

SIS Summary for Request #s 950344, 950345, and 950346

Models used in this study correlated with the years 2007, 2009 and 2011. The results for all other years were estimated from results of the existing models. The results of the System Impact Study (SIS) for requests #s 950344 thru 950346 for 115 MW (each) from the Oak Creek power station substation to MGE from January 2007 to January 2036 are as follows:

2007: Zero MW of ATC is available from Oak Creek to MGE. The limiting element for this transfer is the Oak Creek-Allerton 138kv line (with a rating of 161 MVA) for loss of the Oak Creek-Pennsylvania 138kv line. The distribution factor for this contingency is 0.03222.

2008: Zero MW of ATC is available from Oak Creek to MGE. The ATC was estimated from the results of the 2007 and 2009 cases.

2009: Zero MW of ATC is available from Oak Creek to WEC. The limiting element for this transfer is the Oak Creek-Allerton 138kv line (with a rating of 161 MVA) for loss of the Oak Creek-Pennsylvania 138kv line. The distribution factor for this contingency is 0.03222.

2010: Zero MW of ATC is available from Oak Creek to MGE. The ATC was estimated from the results of the 2009 and 2011 cases.

2011: Zero MW of ATC is available from Oak Creek to WEC. The limiting element for this transfer is the Oak Creek-Allerton 138kv line (with a rating of 161 MVA) for loss of the Oak Creek-Pennsylvania 138kv line. The distribution factor for this contingency is 0.03222.

2012 through 2036: Zero MW of ATC is available from Oak Creek to MGE. The ATC was estimated from the results of the 2011 case.

Summary for the Requests: Transmission service cannot be granted for request #s 950344 thru 950346 from Oak Creek to MGE in the amount of 115 MW from 1/1/2007 to 1/1/2036 without improvements to the transmission system.

There are many elements and contingencies that would prevent service from being granted, as shown in the attached study results. Only the most limiting element and contingency is listed in the above summary.

Generator redispatch options will be evaluated if the requestor wants to investigate them. If there is a limit in the CBM case, redispatch may not be available.

A facilities study will be offered to determine what facilities are needed in order to grant the requested service. A contract to perform the facilities study will be sent for your approval and signature in the near future.

*** MUST 4.00 *** THU, JAN 10 2002 11:28 ***
 SUMMER 2007 CASE FOR WEC-MGE TRANSFER
 OAK CREEK BACKED DOWN 115MW (ADDED AT PARIS)

Violations report ordered by transfer capability. Total 5872 violations

INCR.	TRANS	LIMITING ELEMENT							DISTR.	PRE-	RATING	CONTINGENCY DESCRIPTION						
CAPAB	<-----	FROM	>	<-----	TO	>	CKT	FACTOR	SHIFT	BAS/CNT								
									MW	A/B								
-6214.9	38894	N APP 3	345	39568	NAP3 NEU	345	1	0.02280	591.7	450.0	38893 N APP 2	345	38894 N APP 3	345	1	784		
											Open	38893 N APP 2	345	38894 N APP 3	345	1		
-4039.3	39244	ARP 345	345	39785	ROCKY RN	345	1	0.02555	1059.2	956.0	36406 WEMPL; B	345	39058 PAD	345	345	1	1443	
											Open	36406 WEMPL; B	345	39058 PAD	345	345	1	
-2784.6	38896	N APP 6	138	39568	NAP3 NEU	345	1	-0.02280	-513.5	450.0	38893 N APP 2	345	38894 N APP 3	345	1	784		
											Open	38893 N APP 2	345	38894 N APP 3	345	1		
-890.4	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03222	-189.7	161.0	39373 OK CRK-4	138	39422 PENNSYLV	138	1	1141		
											Open	39373 OK CRK-4	138	39422 PENNSYLV	138	1		
-820.8	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.02245	-179.4	161.0	39307 S 43RD N	138	39366 NORWICH	138	1	1074		
											Open	39307 S 43RD N	138	39366 NORWICH	138	1		
-820.2	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.02245	-179.4	161.0	39307 S 43RD N	138	39350 LINCOLN1	138	1	1073		
											Open	39307 S 43RD N	138	39350 LINCOLN1	138	1		
-648.0	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03363	-182.8	161.0	39371 OC CRK-2	138	39474 RAMSY-6	138	1	1137		
											Open	39371 OC CRK-2	138	39474 RAMSY-6	138	1		
-591.1	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03486	-181.6	161.0	39344 KANSAS-6	138	39366 NORWICH	138	1	1113		
											Open	39344 KANSAS-6	138	39366 NORWICH	138	1		
-556.9	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03354	-179.7	161.0	39361 NICHLSN	138	39373 OK CRK-4	138	1	1128		
											Open	39361 NICHLSN	138	39373 OK CRK-4	138	1		
-555.1	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03363	-179.7	161.0	39344 KANSAS-6	138	39474 RAMSY-6	138	1	1114		
											Open	39344 KANSAS-6	138	39474 RAMSY-6	138	1		
-544.4	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03354	-179.3	161.0	39361 NICHLSN	138	39473 RAMSY-5	138	1	1129		
											Open	39361 NICHLSN	138	39473 RAMSY-5	138	1		
-531.5	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.02807	-175.9	161.0	WPL-ARP3e					1936		
											Open	39244 ARP	345	345 39785 ROCKY RN	345	1		
											Open	39241 POE	138	138 39939 SAL	138	138	1	
											Open	39240 SAR	138	138 39241 POE	138	138	1	
											Open	38357 WWR	46	46.0 38696 WATER QU	46.0	1		
											Open	38342 COC	69	69.0 39901 COC DPC	69.0	1		
											Open	39704 SHRMN ST	115	39705 CASSEL	115	1		
-508.2*	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03245	-177.5	161.0	38856 OC CRK7	230	38863 BLUMND3	230	1	730		
											Open	38856 OC CRK7	230	38863 BLUMND3	230	1		
-429.9	39355	MERL HLS	138	39489	SUMMIT	138	1	0.04319	159.6	141.0	39331 GRANVL	4	138 39508 TMRACKTP	138	1	1094		
											Open	39331 GRANVL	4	138 39508 TMRACKTP	138	1		
-364.5	39371	OC CRK-2	138	39474	RAMSY-6	138	1	0.05165	248.8	230.0	39373 OK CRK-4	138	39422 PENNSYLV	138	1	1141		
											Open	39373 OK CRK-4	138	39422 PENNSYLV	138	1		
-258.7	38145	KEG 69	69.0	38146	MCF 69	69.0	1	0.06014	87.6	72.0	39217 YAR	138	138 39819 NMA	138	138	1	976	

