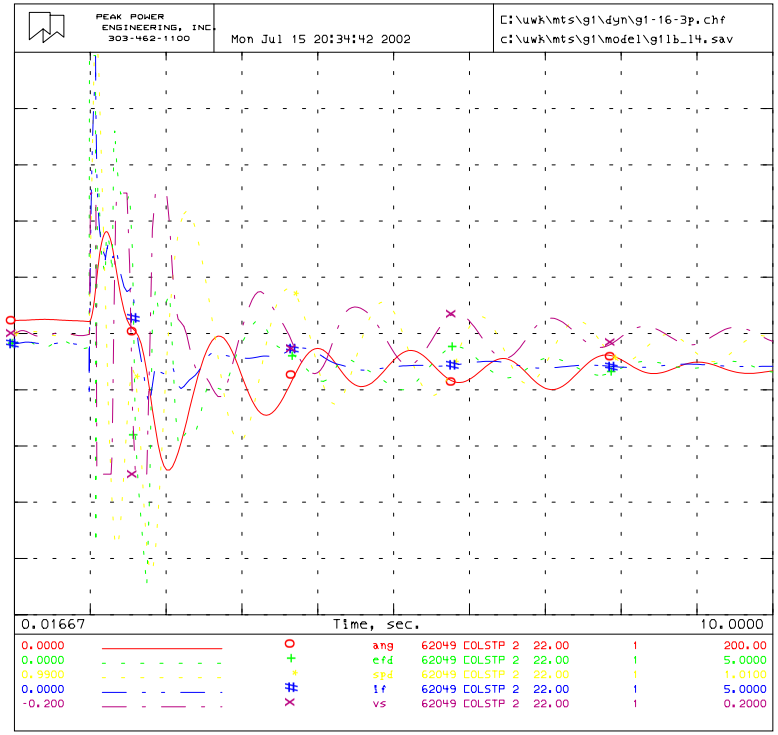

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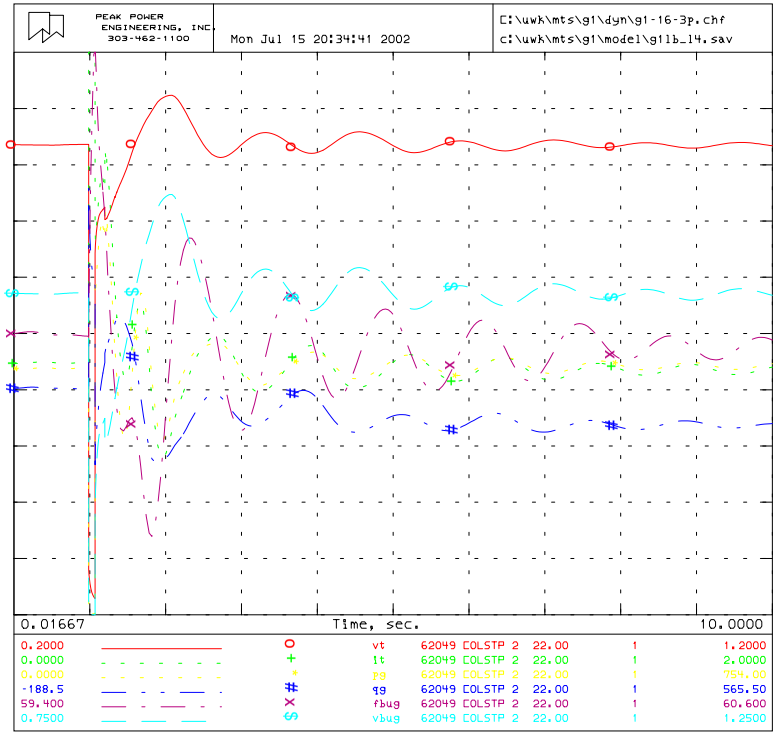

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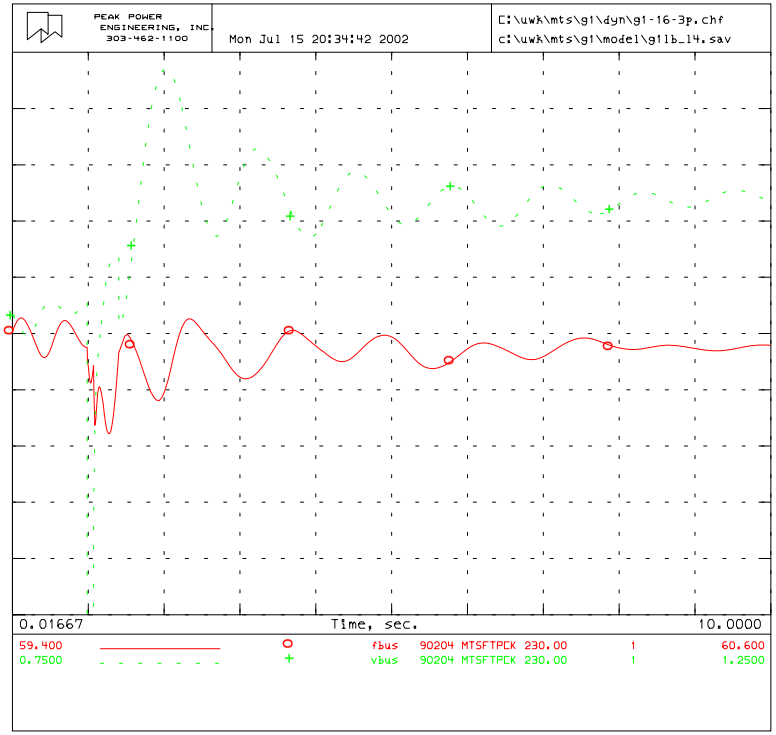

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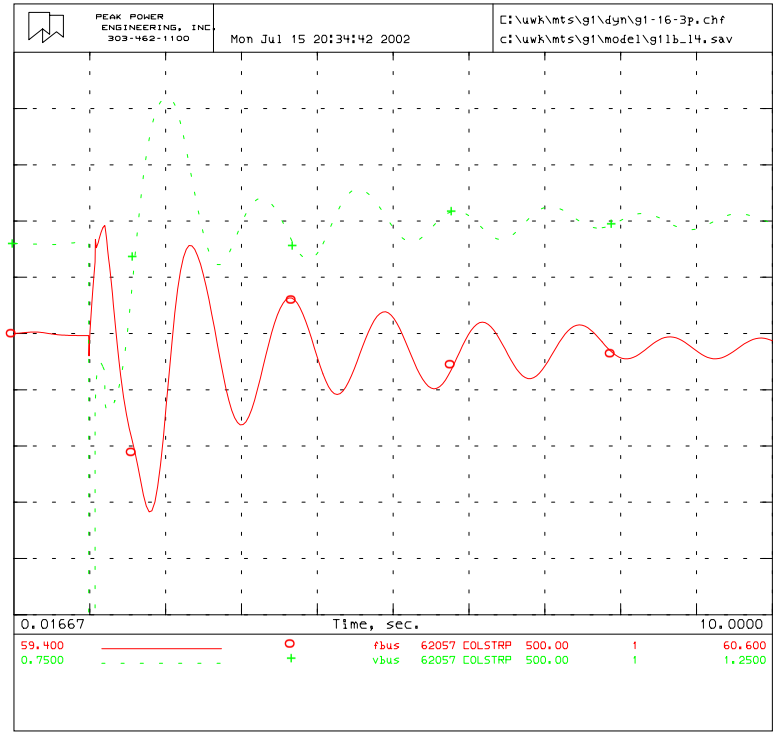

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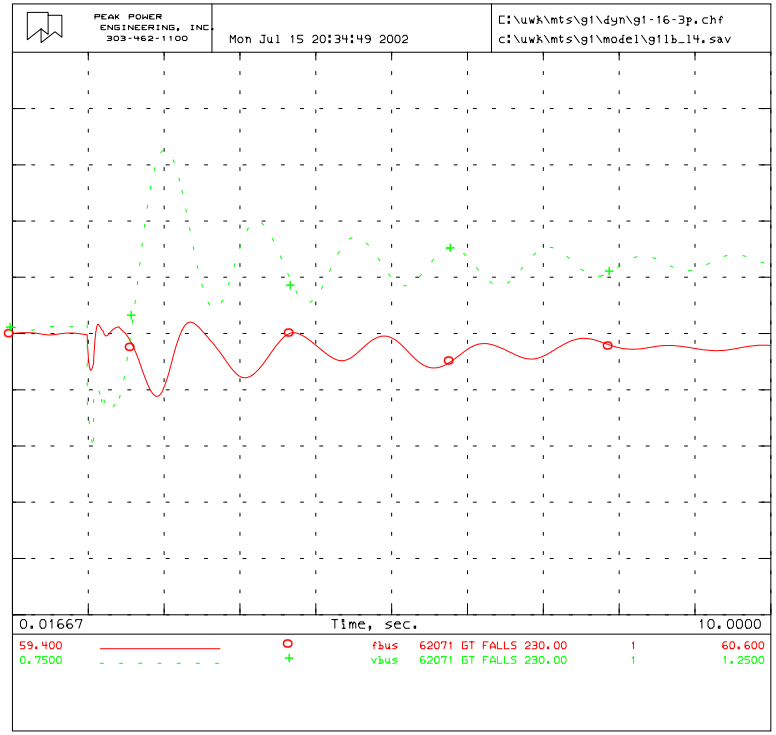

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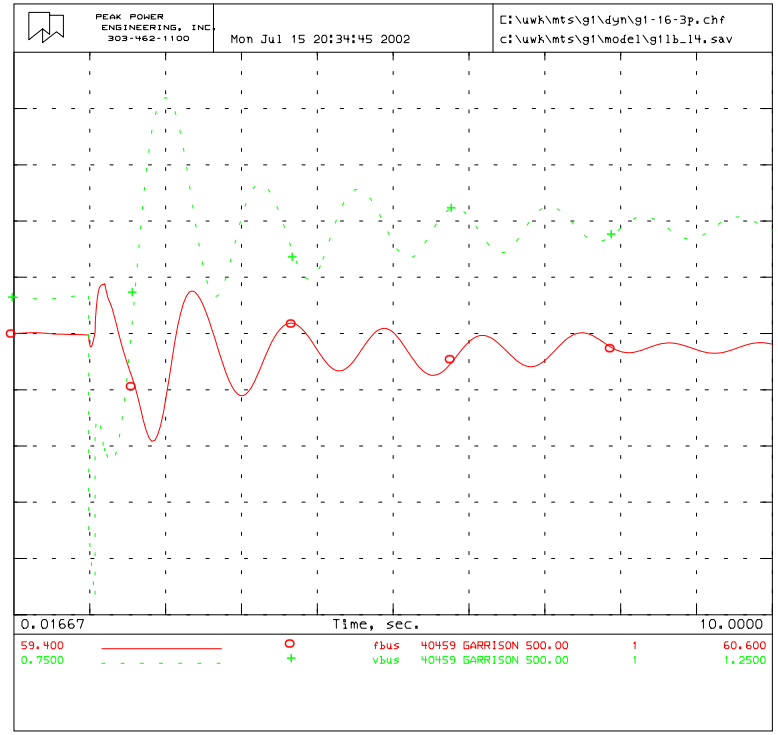

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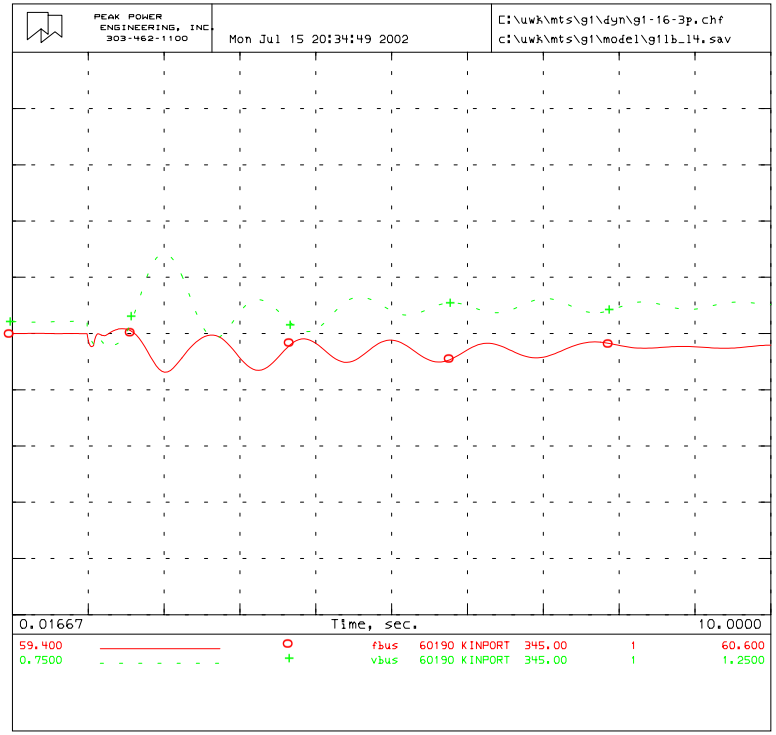

