

**SPP TLR 5 Investigation Report  
Flowgate 5203  
(N. American Philips – W. McPherson 115 kV for loss of E. McPherson – Summit 230 kV)  
(SPHWMCSUMEMC)  
TLR Level 5: November 5, 2008  
Report Issued: December 3, 2008**

**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 5204 on November 5, 2008. Flowgate 5204 is an SPP flowgate. The Level 5 TLR was in effect from 13:15 until 15:20 CST on November 5, 2008. Projected post-contingent flows on the North American Philips – West McPherson 115 kV line exceeded the SOL. The monitored element on this flowgate has a dynamic temperature dependent rating. TLR is issued dependent on this dynamic rating.

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

At the time the Level 5B TLR was issued, the Limiting Element was rated at 225 MVA. Flow on the Limiting Element was 68 MVA. Flow on the Contingent Element was 207 MVA. The LODF was approximately 82%. Post-contingent flow on the Limiting Element was approximately 237 MVA.

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

TLRs levels, timing and relief requested amounts are shown in the Event History and NERC TLR Log on pages 3-5.

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

There was one planned outage, Mullergren-Circle 230 kV line, in the area that contributed to the TLR. This would not have been the case had it not been for two unplanned outages that occurred simultaneously in the area. An outage of the Circle-Moundridge 115 kV line had to be extended when maintenance work was not completed as scheduled. Notice of the extension was not provided. Additionally, the HEC-Huntsville 115 kV line was taken out of service without prior notice. This left the flowgate as the only source into the Hutchinson area northwest of Wichita.

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

There were no non-firm transactions or market flow impacting the flowgate at greater than 5%. The only impacts on the flowgate were from firm, market flows necessitating the issuance of the Level 5 TLR in order to obtain loading relief.

**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 6. Times in the RC Log are CST.

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

In the next day process, we did not see an issue with this flowgate, based off of the peak study.

**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 page 7.

**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 transmission facility outages in the vicinity of Hutchinson, KS. Closer coordination of outages will be required in the future to ensure this event does not repeat itself.

**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 Market Flow was reduced on the flowgate as reported in the TLR Event History and NERC TLR Log on pages 3-5.

## TLR Event History

### 5204 - SphWmcSumEmc

Status	TLR Level	TLR Date (CST)	TLR Confirm Time (CST)	Run Time (CST)	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
								Tags	MW
SUPERSEDED	3B	11/05/2008 12:35	11/05/2008 12:30	11/05/2008 12:30:34	10.0	10.0	0.0	0	0
<a href="#">SUPERSEDED</a>	5B	11/05/2008 13:15	11/05/2008 13:02	11/05/2008 13:01:56	196.0	0.0	196.0	0	0
<a href="#">SUPERSEDED</a>	5A	11/05/2008 15:00	11/05/2008 14:30	11/05/2008 14:30:15	207.0	0.0	207.0	0	0
<a href="#">TERMINATED</a>	0	11/05/2008 15:20	11/05/2008 15:08	11/05/2008 15:07:47	0.0	0.0	0.0	0	0

12/03/2008 10:22:15 (CST)

OATI IDC Support Phone: 763-201-2010 Fax: 763-553-2813

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## Event Summary

FILE SAVED AS: SWPP\_5204\_20081105\_1235.htm

Incident: SWPP_5204_20081105_1235	Date: 11/05/2008	Reliability Coordinator: SWPP
Initial Conditions: load increasing		
Flowgate: 5204 - SphWmcSumEmc	Rating: 225	LODF: 81.80%
TLR Direction: Normal		
Effective StartTime: 11/05/2008 12:35	Effective EndTime: 11/05/2008 15:20	TLR Duration: 2 Hours and 45 Minutes

## TLR Actions

Confirm Time	Level	Effective Hour	Priority	Schedule								NNL Relief			Market Relief				Flow			TLR Action Comments
				Total Tags Cut / Hold	IDC Cut		RC Cut Acknowledge		Hold		CA	IDC MW	RC Ackn MW	Type	Mkt	IDC MW	RC Ackn MW	Current	Post Cont.	Cont. Flow		
					MW	Relief	MW	Relief	MW	Relief												
Nov 05 12:30	TLR 3B	CURRENT		NONE								NONE			ED-2	SWPP	0.0	0.0	67	236	207	N/A
		NEXT		NONE								NONE			ED-5	SWPP	0.0	0.0				
Nov 05 13:02	TLR 5B	CURRENT		NONE								NONE			ED-2	SWPP	0.0	0.0	68	237	207	N/A
		NEXT		NONE								NONE			ED-5	SWPP	0.0	0.0				
Nov 05 14:30	TLR 5A	NEXT		NONE								NONE			ED-2	SWPP	0.0	0.0	63	229	203	N/A
				NONE								NONE			FIRM-7	SWPP	207.0	207.0				
Nov 05 15:08	TLR 0	CURRENT		NONE								NONE			NONE				51	190	171	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-6	0.0	0.0
	FIRM-7	410.0	410.0
Total for SWPP		410.0	410.0
<b>Total</b>		<b>410.0</b>	<b>410.0</b>

12/03/2008 10:23:01 (CST)

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	A	B	C	D
1	<b>Reliability Log for November, 5</b>			<b>2008</b>
2	Time	Initials	Comments	
3				
9	0031	LRG	Issued TLR level 0 on SphWmcSumEmc #5204	
43	0820	RGH	Issued TLR level 3B on SphWmcSumEmc #5204	
49	0925	RGH	Issued TLR level 3B on SphWmcSumEmc #5204	
53	1026	RGH	Issued TLR level 0 on SphWmcSumEmc #5204	
63	1230	RGH	Issued TLR level 3B on SphWmcSumEmc #5204	
66	1301	RGH	Issued TLR level 5B on SphWmcSumEmc #5204	
70	1430	RGH	Issued TLR level 5A on SphWmcSumEmc #5204	
71	1431	RGH	WR McPherson unit #4 unit on line	
75	1507	RGH	Issued TLR level 0 on SphWmcSumEmc #5204	
116				

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