-13.9*	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.04190	72.6	72.0	Open 38145 KEG 69	69.0	38147	COG	69	69.0	1	
													39152 COL G1	22.0	39157	COL	345	345	1	1793
													Open 39152 COL G1	22.0	39157	COL	345	345	1	
-12.0	39821	FCH	138	138	39831	FCH	69	69.0	1	0.07380	101.9	101.0	39821 FCH 138	138	39831	FCH	69	69.0	2	1381
													Open 39821 FCH 138	138	39831	FCH	69	69.0	2	
-6.4	39332	HARBOR-1	138	138	39473	RAMSY-5	138	138	1	-0.05354	-185.3	185.0	39371 OC CRK-2	138	39474	RAMSY-6	138	138	1	1137
													Open 39371 OC CRK-2	138	39474	RAMSY-6	138	138	1	
-2.4	39122	KEG	138	138	39218	CHA	138	138	1	-0.16853	-286.4	286.0	39218 CHA 138	138	39821	FCH	138	138	1	978
													Open 39218 CHA 138	138	39821	FCH	138	138	1	
1.9	38676	RYS	69	69.0	39853	FEM	69	69.0	1	-0.05745	-49.9	50.0	39122 KEG 138	138	39123	COD	138	138	1	918
													Open 39122 KEG 138	138	39123	COD	138	138	1	
4.9	38099	MCU	69	69.0	38104	RC7	69	69.0	1	0.02718	68.9	69.0	39122 KEG 138	138	39218	CHA	138	138	1	919
													Open 39122 KEG 138	138	39218	CHA	138	138	1	
12.5	39332	HARBOR-1	138	138	39473	RAMSY-5	138	138	1	-0.05529	-184.3	185.0	39344 KANSAS-6	138	39366	NORWICH	138	138	1	1113
													Open 39344 KANSAS-6	138	39366	NORWICH	138	138	1	
17.1	38676	RYS	69	69.0	39853	FEM	69	69.0	1	-0.05745	-49.0	50.0	39123 COD 138	138	39821	FCH	138	138	1	920
													Open 39123 COD 138	138	39821	FCH	138	138	1	
35.8	39332	HARBOR-1	138	138	39473	RAMSY-5	138	138	1	-0.04639	-183.3	185.0	WPL-ARP3e							1936
													Open 39244 ARP 345	345	39785	ROCKY RN	345	345	1	
													Open 39241 POE 138	138	39939	SAL	138	138	1	
													Open 39240 SAR 138	138	39241	POE	138	138	1	
													Open 38357 WWR 46	46.0	38696	WATER QU46.0	46.0	46.0	1	
													Open 38342 COC 69	69.0	39901	COC DPC	69.0	69.0	1	
													Open 39704 SHRMN ST	115	39705	CASSEL	115	115	1	
36.4	38668	WMD	69	69.0	38673	PHB	69	69.0	1	0.02461	81.1	82.0	38160 DAN 69	69.0	38162	WKE	69	69.0	1	201
													Open 38160 DAN 69	69.0	38162	WKE	69	69.0	1	
42.1	38676	RYS	69	69.0	39853	FEM	69	69.0	1	-0.04781	-48.0	50.0	38670 NSP 69	69.0	39831	FCH	69	69.0	1	610
													Open 38670 NSP 69	69.0	39831	FCH	69	69.0	1	
64.0	38146	MCF	69	69.0	39853	FEM	69	69.0	1	0.05047	68.8	72.0	39157 COL 345	345	39818	NMA	345	345	1	937
													Open 39157 COL 345	345	39818	NMA	345	345	1	
70.0	39332	HARBOR-1	138	138	39473	RAMSY-5	138	138	1	-0.05354	-181.3	185.0	39344 KANSAS-6	138	39474	RAMSY-6	138	138	1	1114
													Open 39344 KANSAS-6	138	39474	RAMSY-6	138	138	1	
73.2	38104	RC7	69	69.0	38105	LMR	69	69.0	1	0.02357	67.3	69.0	38145 KEG 69	69.0	39122	KEG	138	138	1	182
													Open 38145 KEG 69	69.0	39122	KEG	138	138	1	
82.2	38676	RYS	69	69.0	39853	FEM	69	69.0	1	-0.02230	-48.2	50.0	38672 WLT 69	69.0	39087	WALNUT_G18.0	18.0	18.0	1	1651
													Open 38672 WLT 69	69.0	39087	WALNUT_G18.0	18.0	18.0	1	
82.9	38676	RYS	69	69.0	39853	FEM	69	69.0	1	-0.04773	-46.0	50.0	39841 SYC 138	138	39851	SYC	69	69.0	1	1382
													Open 39841 SYC 138	138	39851	SYC	69	69.0	1	
102.4	38676	RYS	69	69.0	39853	FEM	69	69.0	1	-0.05033	-44.8	50.0	38145 KEG 69	69.0	38147	COG	69	69.0	1	181
													Open 38145 KEG 69	69.0	38147	COG	69	69.0	1	
107.1	39332	HARBOR-1	138	138	39473	RAMSY-5	138	138	1	-0.05198	-179.4	185.0	39264 BRANCH	138	39422	PENNSYLV	138	138	1	1033
													Open 39264 BRANCH	138	39422	PENNSYLV	138	138	1	
109.9	39332	HARBOR-1	138	138	39473	RAMSY-5	138	138	1	-0.04578	-152.0	157.0	Base Case							
111.7	39089	JAN	138	138	39090	RSS	138	138	1	0.07861	159.2	168.0	39092 VIK 138	138	39140	ROR GEN1	138	138	1	901
													Open 39092 VIK 138	138	39140	ROR GEN1	138	138	1	
112.6	38146	MCF	69	69.0	39853	FEM	69	69.0	1	0.05745	65.5	72.0	39122 KEG 138	138	39123	COD	138	138	1	918
													Open 39122 KEG 138	138	39123	COD	138	138	1	
119.8	39122	KEG	138	138	39218	CHA	138	138	1	-0.13620	-269.7	286.0	39157 COL 345	345	39818	NMA	345	345	1	937