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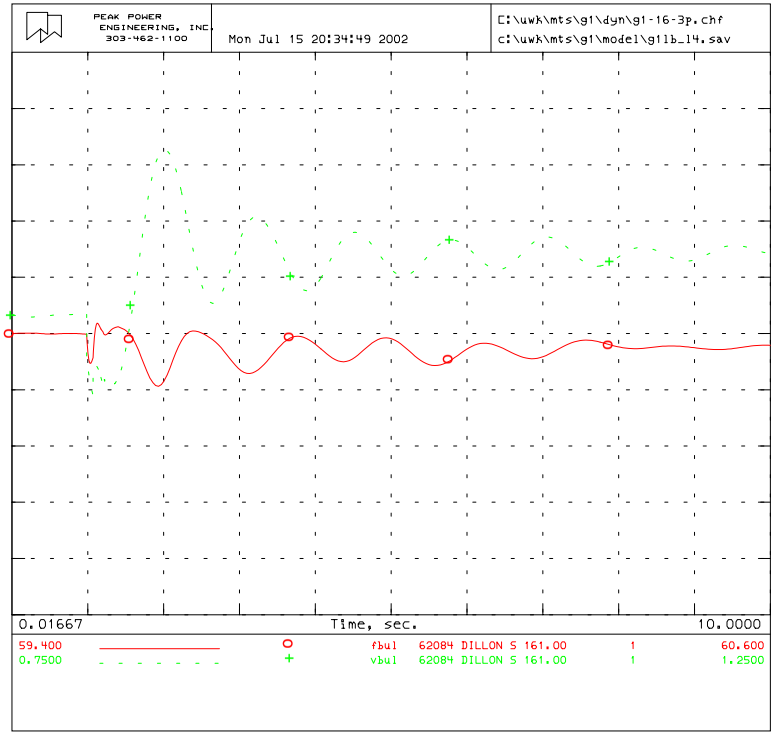

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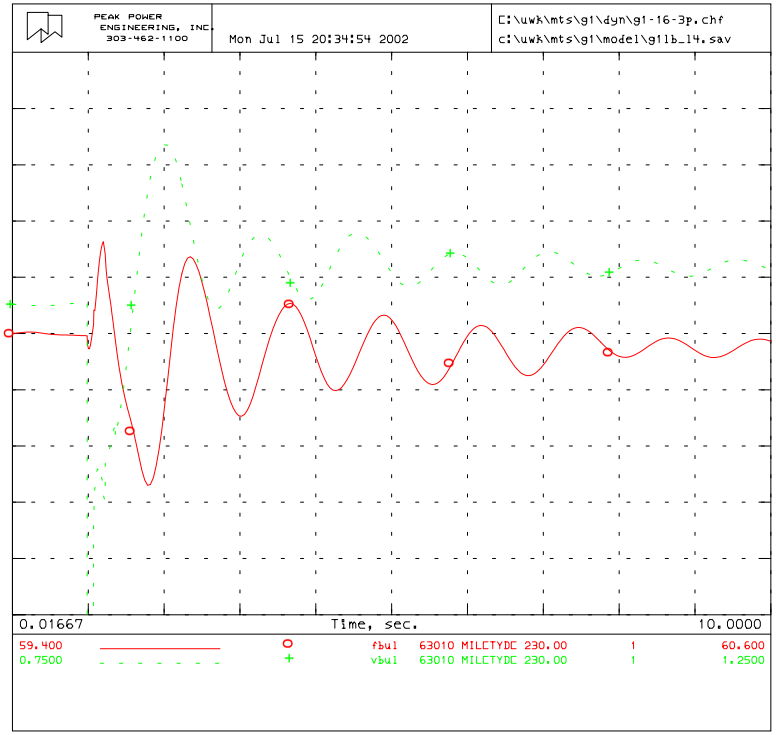

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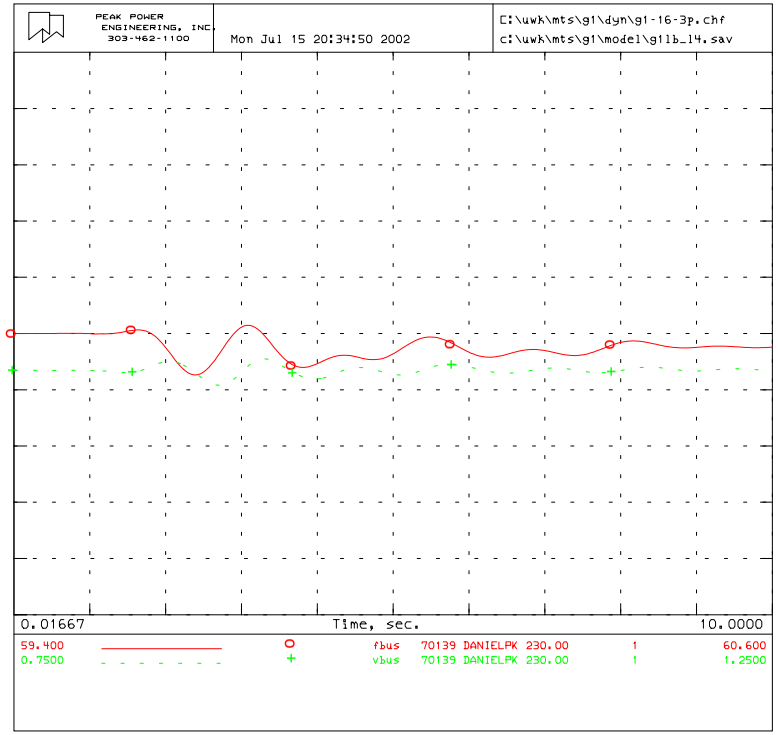

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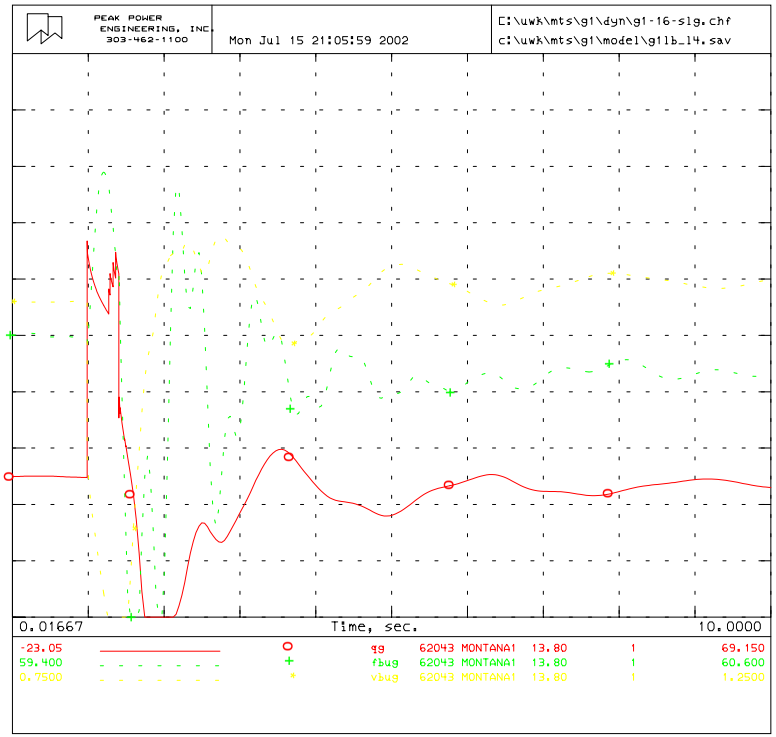

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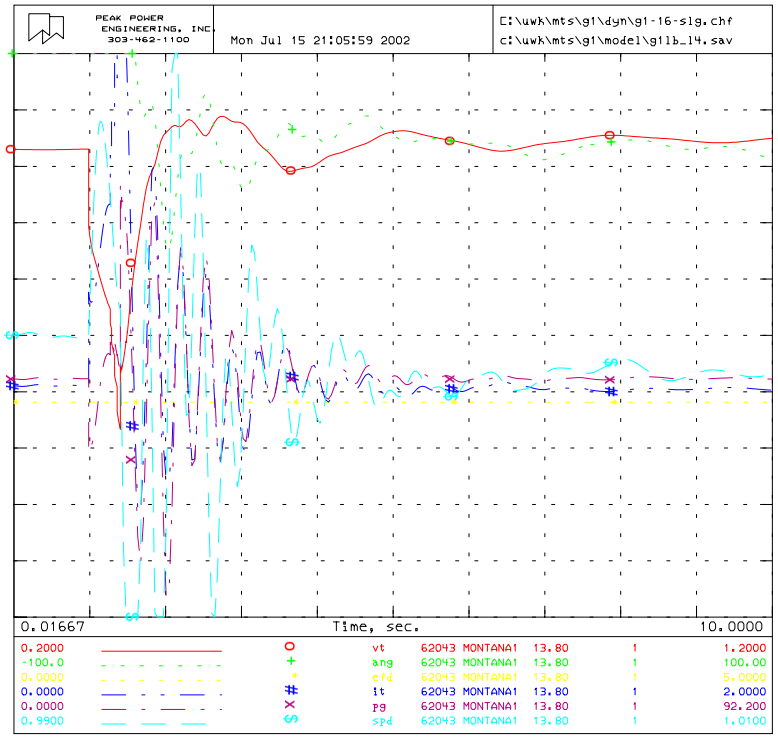

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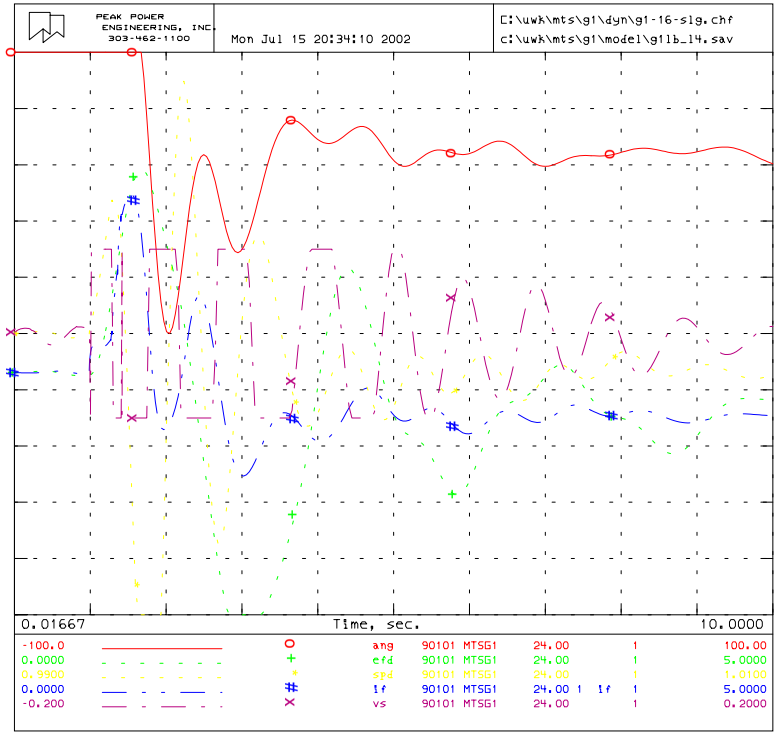

