

**SPP TLR 5 Investigation Report**  
**Temp 15 Flowgate 16332**  
**(McElroy – Kinze 138 kV line for the loss of Sooner – Spring Creek 345 kV line)**  
**TLR Level 5: April 28, 2010**  
**Report Issued: May 3, 2010**

**1. Description of purpose/cause of hold/curtailment.**

This report is submitted in accordance with the NERC Transmission Loading Relief Investigation Procedure for the Level 5 TLR event that occurred on Flowgate 16332 on April 28, 2010. Flowgate 16332 is an SPP flowgate created due to the planned maintenance outage of the Woodring – Sooner 345 kV line. The Level 5 TLR was in effect from 3:00 until 4:00 CST and again from 6:00 until 15:25 CST on April 28, 2010. Projected post contingent flows on the McElroy – Kinze 138 kV line exceeded the SOL.

**2. Facility/flowgate limitations and flows at the time the TLR was initiated.**

At the time the Level 5A TLR was issued, the Limiting Element was rated at 222 MVA. Flow on the Limiting Element was 103 MVA. Flow on the Contingent Element was 393 MVA. The LODF was approximately 31%. Post-contingent flow on the Limiting Element was approximately 224 MVA.

**3. TLR levels, timing, and relief requested amounts.**

TLR levels, timing and relief requested amounts are shown in the Event History and NERC TLR Log on pages 3-6.

**4. Transmission and generation outages or changes from prediction that may have contributed.**

There were no unplanned outages that contributed to this TLR.

**5. Procedures implemented prior to hold/curtailment.**

There were no non-firm transactions or market flows impacting the flowgate by more than 5% prior to the Level 5 TLR. The TLR was escalated to a Level 5 in order to curtail firm transactions and firm market flow to relieve loading.

**6. The initial investigation shall compare all transaction curtailment lists as generated by the IDC with the list of transactions flowing as determined by the IDC (Whole Transaction Lists) both before and after curtailment. The reasons for any transactions that were excluded from curtailment shall be provided. For those transactions not curtailed, the Reliability Authority will identify those entities and any affiliation with said entities.**

There were no known transactions excluded from curtailment for this TLR.

**7. List of known transactions not in the IDC with Transaction Contribution Factors greater than the curtailment threshold and actions taken to curtail such transactions.**

There were no known transactions not in the IDC.

**8. Excerpts from the RA Operations Log containing information relevant to the TLR event.**

Information was provided to Reliability Coordinators through the IDC and the RCIS. Also the SPP Reliability Coordinators logged information describing the actions taken at each issuance of the TLR, see page 7. Times in the RC Log are CDT.

**9. Flowgate limitations as identified by security analysis processes conducted by the Reliability Authority for the day prior to the TLR event.**

SPP's outage coordination process identified potential for loading issues due to the outage of the Woodring – Sooner 345 kV line. The temporary flowgate was created in order to dispatch around the constraint via TLR to control the loading until the line was returned to service.

**10. State Estimator snapshots and security analysis, including any contingency analysis or stability analysis, along with any other recorded data indicating need for TLR.**

The SPP Reliability Coordinator was monitoring their state estimator, RTCA and RTLODF applications for current flowgate loading and other potential issues during this time. eDNA data historian recorded all line flows before, during and after the Level 5 TLR event, see pages 8.

**11. ATC limitations before, during, and after the TLR event.**

SPP Tariff Administration grants transmission service using an AFC process. This process evaluates each transmission request on a case by case basis. SPP Tariff Administration was not granting any transmission requests that impacted the congested flowgate by 3 % or greater at the time of the Level 5 TLR.

**12. Description of actions taken to avoid future hold/curtailments.**

This TLR was caused by a combination of generation patterns, load, and system flows due to the planned maintenance outage of the Woodring – Sooner 345 kV line. Since the temporary outage was the most significant factor associated with this event, no additional actions were necessary.

**13. Provide IDC generated Congestion Management Reports showing transaction curtailment list and Control Area NNL (network and native load) curtailment responsibility.**

Congestion Management Reports for each issuance of the TLR have been reviewed and are archived in the IDC. These screen shots have not been included to reduce the size of this report.

**14. Re-dispatch actions taken.**

SPP EIS Market redispatch was implemented during the entire TLR event. Firm and non-firm Market Flows were reduced on the flowgate as reported in the TLR Event History and NERC TLR Log on pages 3-6.