123.0	39821	FCH	138	138	39831	FCH	69	69.0	2	0.07196	92.1	101.0	Open 39157 COL 345 345 39818 NMA 345 345 1	975
													39216 CCS 138 138 39821 FCH 138 138 1	
													Open 39216 CCS 138 138 39821 FCH 138 138 1	
127.8	38146	MCF	69	69.0	39853	FEM	69	69.0	1	0.05745	64.7	72.0	39123 COD 138 138 39821 FCH 138 138 1	920
													Open 39123 COD 138 138 39821 FCH 138 138 1	
129.8*	38676	RYS	69	69.0	39853	FEM	69	69.0	1	-0.04995	-43.5	50.0	39218 CHA 138 138 39821 FCH 138 138 1	978
													Open 39218 CHA 138 138 39821 FCH 138 138 1	
130.5	39371	OC CRK-2	138	138	39474	RAMSY-6	138	138	1	0.05165	223.3	230.0	39264 BRANCH 138 39422 PENNSYLV 138 1	1033
													Open 39264 BRANCH 138 39422 PENNSYLV 138 1	
131.4	39332	HARBOR-1	138	138	39473	RAMSY-5	138	138	1	-0.05043	-178.4	185.0	39251 ALERTON8 138 39371 OC CRK-2 138 1	1007
													Open 39251 ALERTON8 138 39371 OC CRK-2 138 1	
132.6	39251	ALERTON8	138	138	39371	OC CRK-2	138	138	1	-0.02771	-157.3	161.0	Base Case	
138.2	38104	RC7	69	69.0	38105	LMR	69	69.0	1	0.02718	65.2	69.0	39122 KEG 138 138 39218 CHA 138 138 1	919
													Open 39122 KEG 138 138 39218 CHA 138 138 1	
142.1	38548	LPK	138	138	39533	FOREST J	138	138	1	-0.02100	-175.0	178.0	WPL-ARP3e	1936
													Open 39244 ARP 345 345 39785 ROCKY RN 345 1	
													Open 39241 POE 138 138 39939 SAL 138 138 1	
													Open 39240 SAR 138 138 39241 POE 138 138 1	
													Open 38357 WWR 46 46.0 38696 WATER QU46.0 1	
													Open 38342 COC 69 69.0 39901 COC DPC 69.0 1	
													Open 39704 SHRMN ST 115 39705 CASSEL 115 1	
143.8	39332	HARBOR-1	138	138	39473	RAMSY-5	138	138	1	-0.05179	-177.6	185.0	38856 OC CRK7 230 38863 BLUMND3 230 1	730
													Open 38856 OC CRK7 230 38863 BLUMND3 230 1	
153.9	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.04513	65.1	72.0	Base Case	
164.0	39821	FCH	138	138	39831	FCH	69	69.0	2	0.06433	90.4	101.0	39217 YAR 138 138 39819 NMA 138 138 1	976
													Open 39217 YAR 138 138 39819 NMA 138 138 1	
170.2	39367	OK CRK	345	345	39382	OC CRK N	100	100	1	0.16721	471.5	500.0	39368 OK CRK-5 230 39369 OK CRK9 230 1	1133
													Open 39368 OK CRK-5 230 39369 OK CRK9 230 1	
171.3	39367	OK CRK	345	345	39382	OC CRK N	100	100	1	0.16721	471.4	500.0	39368 OK CRK-5 230 39373 OK CRK-4 138 1	1134
													Open 39368 OK CRK-5 230 39373 OK CRK-4 138 1	

Violations report ordered by transfer capability. Total 13484 violations

INCR.	TRANS	LIMITING ELEMENT							DISTR.	PRE-SHIFT	RATING	CONTINGENCY DESCRIPTION						
CAPAB	<-----	FROM	----->	<-----	TO	----->	CKT	FACTOR	MW	A/B								
-6799.1	38894	N APP 3	345	39568	NAP3 NEU	345	1	0.02280	605.1	450.0	38893 N APP 2	345	38894 N APP 3	345	1	784		
											Open	38893 N APP 2	345	38894 N APP 3	345	1		
-4498.7	39244	ARP 345	345	39785	ROCKY RN	345	1	0.02555	1071.0	956.0	36406 WEMPL; B	345	39058 PAD	345	345	1	1443	
											Open	36406 WEMPL; B	345	39058 PAD	345	345	1	
-3205.3	38896	N APP 6	138	39568	NAP3 NEU	345	1	-0.02280	-523.1	450.0	38893 N APP 2	345	38894 N APP 3	345	1	784		
											Open	38893 N APP 2	345	38894 N APP 3	345	1		
-1546.0	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.02245	-195.7	161.0	39307 S 43RD N	138	39366 NORWICH	138	1	1074		
											Open	39307 S 43RD N	138	39366 NORWICH	138	1		
-1545.4	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.02245	-195.7	161.0	39307 S 43RD N	138	39350 LINCOLN1	138	1	1073		
											Open	39307 S 43RD N	138	39350 LINCOLN1	138	1		
-1524.1	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03222	-210.1	161.0	39373 OK CRK-4	138	39422 PENNSYLV	138	1	1141		
											Open	39373 OK CRK-4	138	39422 PENNSYLV	138	1		
-1261.6	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03363	-203.4	161.0	39371 OC CRK-2	138	39474 RAMSY-6	138	1	1137		
											Open	39371 OC CRK-2	138	39474 RAMSY-6	138	1		
-1197.0	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03486	-202.7	161.0	39344 KANSAS-6	138	39366 NORWICH	138	1	1113		
											Open	39344 KANSAS-6	138	39366 NORWICH	138	1		
-1166.5	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03354	-200.1	161.0	39361 NICHLSN	138	39373 OK CRK-4	138	1	1128		
											Open	39361 NICHLSN	138	39373 OK CRK-4	138	1		
-1162.5	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03363	-200.1	161.0	39344 KANSAS-6	138	39474 RAMSY-6	138	1	1114		
											Open	39344 KANSAS-6	138	39474 RAMSY-6	138	1		
-1153.0	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03354	-199.7	161.0	39361 NICHLSN	138	39473 RAMSY-5	138	1	1129		
											Open	39361 NICHLSN	138	39473 RAMSY-5	138	1		
-1150.7	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.02807	-193.3	161.0	WPL-ARP3e					1937		
											Open	39244 ARP	345	345 39785 ROCKY RN	345	1		
											Open	39241 POE	138	138 39939 SAL	138	138	1	
											Open	39240 SAR	138	138 39241 POE	138	138	1	
											Open	38357 WWR	46	46.0 38696 WATER QU	46.0	1		
											Open	38342 COC	69	69.0 39901 COC DPC	69.0	1		
											Open	39704 SHRMN ST	115	39705 CASSEL	115	1		
-1120.6*	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03222	-197.1	161.0	39264 BRANCH	138	39422 PENNSYLV	138	1	1033		
											Open	39264 BRANCH	138	39422 PENNSYLV	138	1		
-967.0	39371	OC CRK-2	138	39474	RAMSY-6	138	1	0.05165	279.9	230.0	39373 OK CRK-4	138	39422 PENNSYLV	138	1	1141		
											Open	39373 OK CRK-4	138	39422 PENNSYLV	138	1		
-783.1	39355	MERL HLS	138	39489	SUMMIT	138	1	0.04319	174.8	141.0	39331 GRANVL	4	138 39508 TMRACKTP	138	1	1094		
											Open	39331 GRANVL	4	138 39508 TMRACKTP	138	1		