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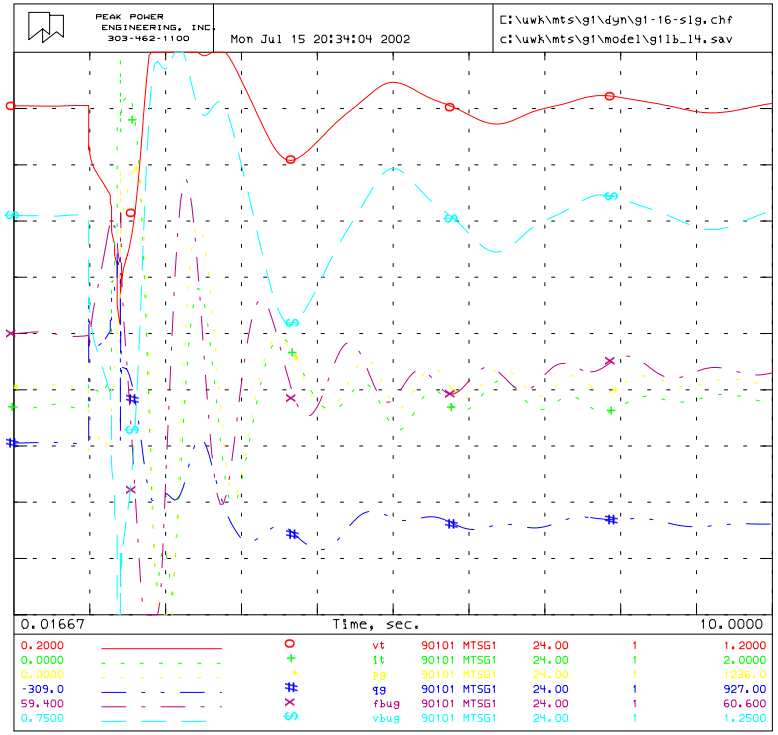

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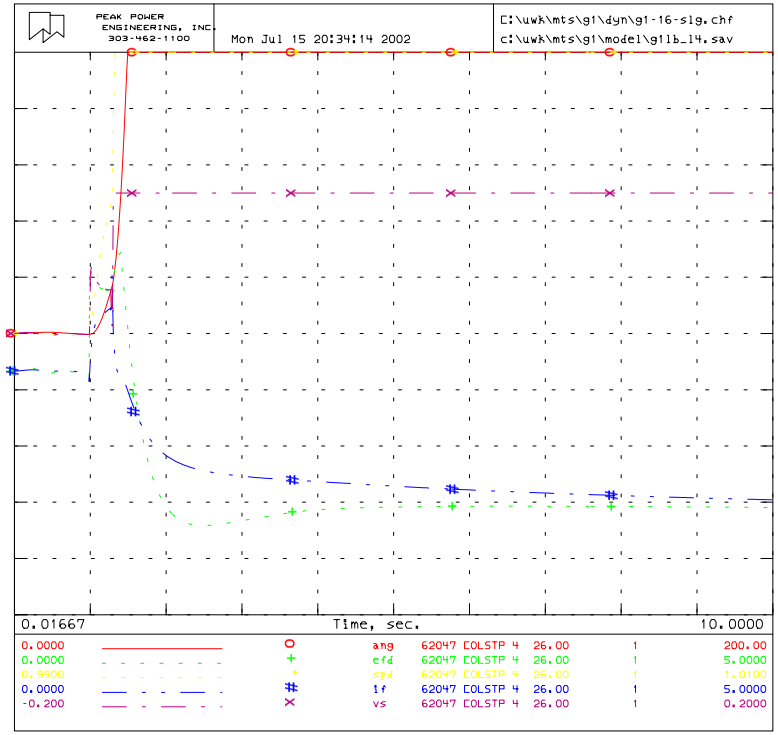

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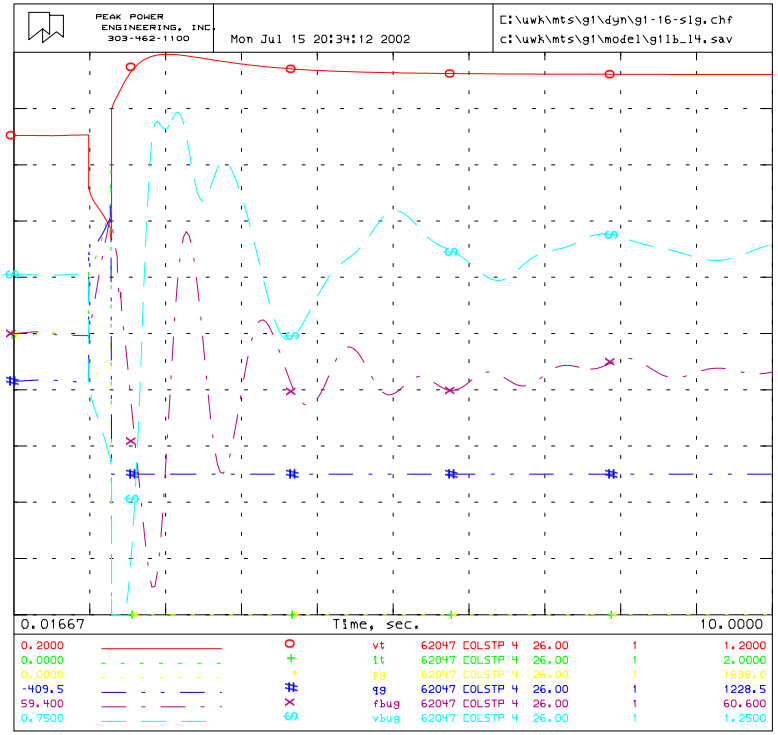

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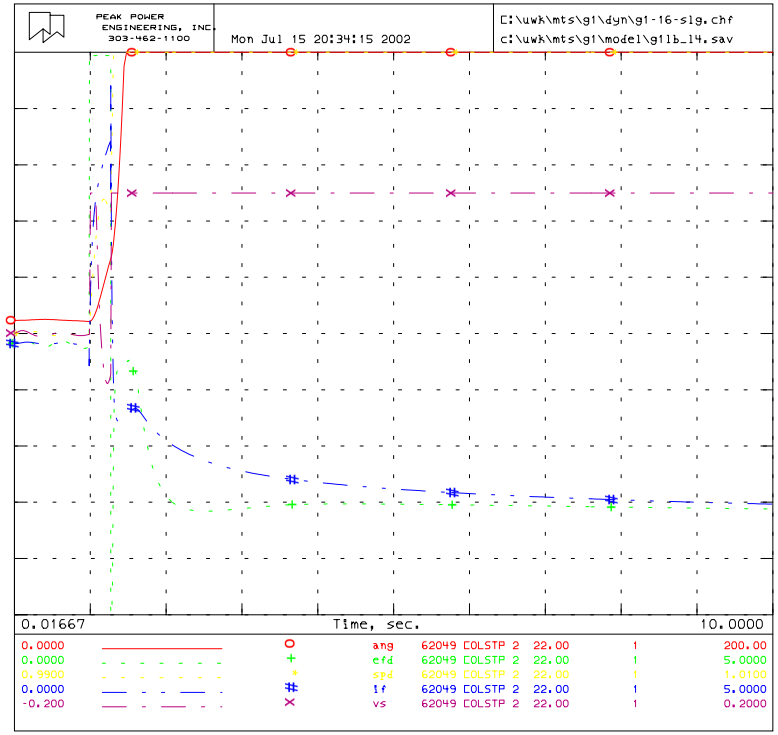

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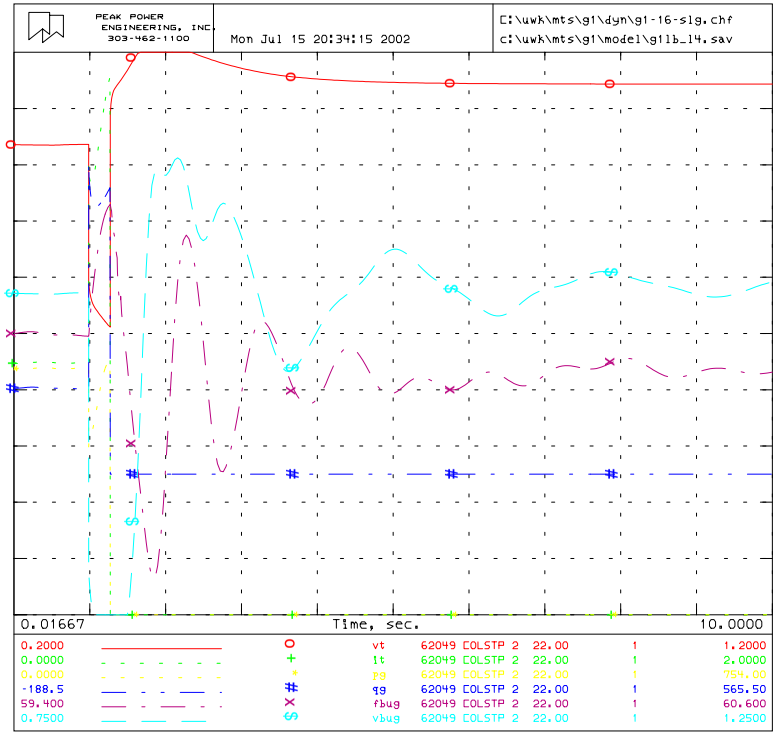

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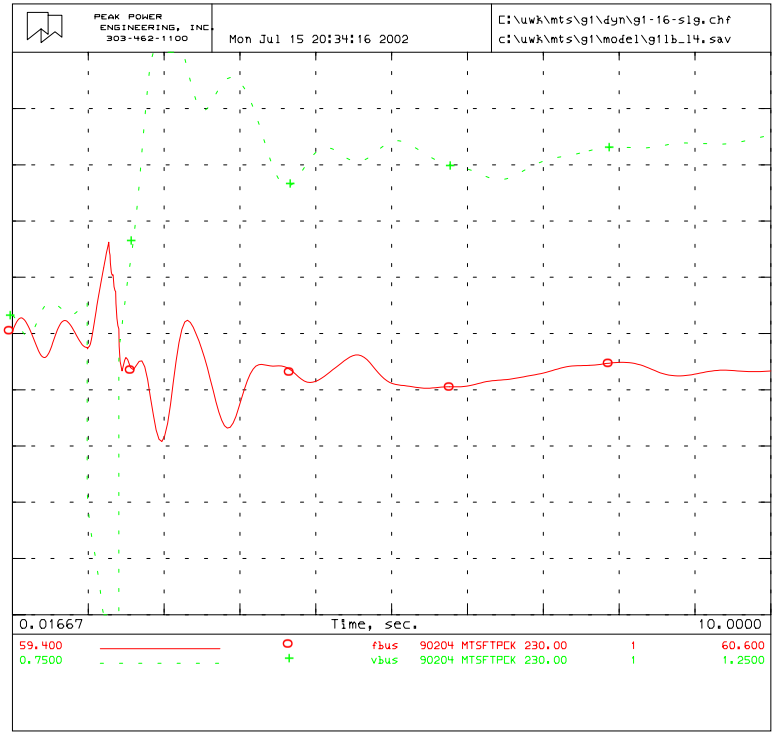

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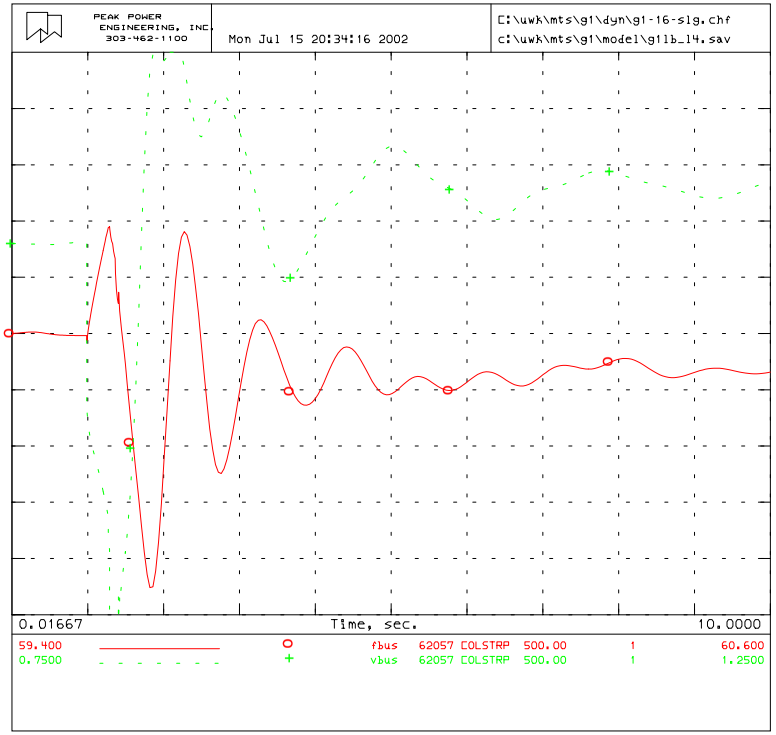