## TLR Event History

**16332 - Temp 15 - McElroy - Kinze 138 kV (ftlo) Sooner - Spring Creek 345 kV**

Status	TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
								Tags	MW
SUPERSEDED	5A	04/28/2010 03:00	04/28/2010 02:33	04/28/2010 02:33:06	10.0	0.0	10.0	0	0
<a href="#">SUPERSEDED</a>	3A	04/28/2010 04:00	04/28/2010 03:31	04/28/2010 03:31:25	11.0	11.0	0.0	0	0
<a href="#">SUPERSEDED</a>	3A	04/28/2010 05:00	04/28/2010 04:29	04/28/2010 04:29:14	6.0	6.0	0.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 06:00	04/28/2010 05:34	04/28/2010 05:33:50	6.0	0.0	6.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 07:00	04/28/2010 06:28	04/28/2010 06:27:59	4.0	0.0	4.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 08:00	04/28/2010 07:28	04/28/2010 07:27:49	3.0	0.0	3.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 09:00	04/28/2010 08:27	04/28/2010 08:27:08	3.0	0.0	3.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 10:00	04/28/2010 09:27	04/28/2010 09:27:33	0.0	0.0	0.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 11:00	04/28/2010 10:27	04/28/2010 10:26:59	8.0	0.0	8.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 12:00	04/28/2010 11:27	04/28/2010 11:27:20	2.0	0.0	2.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 13:00	04/28/2010 12:27	04/28/2010 12:27:27	5.0	0.0	5.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 14:00	04/28/2010 13:28	04/28/2010 13:27:47	4.0	0.0	4.0	0	0
<a href="#">SUPERSEDED</a>	5A	04/28/2010 15:00	04/28/2010 14:28	04/28/2010 14:28:19	4.0	0.0	4.0	0	0
<a href="#">TERMINATED</a>	0	04/28/2010 15:25	04/28/2010 15:02	04/28/2010 15:02:14	0.0	0.0	0.0	0	0



Apr 28 09:27 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-8 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 0.0 0.0 0.0 <b>0.0</b>	0.0 0.0 0.0 0.0 <b>0.0</b>	106	228	390	N/A
Apr 28 10:27 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-8 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 0.0 8.0 0.0 <b>8.0</b>	0.0 0.0 8.0 0.0 <b>8.0</b>	105	224	387	N/A
Apr 28 11:27 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-8 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 0.0 2.0 0.0 <b>2.0</b>	0.0 0.0 2.0 0.0 <b>2.0</b>	103	223	392	N/A
Apr 28 12:27 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-8 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 0.0 5.0 0.0 <b>5.0</b>	0.0 0.0 5.0 0.0 <b>5.0</b>	100	218	384	N/A
Apr 28 13:28 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-8 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 0.0 4.0 0.0 <b>4.0</b>	0.0 0.0 4.0 0.0 <b>4.0</b>	102	222	390	N/A
Apr 28 14:28 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-8 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 0.0 4.0 0.0 <b>4.0</b>	0.0 0.0 4.0 0.0 <b>4.0</b>	105	228	395	N/A
Apr 28 15:02 (CST)	TLR 0	CURRENT	NONE	NONE	NONE				92	178	281	N/A

### TLR Schedule Totals

Priority	Schedule			
	Total Tags Cut / Hold	IDC Cut MW	RC Cut Acknowledge MW	Hold MW
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
SWPP	ED-2	0.0	0.0
	ED-8	10.0	10.0
	FIRM-7	39.0	39.0
Total for SWPP		49.0	49.0
Total		49.0	49.0

## Reliability Log for April, 28

2010

Time	Initials	Comments	Wednesday
0333	MRH	Issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Load &amp; Feasibility</b>	
0431	MRH	Re-issued TLR Level 3A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332.	
0529	LRG	Re-issued TLR Level 3A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332.	
0633	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
0727	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
0827	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
0927	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
1027	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
1126	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
1227	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
1327	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
1427	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
1528	LRG	Re-issued TLR Level 5A on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332. <b>Feasibility</b>	
1558	LRG	Sooner-Woodring 345 line returned to service	
1602	LRG	Re-issued TLR Level 0 on Temp 15 MCElroy-Kinze 138kV fto Sooner-Spring Creek 345kv Flgt 16332.	

# Temp15\_16332

— Post Cont. — SOL