-772.0	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05198	-225.1	185.0	39373	OK	CRK-4	138	39422	PENNSYLV	138	1	1141				
											Open	39373	OK	CRK-4	138	39422	PENNSYLV	138	1				
-730.9	39255	ARCADN5	138	39517	WAUKSH4	138	1	0.03676	313.9	287.0	39255	ARCADN5	138	39519	WAUKSH6	138	1	1017					
											Open	39255	ARCADN5	138	39519	WAUKSH6	138	1					
-633.7	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.06931	-228.9	185.0	39372	OK	CRK-3	138	39373	OK	CRK-4	138	1	1138			
											Open	39372	OK	CRK-3	138	39373	OK	CRK-4	138	1			
-625.7	38548	LPK	138	138	39533	FOREST J	138	1	-0.02100	-191.1	178.0	WPL-ARP3e							1937				
											Open	39244	ARP	345	345	39785	ROCKY	RN	345	1			
											Open	39241	POE	138	138	39939	SAL	138	138	1			
											Open	39240	SAR	138	138	39241	POE	138	138	1			
											Open	38357	WWR	46	46.0	38696	WATER	QU46.0	1				
											Open	38342	COC	69	69.0	39901	COC	DPC	69.0	1			
											Open	39704	SHRMN	ST	115	39705	CASSEL	115	1				
-589.1	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1	0.09191	414.1	360.0	39367	OK	CRK	345	39382	OC	CRK	N	100	1	1132
											Open	39367	OK	CRK	345	39382	OC	CRK	N	100	1		
-586.6	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1	0.09191	413.9	360.0	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	1140
											Open	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1		
-542.8	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05354	-214.1	185.0	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	1137				
											Open	39371	OC	CRK-2	138	39474	RAMSY-6	138	1				
-519.8	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05529	-213.7	185.0	39344	KANSAS-6	138	39366	NORWICH	138	1	1113					
											Open	39344	KANSAS-6	138	39366	NORWICH	138	1					
-492.7	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.04639	-207.9	185.0	WPL-ARP3e								1937				
											Open	39244	ARP	345	345	39785	ROCKY	RN	345	1			
											Open	39241	POE	138	138	39939	SAL	138	138	1			
											Open	39240	SAR	138	138	39241	POE	138	138	1			
											Open	38357	WWR	46	46.0	38696	WATER	QU46.0	1				
											Open	38342	COC	69	69.0	39901	COC	DPC	69.0	1			
											Open	39704	SHRMN	ST	115	39705	CASSEL	115	1				
-488.5	39251	ALERTON8	138	39371	OC	CRK-2	138	1	-0.02771	-174.5	161.0	Base Case											
-461.3	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05354	-209.7	185.0	39344	KANSAS-6	138	39474	RAMSY-6	138	1	1114					
											Open	39344	KANSAS-6	138	39474	RAMSY-6	138	1					
-448.0	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	0.05165	253.1	230.0	39264	BRANCH	138	39422	PENNSYLV	138	1	1033				
											Open	39264	BRANCH	138	39422	PENNSYLV	138	1					
-445.0	39355	MERL	HLS	138	39489	SUMMIT	138	1	0.04319	160.2	141.0	39491	SUSSEX	138	39508	TMRACKTP	138	1	1171				
											Open	39491	SUSSEX	138	39508	TMRACKTP	138	1					
-431.8	39331	GRANVL	4	138	39508	TMRACKTP	138	1	0.02346	262.1	252.0	39380	MAPLE	138	39955	SAUKVL4	138	1	1142				
											Open	39380	MAPLE	138	39955	SAUKVL4	138	1					
-427.9	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05198	-207.2	185.0	39264	BRANCH	138	39422	PENNSYLV	138	1	1033					
											Open	39264	BRANCH	138	39422	PENNSYLV	138	1					
-422.9	39367	OK	CRK	345	39382	OC	CRK	N	100	1	0.16721	570.7	500.0	39368	OK	CRK-5	230	39369	OK	CRK9	230	1	1133
											Open	39368	OK	CRK-5	230	39369	OK	CRK9	230	1			
-421.7	39367	OK	CRK	345	39382	OC	CRK	N	100	1	0.16721	570.5	500.0	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1	1134
											Open	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1			
-419.3	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.04578	-176.2	157.0	Base Case												
-418.2	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	-0.16721	-569.9	500.0	39368	OK	CRK-5	230	39369	OK	CRK9	230	1	1133
											Open	39368	OK	CRK-5	230	39369	OK	CRK9	230	1			
-416.9	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	-0.16721	-569.7	500.0	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1	1134
											Open	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1			

-406.4	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05043	-205.5	185.0	39251	ALERTON8	138	39371	OC	CRK-2	138	1	1007			
											Open	39251	ALERTON8	138	39371	OC	CRK-2	138	1			
-382.0	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05179	-204.8	185.0	38856	OC	CRK7	230	38863	BLUMND3	230	1	730			
											Open	38856	OC	CRK7	230	38863	BLUMND3	230	1			
-355.4	39368	OK	CRK-5	230	39369	OK	CRK9	230	1	-0.09191	-414.7	382.0	39367	OK	CRK	345	39382	OC	CRK N	100	1	1132
											Open	39367	OK	CRK	345	39382	OC	CRK N	100	1		
-352.8	39368	OK	CRK-5	230	39369	OK	CRK9	230	1	-0.09191	-414.4	382.0	39373	OK	CRK-4	138	39382	OC	CRK N	100	1	1140
											Open	39373	OK	CRK-4	138	39382	OC	CRK N	100	1		
-338.6	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	0.05165	247.5	230.0	39361	NICHLSON	138	39373	OK	CRK-4	138	1	1128		
											Open	39361	NICHLSON	138	39373	OK	CRK-4	138	1			
-324.6	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	0.05165	246.8	230.0	39361	NICHLSON	138	39473	RAMSY-5	138	1	1129			
											Open	39361	NICHLSON	138	39473	RAMSY-5	138	1				
-309.0	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.02230	78.9	72.0	38672	WLT	69	69.0	39087	WALNUT_G18.0	1	1651		
											Open	38672	WLT	69	69.0	39087	WALNUT_G18.0	1				
-306.8	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.06014	90.5	72.0	39217	YAR	138	138	39819	NMA	138	138	1	976
											Open	39217	YAR	138	138	39819	NMA	138	138	1		
-290.8	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.06014	89.5	72.0	39217	YAR	138	138	39841	SYC	138	138	1	977
											Open	39217	YAR	138	138	39841	SYC	138	138	1		
-289.2	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	0.03980	241.5	230.0	39255	ARCADN5	138	39356	MORLND4	138	1	1015			
											Open	39255	ARCADN5	138	39356	MORLND4	138	1				
-273.4	39344	KANSAS-6	138	39474	RAMSY-6	138	1	-0.05165	-256.1	242.0	39373	OK	CRK-4	138	39422	PENNSYLV	138	1	1141			
											Open	39373	OK	CRK-4	138	39422	PENNSYLV	138	1			
-258.3*	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.06429	-201.6	185.0	39253	ARCADN1	345	39367	OK	CRK	345	1	1011			
											Open	39253	ARCADN1	345	39367	OK	CRK	345	1			
-256.8	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	0.04802	242.3	230.0	39251	ALERTON8	138	39371	OC	CRK-2	138	1	1007		
											Open	39251	ALERTON8	138	39371	OC	CRK-2	138	1			
-248.2	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.05047	84.5	72.0	39157	COL	345	345	39818	NMA	345	345	1	937
											Open	39157	COL	345	345	39818	NMA	345	345	1		
-244.3	39372	OK	CRK-3	138	39373	OK	CRK-4	138	1	-0.13532	-415.1	382.0	39373	OK	CRK-4	138	39422	PENNSYLV	138	1	1141	
											Open	39373	OK	CRK-4	138	39422	PENNSYLV	138	1			
-240.7	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	0.05165	242.4	230.0	39332	HARBOR-1	138	39473	RAMSY-5	138	1	1097			
											Open	39332	HARBOR-1	138	39473	RAMSY-5	138	1				
-230.0	38099	MCU	69	69.0	38104	RC7	69	69.0	1	0.02357	74.4	69.0	38145	KEG	69	69.0	39122	KEG	138	138	1	182
											Open	38145	KEG	69	69.0	39122	KEG	138	138	1		
-221.0	39533	FOREST	J	138	39538	KACENTAP	138	1	0.02154	147.8	143.0	WPL-ARP3e										1937
											Open	39244	ARP	345	345	39785	ROCKY	RN	345	1		
											Open	39241	POE	138	138	39939	SAL	138	138	1		
											Open	39240	SAR	138	138	39241	POE	138	138	1		
											Open	38357	WWR	46	46.0	38696	WATER	QU46.0	1			
											Open	38342	COC	69	69.0	39901	COC	DPC	69.0	1		
											Open	39704	SHRMN	ST	115	39705	CASSEL	115	1			
-214.0	39047	ROR	138	138	39094	LBT	138	138	1	0.02827	223.1	217.0	39058	PAD	345	345	39119	ROE	345	345	1	867
											Open	39058	PAD	345	345	39119	ROE	345	345	1		
-197.0	39818	NMA	345	345	39819	NMA	138	138	1	0.08424	271.6	255.0	39818	NMA	345	345	39819	NMA	138	138	2	1378
											Open	39818	NMA	345	345	39819	NMA	138	138	2		
-196.1	39367	OK	CRK	345	39382	OC	CRK N	100	1	0.20569	540.3	500.0	39253	ARCADN1	345	39367	OK	CRK	345	1	1011	
											Open	39253	ARCADN1	345	39367	OK	CRK	345	1			
-194.5	39818	NMA	345	345	39819	NMA	138	138	2	0.08417	271.4	255.0	39818	NMA	345	345	39819	NMA	138	138	1	1377