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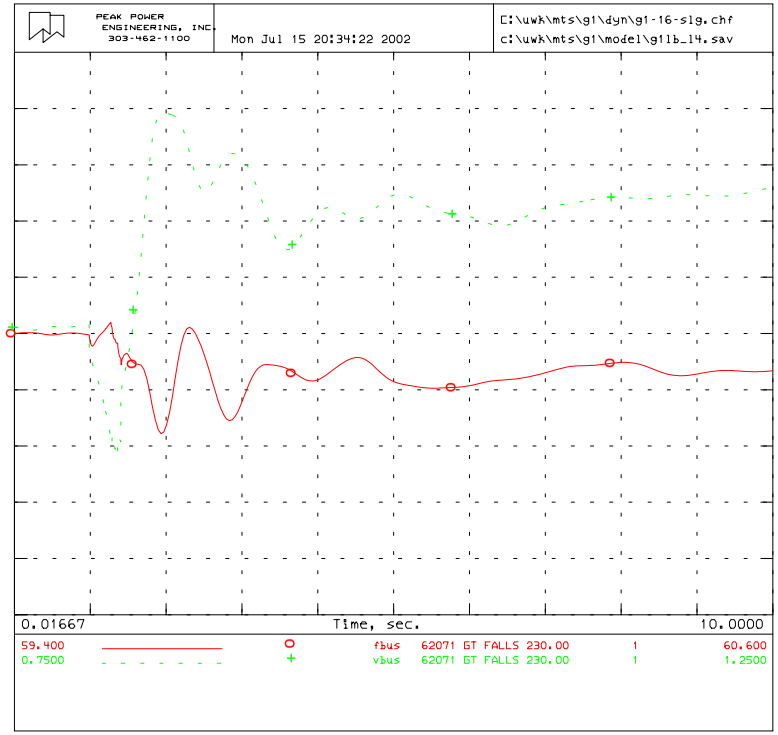

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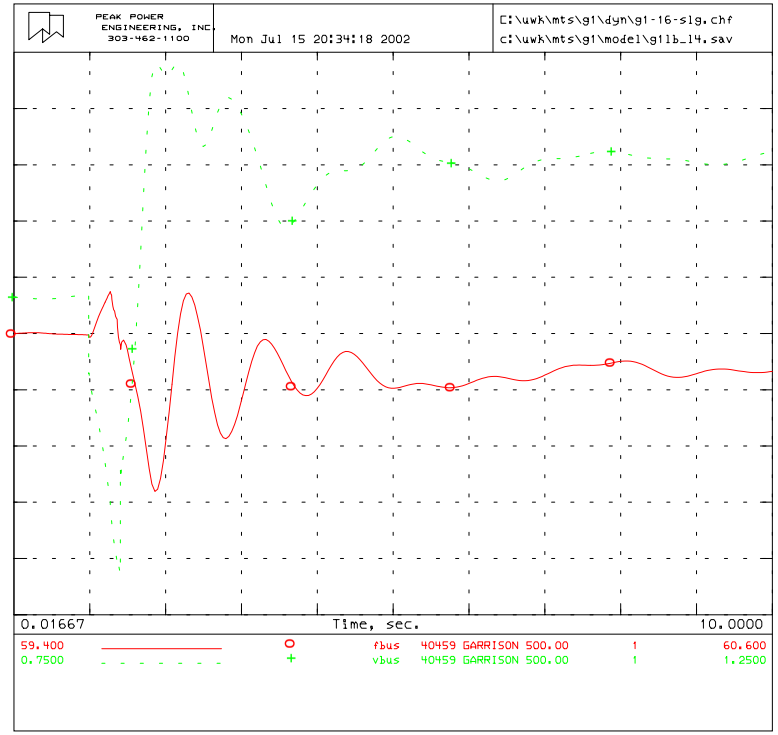

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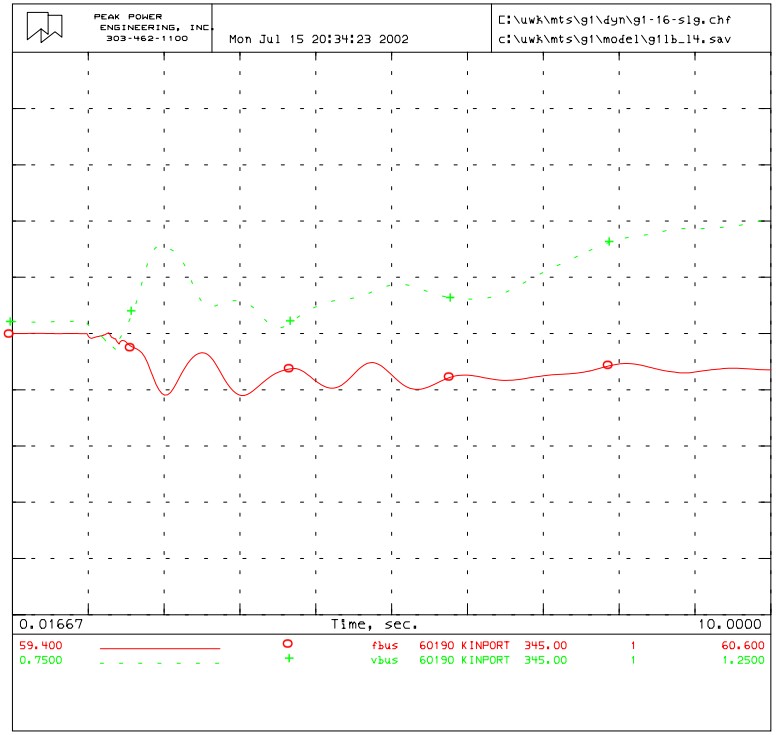

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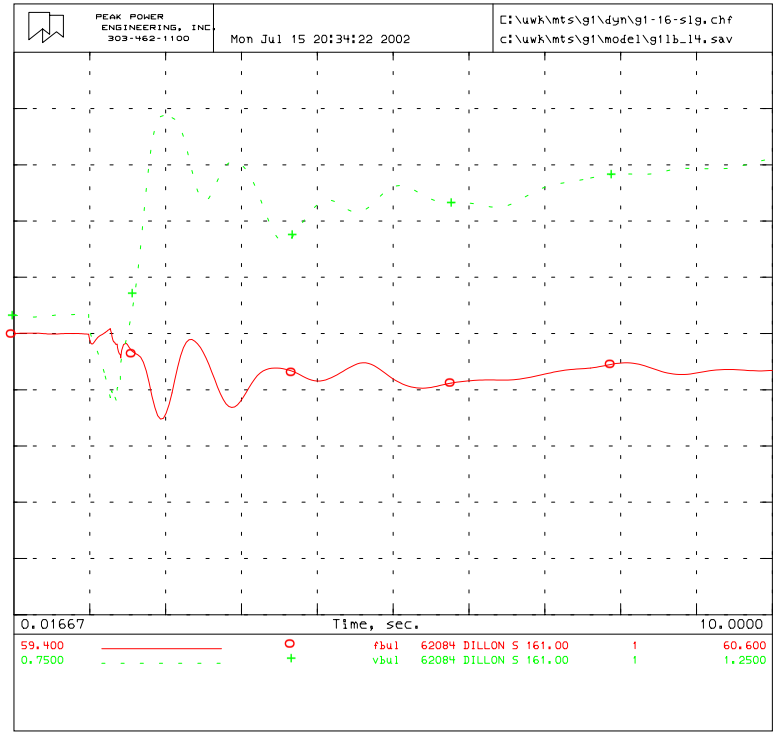

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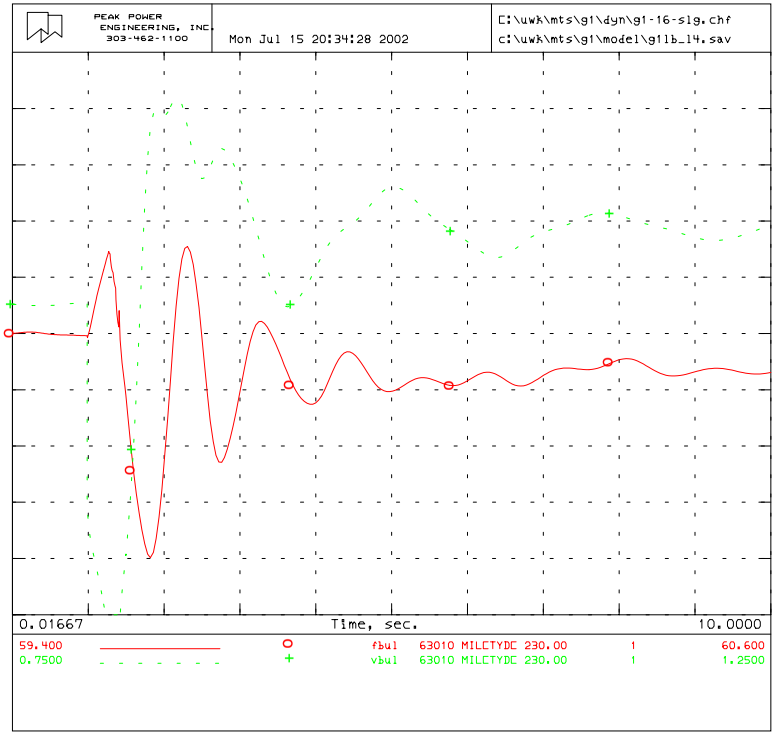

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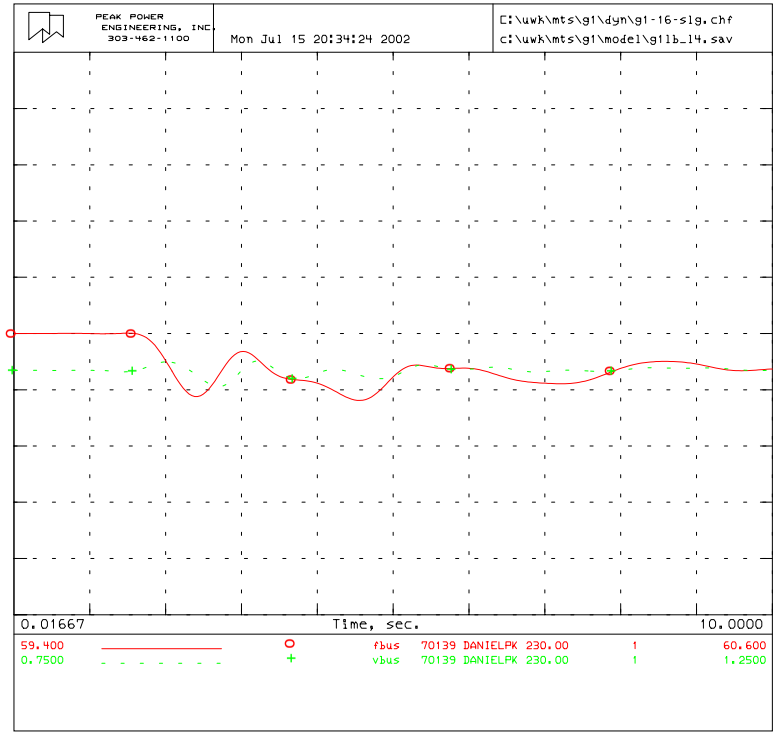

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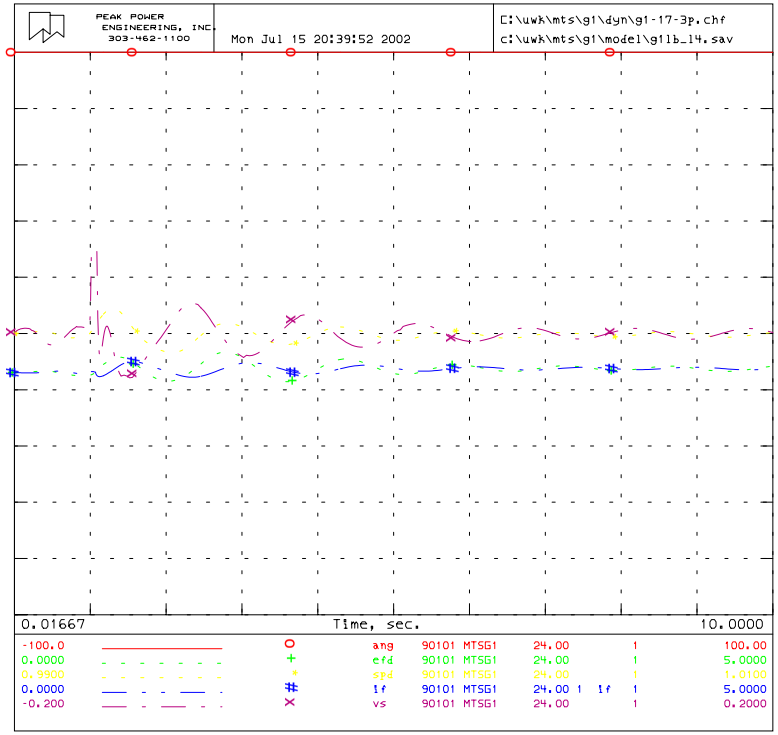