-192.2	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	-0.20569	-539.5	500.0	Open 39818	NMA	345	345	39819	NMA	138	138	1		
														39253	ARCADN1	345	39367	OK	CRK	345	1	1011		
														Open 39253	ARCADN1	345	39367	OK	CRK	345	1			
-166.1	38676	RYS	69	69.0	39853	FEM	69	69.0	1	-0.06014	-60.0	50.0	39217	YAR	138	138	39819	NMA	138	138	1	976		
														Open 39217	YAR	138	138	39819	NMA	138	138	1		
-161.1	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.05745	81.3	72.0	39122	KEG	138	138	39123	COD	138	138	1	918		
														Open 39122	KEG	138	138	39123	COD	138	138	1		
-159.4	39344	KANSAS-6	138	39366	NORWICH	138	1	0.07356	298.7	287.0	39361	NICHLSON	138	39373	OK	CRK-4	138	1	1128					
														Open 39361	NICHLSON	138	39373	OK	CRK-4	138	1			
-156.4	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.04781	79.5	72.0	38670	NSP	69	69.0	39831	FCH	69	69.0	1	610		
														Open 38670	NSP	69	69.0	39831	FCH	69	69.0	1		
-150.0	38676	RYS	69	69.0	39853	FEM	69	69.0	1	-0.06014	-59.0	50.0	39217	YAR	138	138	39841	SYC	138	138	1	977		
														Open 39217	YAR	138	138	39841	SYC	138	138	1		
-145.1	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.05745	80.3	72.0	39123	COD	138	138	39821	FCH	138	138	1	920		
														Open 39123	COD	138	138	39821	FCH	138	138	1		
-139.2	39344	KANSAS-6	138	39366	NORWICH	138	1	0.07356	297.2	287.0	39361	NICHLSON	138	39473	RAMSY-5	138	1	1129						
														Open 39361	NICHLSON	138	39473	RAMSY-5	138	1				
-139.0	38668	WMD	69	69.0	38673	PHB	69	69.0	1	0.02461	85.4	82.0	38160	DAN	69	69.0	38162	WKE	69	69.0	1	201		
														Open 38160	DAN	69	69.0	38162	WKE	69	69.0	1		
-132.8	39367	OK	CRK	345	39382	OC	CRK	N	100	1	0.16474	521.9	500.0	38856	OC	CRK7	230	38857	OC	CRK8	230	1	729	
														Open 38856	OC	CRK7	230	38857	OC	CRK8	230	1		
-127.9	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	-0.16474	-521.1	500.0	38856	OC	CRK7	230	38857	OC	CRK8	230	1	729	
														Open 38856	OC	CRK7	230	38857	OC	CRK8	230	1		
-127.0	39367	OK	CRK	345	39382	OC	CRK	N	100	1	0.14840	518.9	500.0	39371	OC	CRK-2	138	39385	OK	C	G5	18.0	1	1825
														Open 39371	OC	CRK-2	138	39385	OK	C	G5	18.0	1	
-122.1	38099	MCU	69	69.0	38104	RC7	69	69.0	1	0.02718	72.3	69.0	39122	KEG	138	138	39218	CHA	138	138	1	919		
														Open 39122	KEG	138	138	39218	CHA	138	138	1		
-121.7	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	-0.14840	-518.1	500.0	39371	OC	CRK-2	138	39385	OK	C	G5	18.0	1	1825
														Open 39371	OC	CRK-2	138	39385	OK	C	G5	18.0	1	
-116.3	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	0.04289	235.0	230.0	WPL-ARP3e											1937	
														Open 39244	ARP	345	345	39785	ROCKY	RN	345	1		
														Open 39241	POE	138	138	39939	SAL	138	138	1		
														Open 39240	SAR	138	138	39241	POE	138	138	1		
														Open 38357	WWR	46	46.0	38696	WATER	QU	46.0	1		
														Open 38342	COC	69	69.0	39901	COC	DPC	69.0	1		
														Open 39704	SHRMN	ST	115	39705	CASSEL	115	1			
-110.2	38145	KEG	69	69.0	38146	MCF	69	69.0	1	0.04773	77.3	72.0	39841	SYC	138	138	39851	SYC	69	69.0	1	1382		
														Open 39841	SYC	138	138	39851	SYC	69	69.0	1		
-100.9	39373	OK	CRK-4	138	39422	PENNSYLV	138	1	0.05888	329.9	324.0	39372	OK	CRK-3	138	39373	OK	CRK-4	138	1	1138			
														Open 39372	OK	CRK-3	138	39373	OK	CRK-4	138	1		
-100.9	39821	FCH	138	138	39831	FCH	69	69.0	2	0.07545	108.6	101.0	39821	FCH	138	138	39831	FCH	69	69.0	1	1380		
														Open 39821	FCH	138	138	39831	FCH	69	69.0	1		