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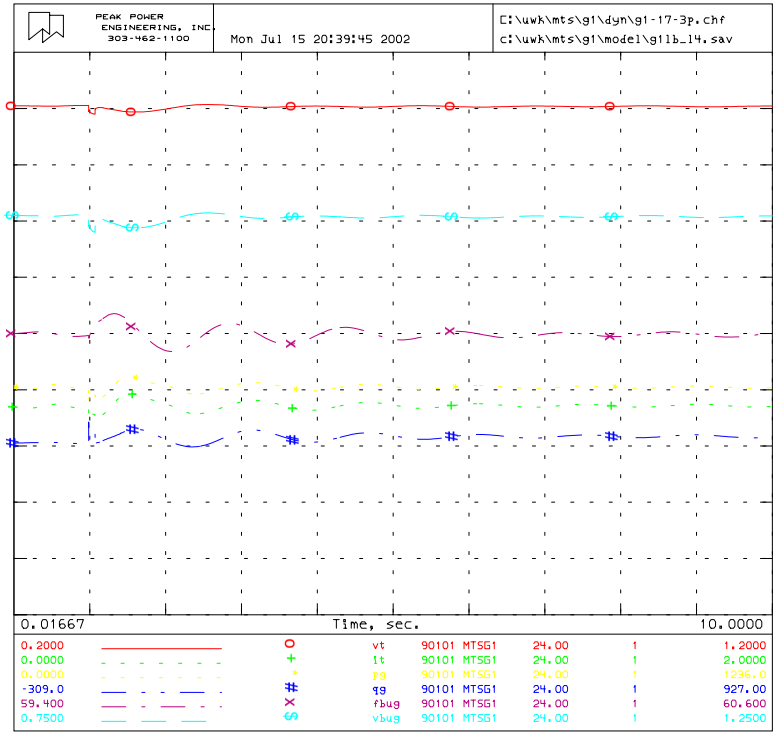

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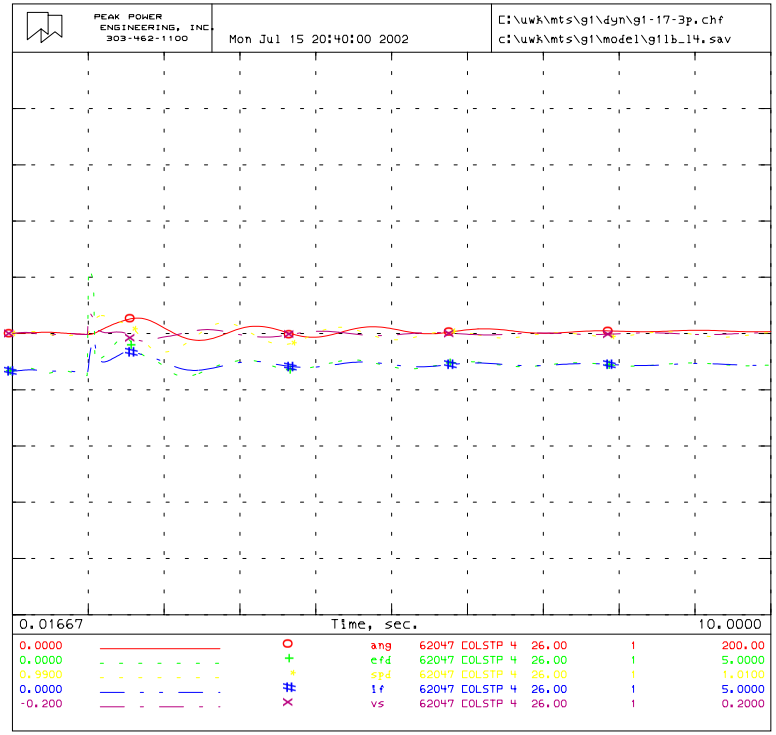

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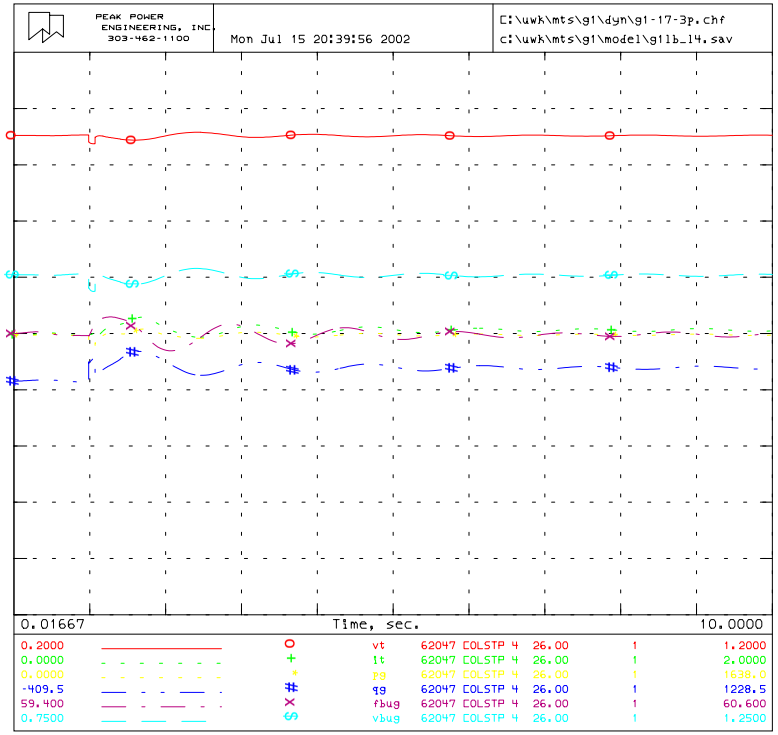

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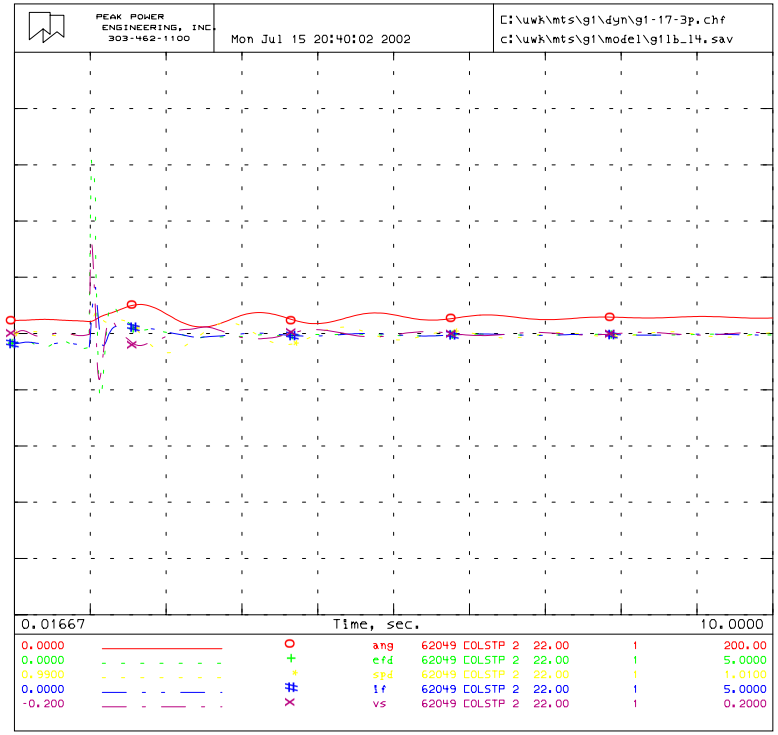

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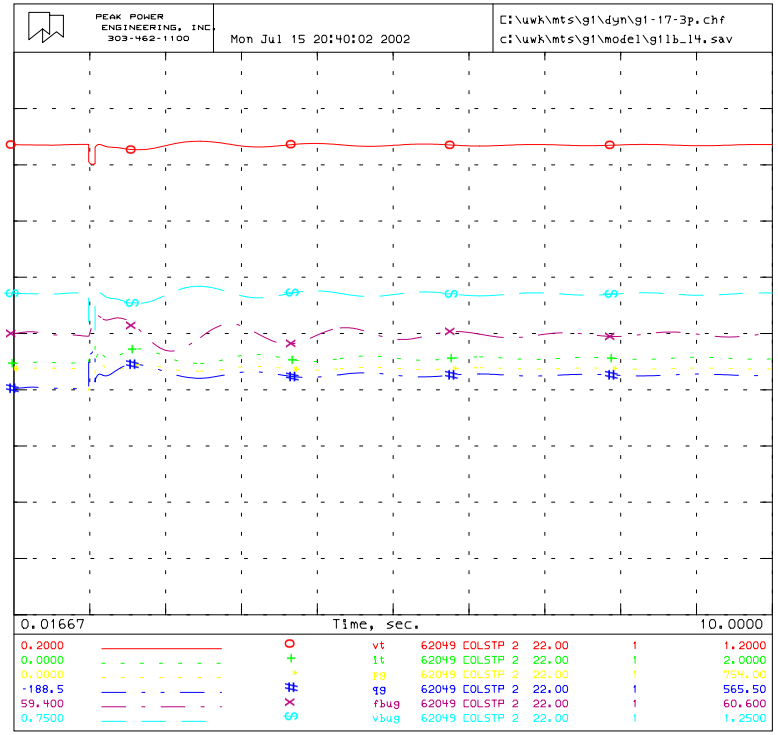

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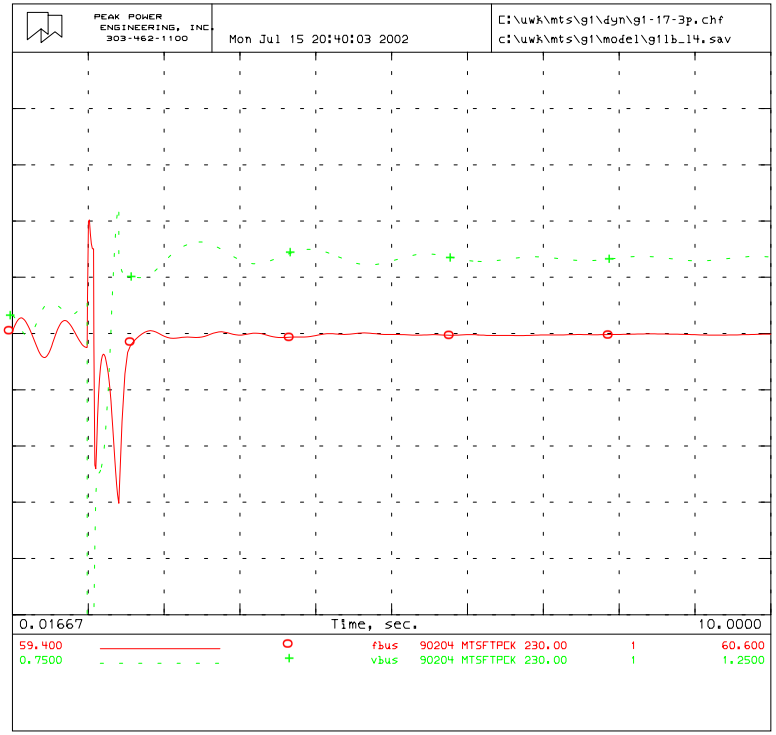

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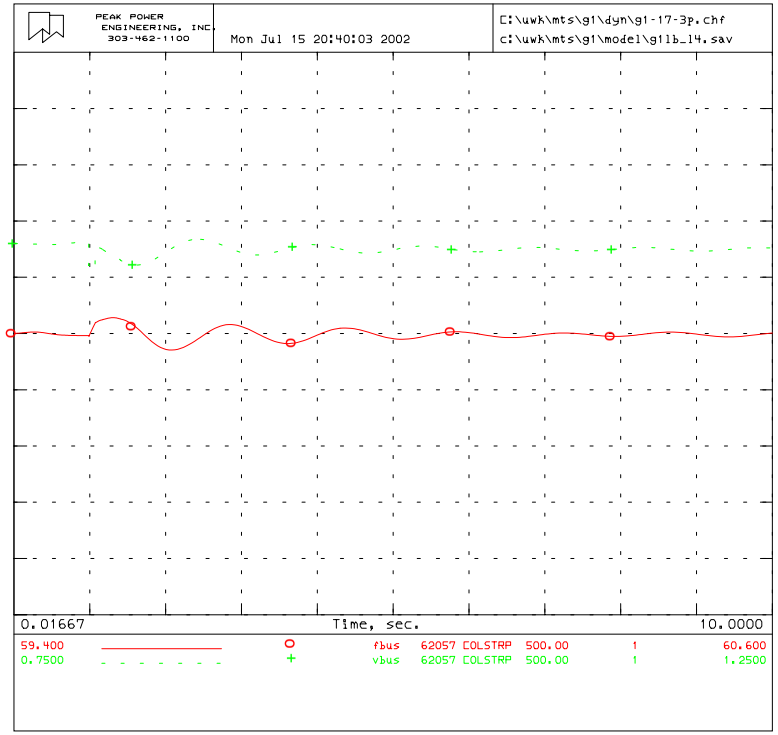

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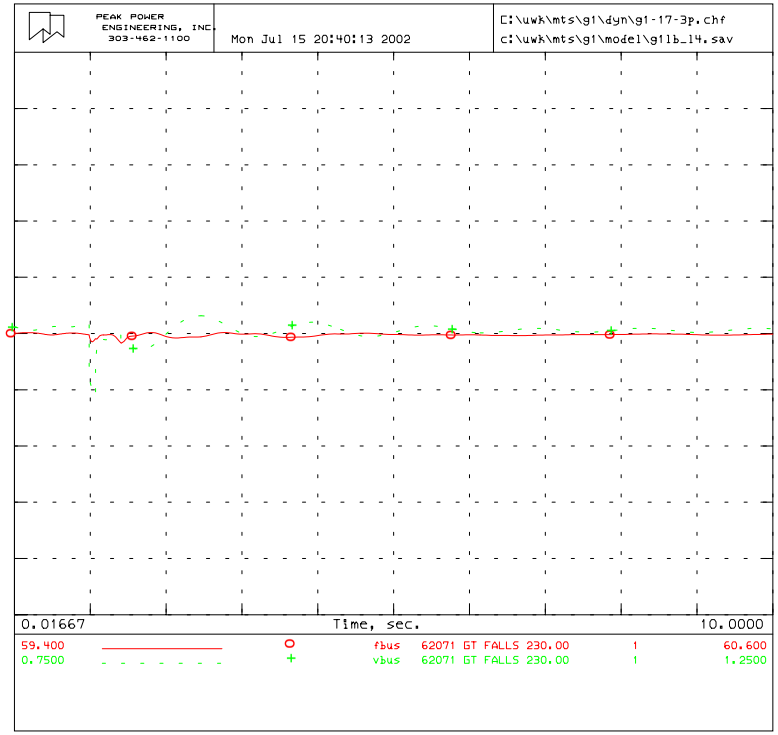

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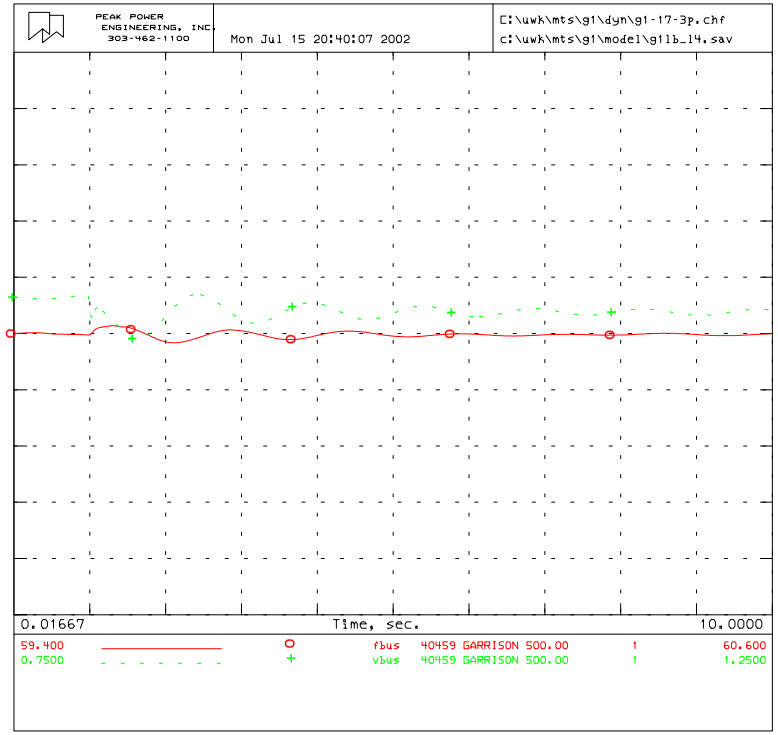

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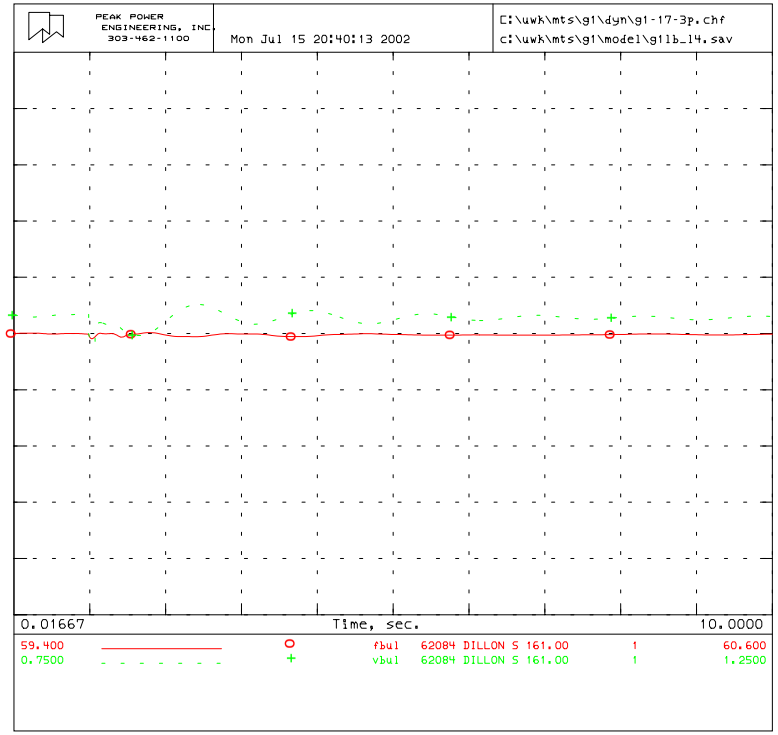

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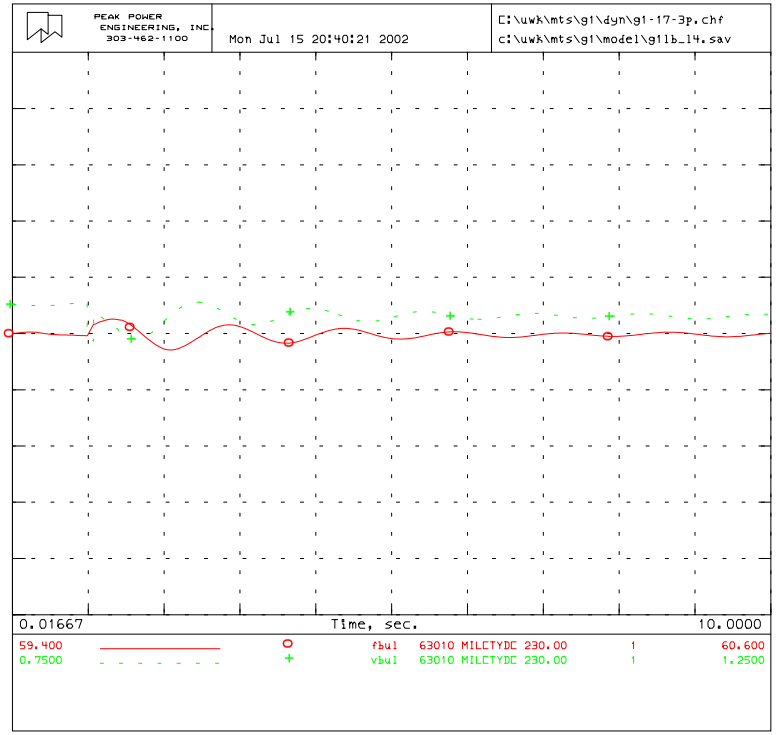

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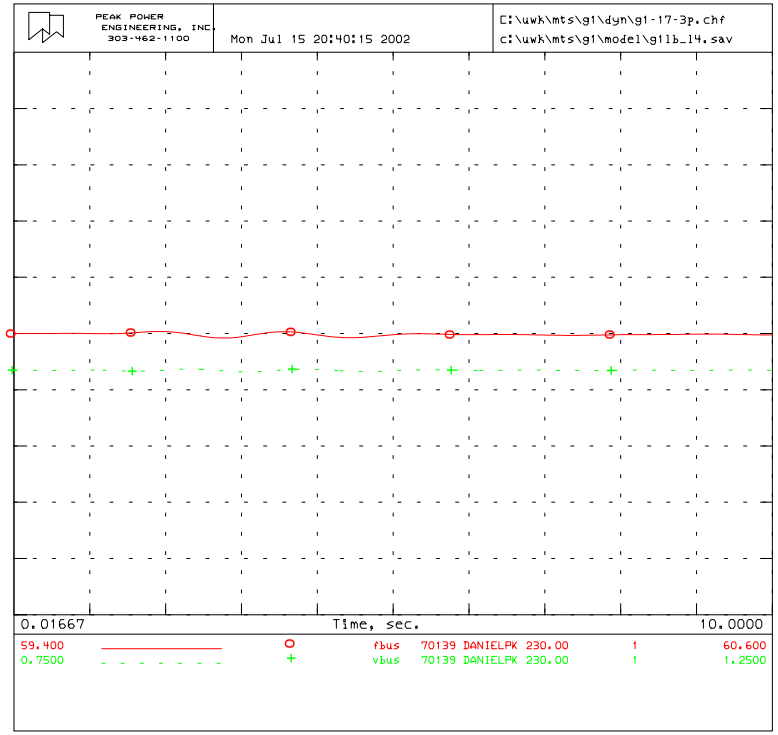

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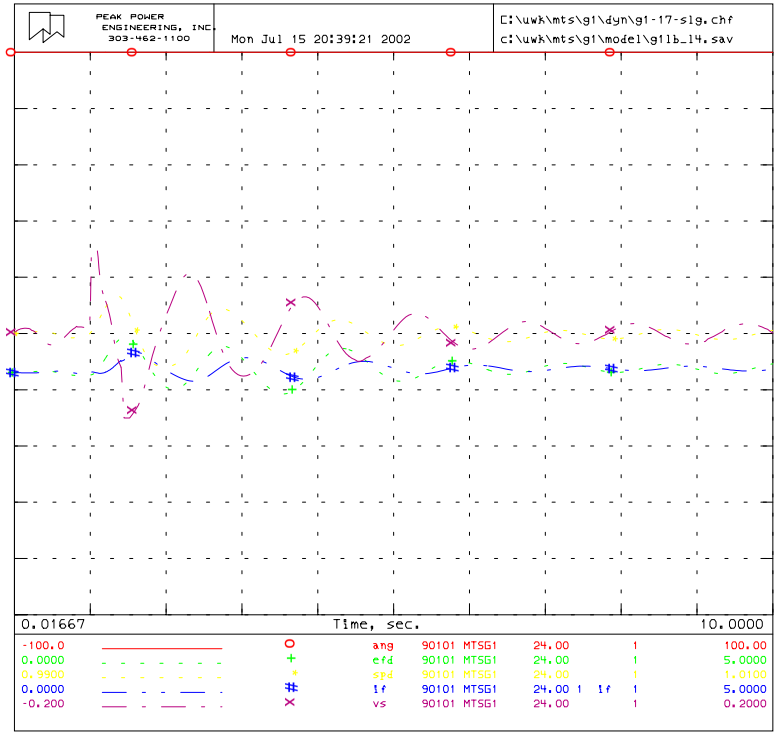