Violations report ordered by transfer capability. Total 17600 violations

INCR.	TRANS	LIMITING ELEMENT							DISTR.	PRE-	RATING	CONTINGENCY DESCRIPTION						
CAPAB	<-----	FROM	----->	<-----	TO	----->	CKT	FACTOR	SHIFT	BAS/CNT								
									MW	A/B								
-7226.1	38894	N APP 3	345	39568	NAP3 NEU	345	1	0.02280	614.8	450.0	38893 N APP 2	345	38894 N APP 3	345	1	784		
											Open	38893 N APP 2	345	38894 N APP 3	345	1		
-4746.5	39244	ARP 345	345	39785	ROCKY RN	345	1	0.02555	1077.3	956.0	36406 WEMPL; B	345	39058 PAD	345	345	1	1443	
											Open	36406 WEMPL; B	345	39058 PAD	345	345	1	
-3466.7	38896	N APP 6	138	39568	NAP3 NEU	345	1	-0.02280	-529.1	450.0	38893 N APP 2	345	38894 N APP 3	345	1	784		
											Open	38893 N APP 2	345	38894 N APP 3	345	1		
-2214.4	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.02245	-210.7	161.0	39307 S 43RD N	138	39366 NORWICH	138	1	1074		
											Open	39307 S 43RD N	138	39366 NORWICH	138	1		
-2213.8	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.02245	-210.7	161.0	39307 S 43RD N	138	39350 LINCOLN1	138	1	1073		
											Open	39307 S 43RD N	138	39350 LINCOLN1	138	1		
-2111.8	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03222	-229.0	161.0	39373 OK CRK-4	138	39422 PENNSYLV	138	1	1141		
											Open	39373 OK CRK-4	138	39422 PENNSYLV	138	1		
-1828.9	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03363	-222.5	161.0	39371 OC CRK-2	138	39474 RAMSY-6	138	1	1137		
											Open	39371 OC CRK-2	138	39474 RAMSY-6	138	1		
-1757.8	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03486	-222.3	161.0	39344 KANSAS-6	138	39366 NORWICH	138	1	1113		
											Open	39344 KANSAS-6	138	39366 NORWICH	138	1		
-1730.0	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03354	-219.0	161.0	39361 NICHLSN	138	39373 OK CRK-4	138	1	1128		
											Open	39361 NICHLSN	138	39373 OK CRK-4	138	1		
-1723.3	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03363	-219.0	161.0	39344 KANSAS-6	138	39474 RAMSY-6	138	1	1114		
											Open	39344 KANSAS-6	138	39474 RAMSY-6	138	1		
-1722.4	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.02807	-209.4	161.0	WPL-ARP3e					1940		
											Open	39244 ARP	345	345 39785 ROCKY RN	345	1		
											Open	39241 POE	138	138 39939 SAL	138	138	1	
											Open	39240 SAR	138	138 39241 POE	138	138	1	
											Open	38357 WWR	46	46.0 38696 WATER QU	46.0	1		
											Open	38342 COC	69	69.0 39901 COC DPC	69.0	1		
											Open	39704 SHRMN	ST 115	39705 CASSEL	115	1		
-1715.5	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03354	-218.5	161.0	39361 NICHLSN	138	39473 RAMSY-5	138	1	1129		
											Open	39361 NICHLSN	138	39473 RAMSY-5	138	1		
-1689.2*	39251	ALERTON8	138	39371	OC CRK-2	138	1	-0.03222	-215.4	161.0	39264 BRANCH	138	39422 PENNSYLV	138	1	1033		
											Open	39264 BRANCH	138	39422 PENNSYLV	138	1		
-1529.0	39371	OC CRK-2	138	39474	RAMSY-6	138	1	0.05165	309.0	230.0	39373 OK CRK-4	138	39422 PENNSYLV	138	1	1141		
											Open	39373 OK CRK-4	138	39422 PENNSYLV	138	1		
-1283.1	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05198	-251.7	185.0	39373 OK CRK-4	138	39422 PENNSYLV	138	1	1141		
											Open	39373 OK CRK-4	138	39422 PENNSYLV	138	1		

-1199.4	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1	0.09191	470.2	360.0	39367	OK	CRK	345	39382	OC	CRK	N	100	1	1132	
													Open	39367	OK	CRK	345	39382	OC	CRK	N	100	1	
-1195.8	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1	0.09191	469.9	360.0	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	1140	
													Open	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	
-1170.1	39255	ARCADN5		138	39517	WAUKSH4		138	1	0.03676	330.0	287.0	39255	ARCADN5		138	39519	WAUKSH6		138	1	1017		
													Open	39255	ARCADN5		138	39519	WAUKSH6		138	1		
-1153.4	39332	HARBOR-1		138	39473	RAMSY-5		138	1	-0.06931	-264.9	185.0	39372	OK	CRK-3	138	39373	OK	CRK-4		138	1	1138	
													Open	39372	OK	CRK-3	138	39373	OK	CRK-4		138	1	
-1101.8	38548	LPK	138	138	39533	FOREST J		138	1	-0.02100	-201.1	178.0	WPL-ARP3e										1940	
													Open	39244	ARP	345	345	39785	ROCKY	RN	345	1		
													Open	39241	POE	138	138	39939	SAL	138	138	1		
													Open	39240	SAR	138	138	39241	POE	138	138	1		
													Open	38357	WWR	46	46.0	38696	WATER	QU	46.0	1		
													Open	38342	COC	69	69.0	39901	COC	DPC	69.0	1		
													Open	39704	SHRMN	ST	115	39705	CASSEL		115	1		
-1062.1	39251	ALERTON8		138	39371	OC	CRK-2	138	1	-0.02771	-190.4	161.0	Base Case											
-1039.0	39332	HARBOR-1		138	39473	RAMSY-5		138	1	-0.05354	-240.6	185.0	39371	OC	CRK-2	138	39474	RAMSY-6		138	1	1137		
													Open	39371	OC	CRK-2	138	39474	RAMSY-6		138	1		
-1026.9	39355	MERL	HLS	138	39489	SUMMIT		138	1	0.04319	185.4	141.0	39331	GRANVL	4	138	39508	TMRACKTP		138	1	1094		
													Open	39331	GRANVL	4	138	39508	TMRACKTP		138	1		
-1012.7	39332	HARBOR-1		138	39473	RAMSY-5		138	1	-0.05529	-241.0	185.0	39344	KANSAS-6	138	39366	NORWICH		138	1	1113			
													Open	39344	KANSAS-6	138	39366	NORWICH		138	1			
-996.4	39367	OK	CRK	345	39382	OC	CRK	N	100	1	0.16721	666.6	500.0	39368	OK	CRK-5	230	39369	OK	CRK9	230	1	1133	
													Open	39368	OK	CRK-5	230	39369	OK	CRK9	230	1		
-994.9	39367	OK	CRK	345	39382	OC	CRK	N	100	1	0.16721	666.4	500.0	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1	1134	
													Open	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1		
-989.7	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	-0.16721	-665.5	500.0	39368	OK	CRK-5	230	39369	OK	CRK9	230	1	1133	
													Open	39368	OK	CRK-5	230	39369	OK	CRK9	230	1		
-988.2	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	-0.16721	-665.2	500.0	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1	1134	
													Open	39368	OK	CRK-5	230	39373	OK	CRK-4	138	1		
-985.6	39371	OC	CRK-2	138	39474	RAMSY-6		138	1	0.05165	280.9	230.0	39264	BRANCH	138	39422	PENNSYLV		138	1	1033			
													Open	39264	BRANCH	138	39422	PENNSYLV		138	1			
-981.0	39332	HARBOR-1		138	39473	RAMSY-5		138	1	-0.04639	-230.5	185.0	WPL-ARP3e										1940	
													Open	39244	ARP	345	345	39785	ROCKY	RN	345	1		
													Open	39241	POE	138	138	39939	SAL	138	138	1		
													Open	39240	SAR	138	138	39241	POE	138	138	1		
													Open	38357	WWR	46	46.0	38696	WATER	QU	46.0	1		
													Open	38342	COC	69	69.0	39901	COC	DPC	69.0	1		
													Open	39704	SHRMN	ST	115	39705	CASSEL		115	1		
-967.1	39368	OK	CRK-5	230	39369	OK	CRK9	230	1	-0.09191	-470.9	382.0	39367	OK	CRK	345	39382	OC	CRK	N	100	1	1132	
													Open	39367	OK	CRK	345	39382	OC	CRK	N	100	1	
-963.5	39368	OK	CRK-5	230	39369	OK	CRK9	230	1	-0.09191	-470.6	382.0	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	1140	
													Open	39373	OK	CRK-4	138	39382	OC	CRK	N	100	1	
-952.1	39332	HARBOR-1		138	39473	RAMSY-5		138	1	-0.05354	-236.0	185.0	39344	KANSAS-6	138	39474	RAMSY-6		138	1	1114			
													Open	39344	KANSAS-6	138	39474	RAMSY-6		138	1			
-922.8	39332	HARBOR-1		138	39473	RAMSY-5		138	1	-0.05198	-233.0	185.0	39264	BRANCH	138	39422	PENNSYLV		138	1	1033			
													Open	39264	BRANCH	138	39422	PENNSYLV		138	1			
-918.3	39331	GRANVL	4	138	39508	TMRACKTP		138	1	0.02346	273.5	252.0	39380	MAPLE	138	39955	SAUKVL4		138	1	1142			

										Open 39380 MAPLE	138	39955 SAUKVL4	138	1
-908.4	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.04578	-198.6	157.0		Base Case		
-903.3	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05043	-230.6	185.0	39251	ALERTON8	138	39371 OC CRK-2 138 1 1007
											Open 39251	ALERTON8	138	39371 OC CRK-2 138 1
-882.6	39371	OC CRK-2	138	39474	RAMSY-6	138	1	0.03980	265.1	230.0	39255	ARCADN5	138	39356 MORLND4 138 1 1015
											Open 39255	ARCADN5	138	39356 MORLND4 138 1
-874.0	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.05179	-230.3	185.0	38856	OC CRK7	230	38863 BLUMND3 230 1 730
											Open 38856	OC CRK7	230	38863 BLUMND3 230 1
-872.0	39371	OC CRK-2	138	39474	RAMSY-6	138	1	0.05165	275.0	230.0	39361	NICHLSON	138	39373 OK CRK-4 138 1 1128
											Open 39361	NICHLSON	138	39373 OK CRK-4 138 1
-857.0	39371	OC CRK-2	138	39474	RAMSY-6	138	1	0.05165	274.3	230.0	39361	NICHLSON	138	39473 RAMSY-5 138 1 1129
											Open 39361	NICHLSON	138	39473 RAMSY-5 138 1
-837.1	39372	OK CRK-3	138	39373	OK CRK-4	138	1	-0.13532	-495.3	382.0	39373	OK CRK-4	138	39422 PENNSYLV 138 1 1141
											Open 39373	OK CRK-4	138	39422 PENNSYLV 138 1
-805.1	39344	KANSAS-6	138	39474	RAMSY-6	138	1	-0.05165	-283.6	242.0	39373	OK CRK-4	138	39422 PENNSYLV 138 1 1141
											Open 39373	OK CRK-4	138	39422 PENNSYLV 138 1
-798.6	39371	OC CRK-2	138	39474	RAMSY-6	138	1	0.04802	268.3	230.0	39251	ALERTON8	138	39371 OC CRK-2 138 1 1007
											Open 39251	ALERTON8	138	39371 OC CRK-2 138 1
-769.5	39371	OC CRK-2	138	39474	RAMSY-6	138	1	0.05165	269.7	230.0	39332	HARBOR-1	138	39473 RAMSY-5 138 1 1097
											Open 39332	HARBOR-1	138	39473 RAMSY-5 138 1
-736.1	39373	OK CRK-4	138	39422	PENNSYLV	138	1	0.05888	367.3	324.0	39372	OK CRK-3	138	39373 OK CRK-4 138 1 1138
											Open 39372	OK CRK-3	138	39373 OK CRK-4 138 1
-732.7*	39332	HARBOR-1	138	39473	RAMSY-5	138	1	-0.06429	-232.1	185.0	39253	ARCADN1	345	39367 OK CRK 345 1 1011
											Open 39253	ARCADN1	345	39367 OK CRK 345 1
-724.3	39367	OK CRK	345	39382	OC CRK N	100	1	0.20569	649.0	500.0	39253	ARCADN1	345	39367 OK CRK 345 1 1011
											Open 39253	ARCADN1	345	39367 OK CRK 345 1
-718.8	39373	OK CRK-4	138	39382	OC CRK N	100	1	-0.20569	-647.8	500.0	39253	ARCADN1	345	39367 OK CRK 345 1 1011
											Open 39253	ARCADN1	345	39367 OK CRK 345 1
-690.0	39367	OK CRK	345	39382	OC CRK N	100	1	0.14840	602.4	500.0	39371	OC CRK-2	138	39385 OK C G5 18.0 1 1825
											Open 39371	OC CRK-2	138	39385 OK C G5 18.0 1
-684.8	39367	OK CRK	345	39382	OC CRK N	100	1	0.16474	612.8	500.0	38856	OC CRK7	230	38857 OC CRK8 230 1 729
											Open 38856	OC CRK7	230	38857 OC CRK8 230 1
-682.4	39373	OK CRK-4	138	39382	OC CRK N	100	1	-0.14840	-601.3	500.0	39371	OC CRK-2	138	39385 OK C G5 18.0 1 1825
											Open 39371	OC CRK-2	138	39385 OK C G5 18.0 1
-677.9	39373	OK CRK-4	138	39382	OC CRK N	100	1	-0.16474	-611.7	500.0	38856	OC CRK7	230	38857 OC CRK8 230 1 729
											Open 38856	OC CRK7	230	38857 OC CRK8 230 1
-673.7	39355	MERL HLS	138	39489	SUMMIT	138	1	0.04319	170.1	141.0	39491	SUSSEX	138	39508 TMRACKTP 138 1 1171
											Open 39491	SUSSEX	138	39508 TMRACKTP 138 1
-671.6	39344	KANSAS-6	138	39366	NORWICH	138	1	0.07356	336.4	287.0	39361	NICHLSON	138	39373 OK CRK-4 138 1 1128
											Open 39361	NICHLSON	138	39373 OK CRK-4 138 1
-652.4	39371	OC CRK-2	138	39474	RAMSY-6	138	1	0.04289	258.0	230.0	WPL-ARP3e			1940
											Open 39244	ARP	345	345 39785 ROCKY RN 345 1
											Open 39241	POE	138	138 39939 SAL 138 138 1
											Open 39240	SAR	138	138 39241 POE 138 138 1
											Open 38357	WWR	46	46.0 38696 WATER QU46.0 1
											Open 38342	COC	69	69.0 39901 COC DPC 69.0 1
											Open 39704	SHRMN ST	115	39705 CASSEL 115 1
-650.1	39344	KANSAS-6	138	39366	NORWICH	138	1	0.07356	334.8	287.0	39361	NICHLSON	138	39473 RAMSY-5 138 1 1129