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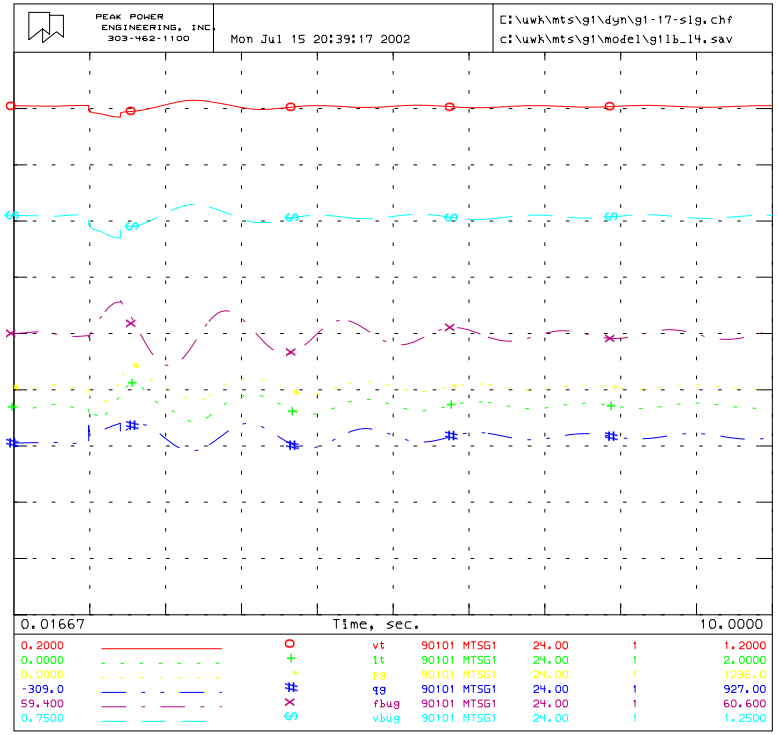

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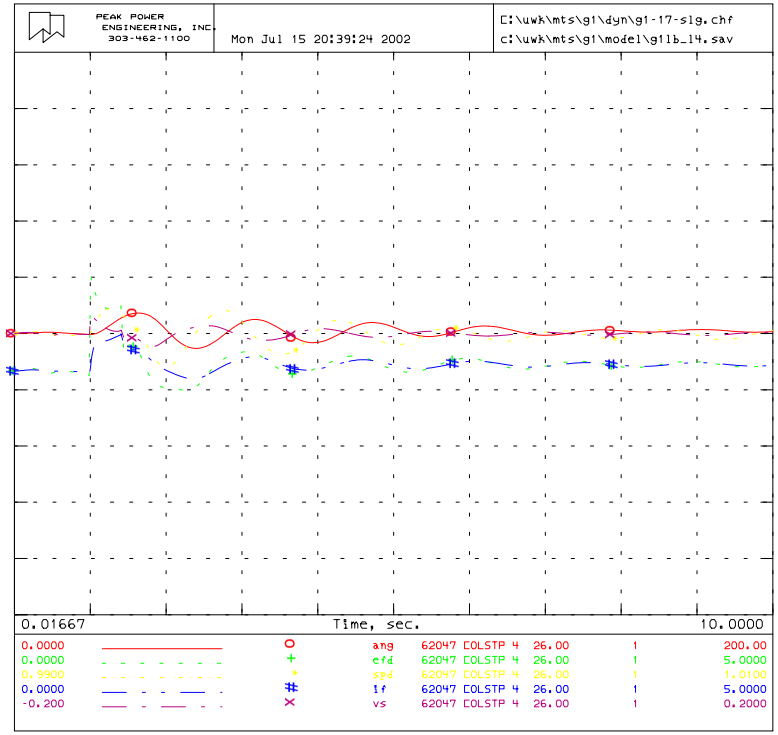

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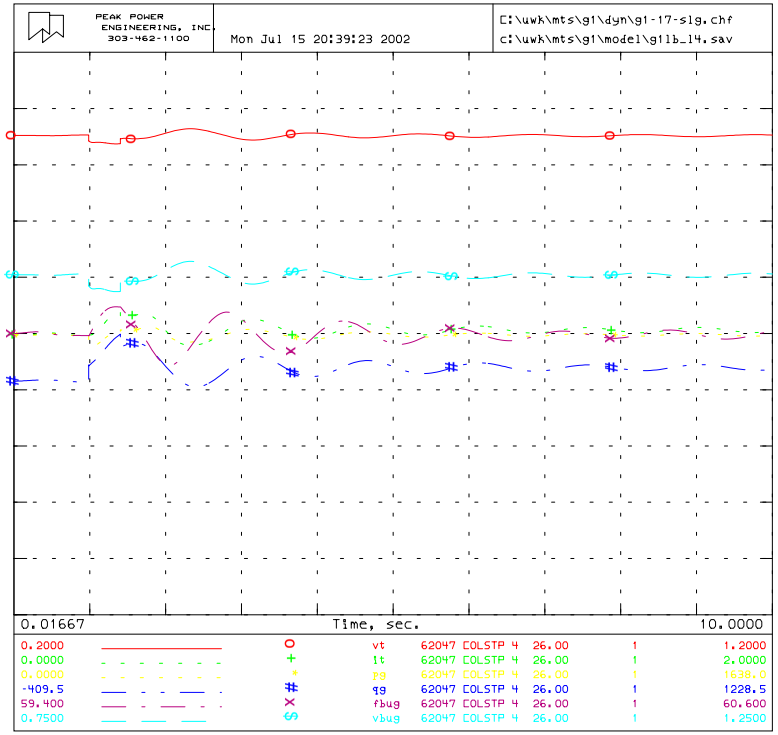

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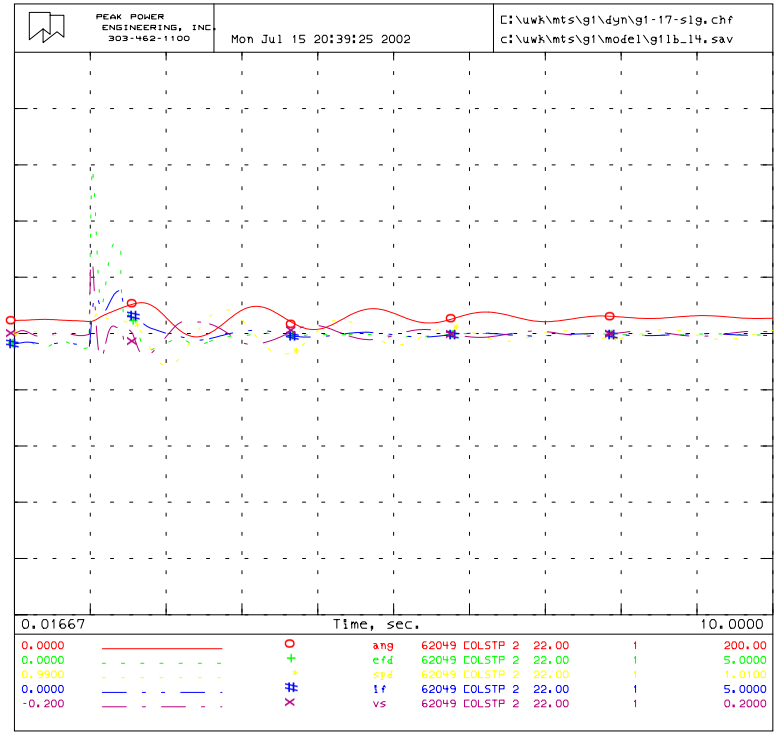

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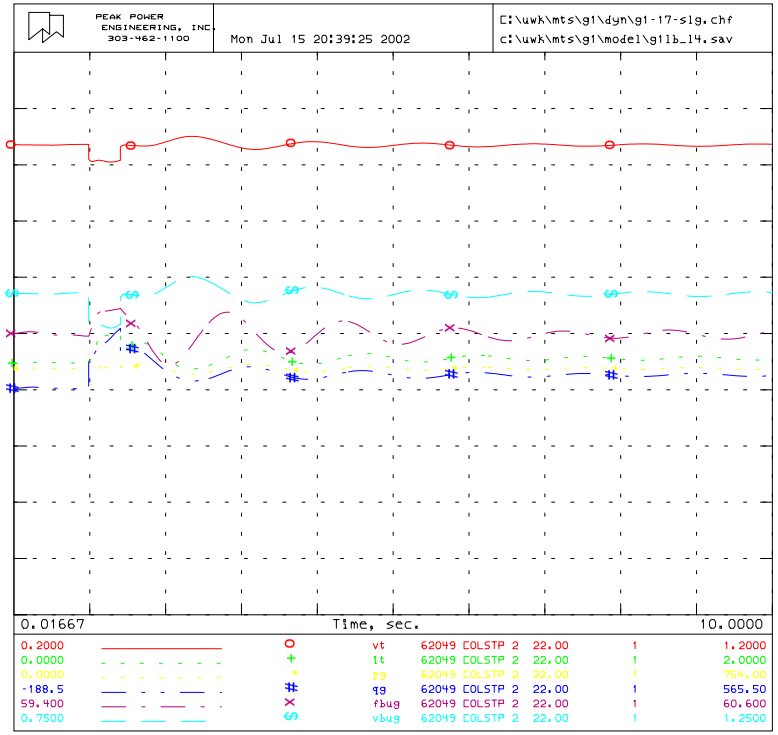

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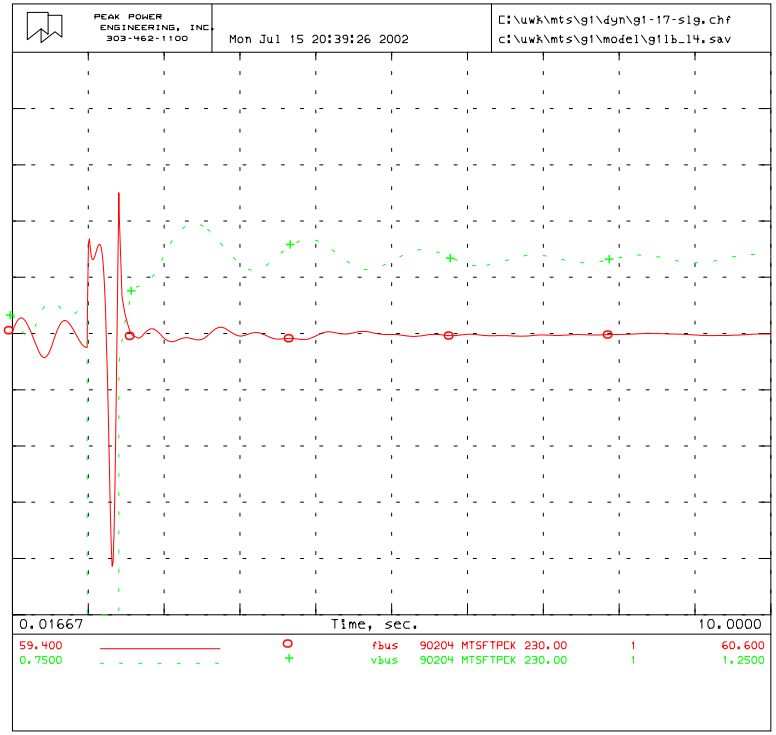