-634.9	39373	OK	CRK-4	138	39422	PENNSYLV	138	1	0.04471	352.4	324.0	Open 39361 NICHLSO	138	39473	RAMSY-5	138	1	
												Open 39371 OC CRK-2	138	39474	RAMSY-6	138	1	1137
												Open 39371 OC CRK-2	138	39474	RAMSY-6	138	1	
-611.9	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	0.04804	259.4	230.0	38856 OC CRK7	230	38863	BLUMND3	230	1	730
												Open 38856 OC CRK7	230	38863	BLUMND3	230	1	
-601.1	39533	FOREST	J	138	39538	KACENTAP	138	1	0.02154	155.9	143.0	WPL-ARP3e						1940
												Open 39244 ARP	345	345	39785	ROCKY RN	345	1
												Open 39241 POE	138	138	39939	SAL	138	1
												Open 39240 SAR	138	138	39241	POE	138	1
												Open 38357 WWR	46	46.0	38696	WATER QU46.0	1	
												Open 38342 COC	69	69.0	39901	COC DPC	69.0	1
												Open 39704 SHRMN	ST	115	39705	CASSEL	115	1
-584.1	39367	OK	CRK	345	39382	OC CRK N	100	1	0.14557	585.0	500.0	39255 ARCADN5	138	39356	MORLND4	138	1	1015
												Open 39255 ARCADN5	138	39356	MORLND4	138	1	
-581.9	39367	OK	CRK	345	39382	OC CRK N	100	1	0.14937	586.9	500.0	38853 RACINE2	345	38867	RACINE5	138	2	723
												Open 38853 RACINE2	345	38867	RACINE5	138	2	
-578.7	39367	OK	CRK	345	39382	OC CRK N	100	1	0.14911	586.3	500.0	39471 RACINE1	345	39472	RACINE4	138	1	1161
												Open 39471 RACINE1	345	39472	RACINE4	138	1	
-576.4	39373	OK	CRK-4	138	39382	OC CRK N	100	1	-0.14557	-583.9	500.0	39255 ARCADN5	138	39356	MORLND4	138	1	1015
												Open 39255 ARCADN5	138	39356	MORLND4	138	1	
-574.3	39373	OK	CRK-4	138	39382	OC CRK N	100	1	-0.14937	-585.8	500.0	38853 RACINE2	345	38867	RACINE5	138	2	723
												Open 38853 RACINE2	345	38867	RACINE5	138	2	
-571.1	39373	OK	CRK-4	138	39382	OC CRK N	100	1	-0.14911	-585.2	500.0	39471 RACINE1	345	39472	RACINE4	138	1	1161
												Open 39471 RACINE1	345	39472	RACINE4	138	1	
-564.5	39367	OK	CRK	345	39382	OC CRK N	100	1	0.27714	656.5	500.0	38853 RACINE2	345	39367	OK CRK	345	1	724
												Open 38853 RACINE2	345	39367	OK CRK	345	1	
-560.5	39373	OK	CRK-4	138	39382	OC CRK N	100	1	-0.27714	-655.3	500.0	38853 RACINE2	345	39367	OK CRK	345	1	724
												Open 38853 RACINE2	345	39367	OK CRK	345	1	
-556.8	39372	OK	CRK-3	138	39373	OK CRK-4	138	1	-0.11551	-446.3	382.0	39371 OC CRK-2	138	39385	OK C G5	18.0	1	1825
												Open 39371 OC CRK-2	138	39385	OK C G5	18.0	1	
-554.2*	39371	OC	CRK-2	138	39474	RAMSY-6	138	1	0.06152	264.1	230.0	39253 ARCADN1	345	39367	OK CRK	345	1	1011
												Open 39253 ARCADN1	345	39367	OK CRK	345	1	
-542.7*	39367	OK	CRK	345	39382	OC CRK N	100	1	0.14915	580.9	500.0	WPL-ARP3e						1940
												Open 39244 ARP	345	345	39785	ROCKY RN	345	1
												Open 39241 POE	138	138	39939	SAL	138	1
												Open 39240 SAR	138	138	39241	POE	138	1
												Open 38357 WWR	46	46.0	38696	WATER QU46.0	1	
												Open 38342 COC	69	69.0	39901	COC DPC	69.0	1
												Open 39704 SHRMN	ST	115	39705	CASSEL	115	1
-535.2*	39373	OK	CRK-4	138	39382	OC CRK N	100	1	-0.14915	-579.8	500.0	WPL-ARP3e						1940
												Open 39244 ARP	345	345	39785	ROCKY RN	345	1
												Open 39241 POE	138	138	39939	SAL	138	1
												Open 39240 SAR	138	138	39241	POE	138	1
												Open 38357 WWR	46	46.0	38696	WATER QU46.0	1	
												Open 38342 COC	69	69.0	39901	COC DPC	69.0	1
												Open 39704 SHRMN	ST	115	39705	CASSEL	115	1
-524.4	39344	KANSAS-6	138	39366	NORWICH	138	1	0.07356	325.6	287.0	39332 HARBOR-1	138	39473	RAMSY-5	138	1	1097	
												Open 39332 HARBOR-1	138	39473	RAMSY-5	138	1	

-521.9	39344	KANSAS-6	138	39366	NORWICH	138	1	0.06594	321.4	287.0	39251	ALERTON8	138	39371	OC	CRK-2	138	1	1007
											Open	39251	ALERTON8	138	39371	OC	CRK-2	138	1
-505.8	39373	OK	CRK-4	138	39422	PENNSYLV	138	1	0.04471	346.6	324.0	39344	KANSAS-6	138	39474	RAMSY-6	138	1	1114
												Open	39344	KANSAS-6	138	39474	RAMSY-6	138	1