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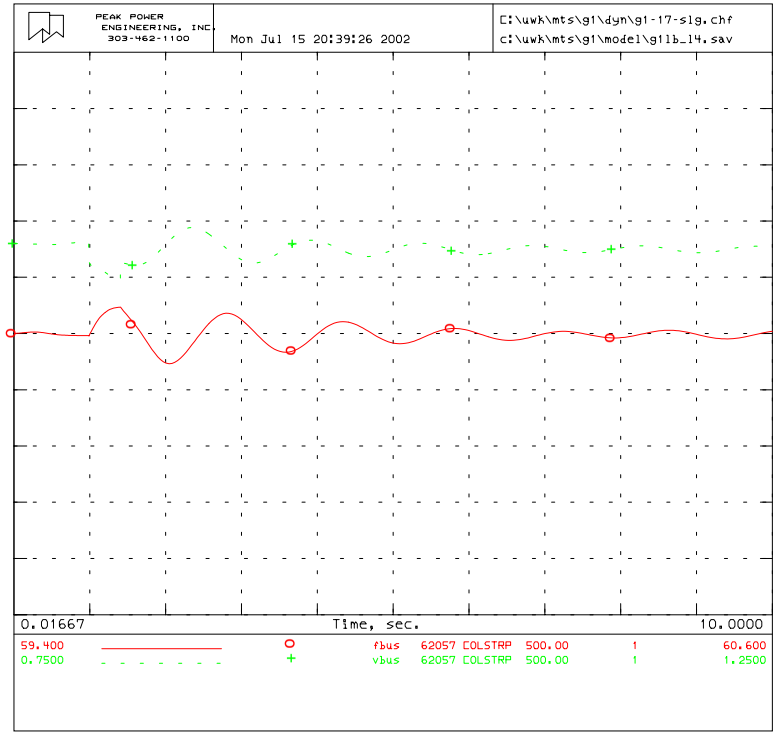

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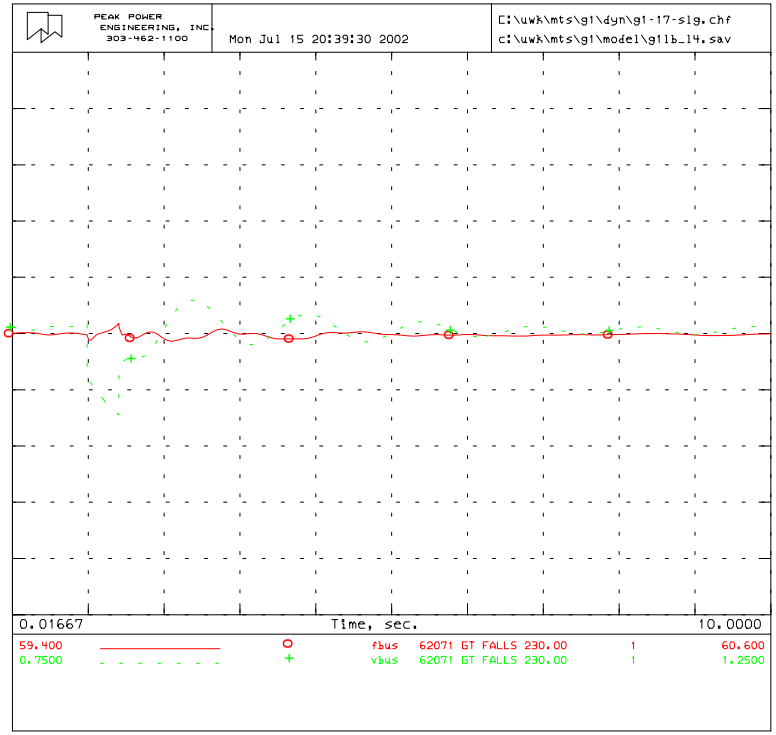

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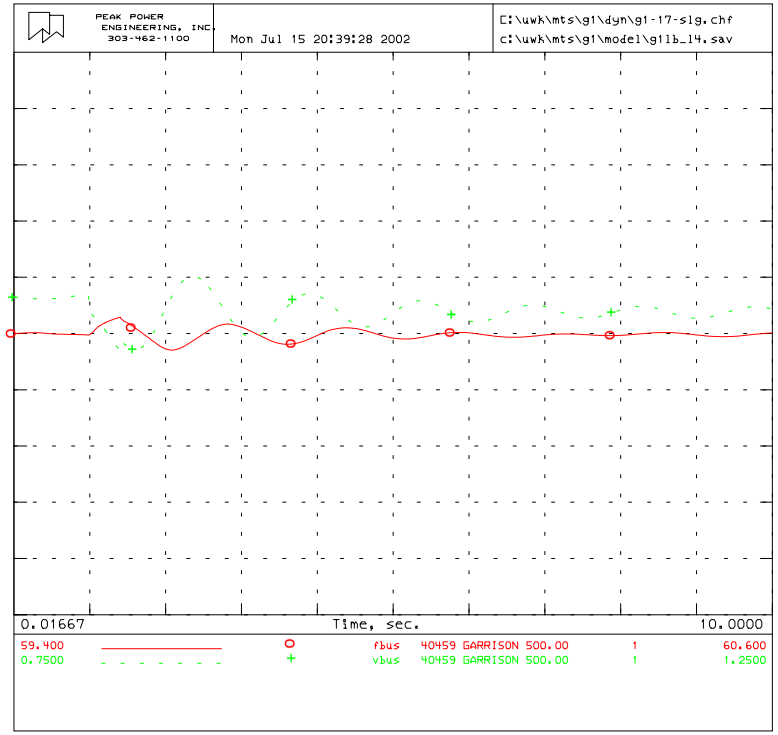

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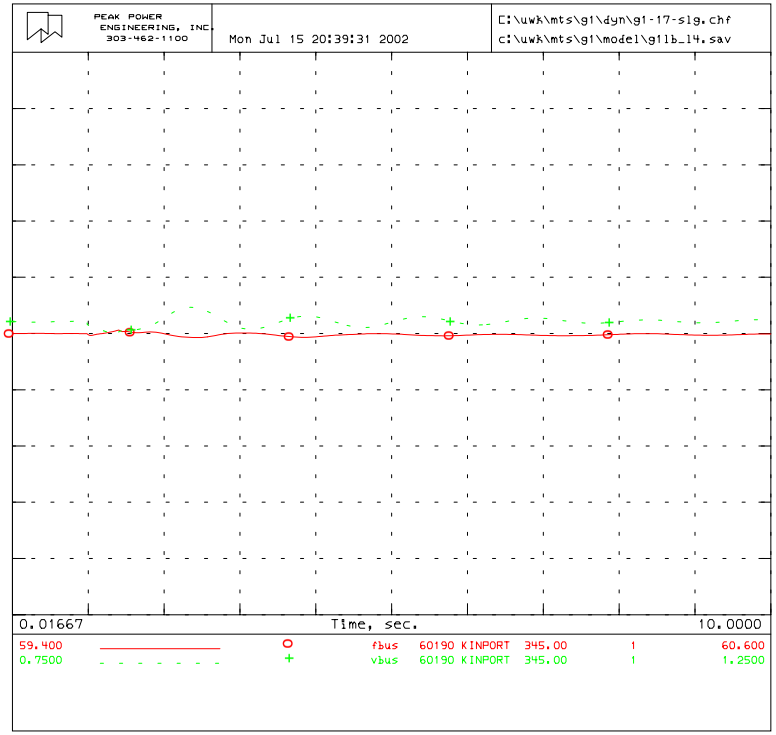

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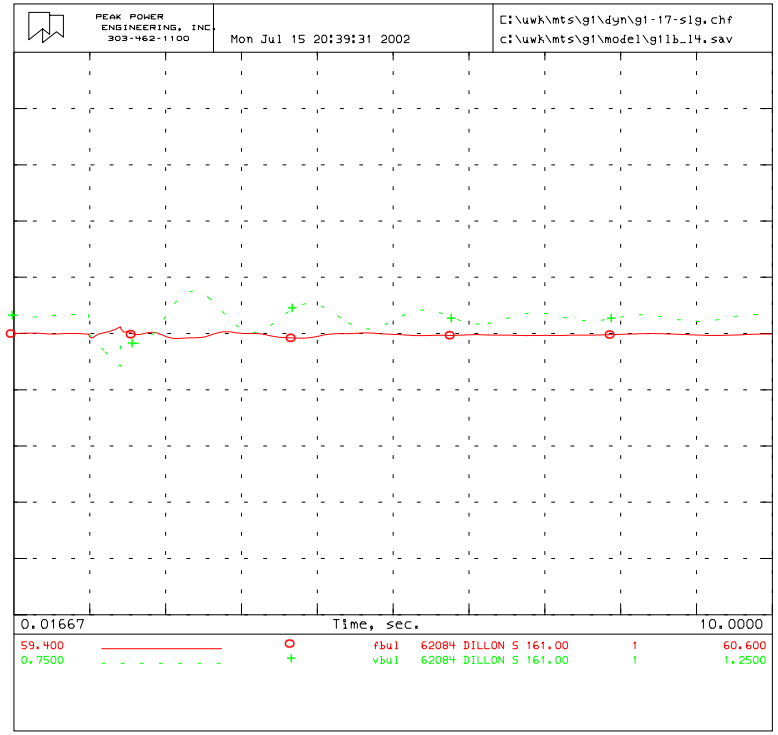

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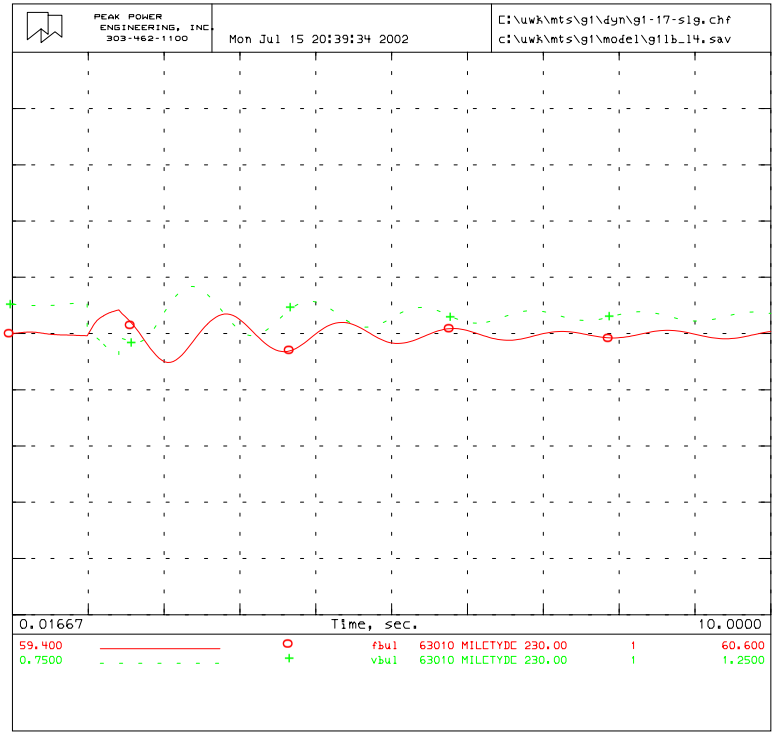

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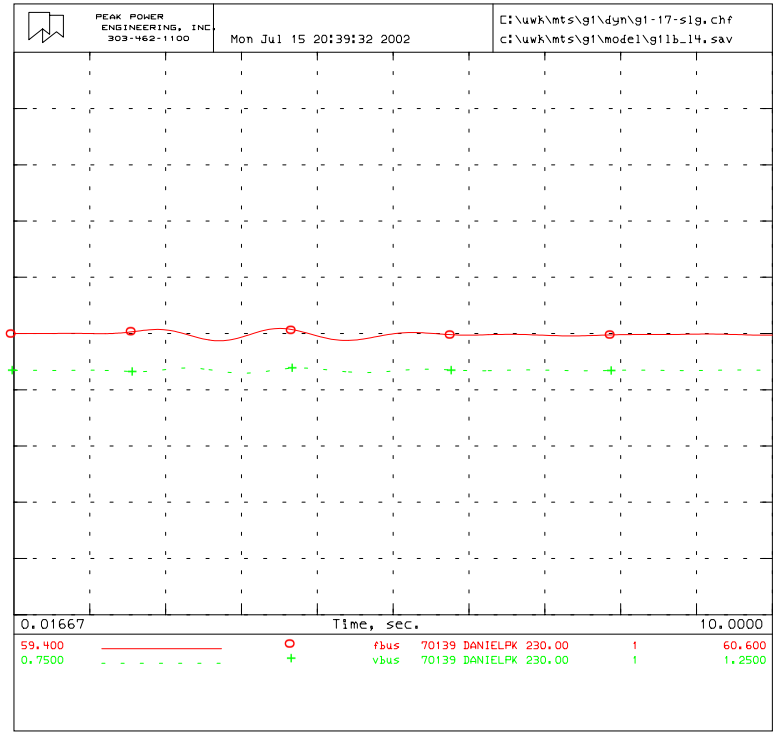

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