

**SPP TLR 5 Investigation Report**  
**Flowgate TEMP10\_16439**  
**(Platte City – Kansas City International 161 kV line for loss of Stranger - Craig 345 kV line)**  
**TLR Level 5: June 22-23, 2010**  
**Report Issued: July 19, 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 16439 on June 22-23, 2010. Flowgate 16439 is an SPP flowgate. The Level 5 TLR was in effect from 23:20 CST on June 22 until 00:55 CST on June 23, 2010. Projected post-contingent flows on the Platte City – Kansas City International (KCI) 161 kV line exceeded the SOL.

**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 224 MVA. Flow on the Limiting Element was 188 MVA. Flow on the Contingent Element was 520 MVA. The LODF was approximately 10%. The actual LODF differs from the IDC LODF due to the breaker reconfiguration at the Nashua Bus. Post-contingent flow on the Limiting Element was approximately 240 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 3-5.

**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 that impacted the flowgate by more than 5%. The TLR was escalated to a Level 5 in order to curtail firm transactions and firm market flow to alleviate loading on the flowgate.

**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 CDT.

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

The next day study process did not indicate an issue with this flowgate based upon conditions at the time of the daily peak.

**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. The Platte City – KCI 161 kV line was showing in the RTCA application on June 10, 2010. After confirmation with the Balancing Authority, it was decided to build the temporary flowgate. 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 a combination of generation patterns, load, and system flows in the Kansas City area which created heavy west to east and north to south flows. During the TLR event, the Platt City-KCI-Ferrel View-TWA-Roanridge line was opened between Ferrel View and TWA reducing loading on the flowgate. In the future, the mitigation plan will be to open the line at the same location but in a post-contingency situation instead of pre-contingency since this configuration puts TWA, KCI, and Ferrel View on radial feeds. Also, KCPL has replaced a wavetrap at the KCI substation in order to increase the rating on the Platte City – KCI 161 kV line.

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

## TLR Event History

16439 - Temporary 10 - Plat City - KCI 161 ftlo Stranger - Craig 345

Status	TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
								Tags	MW
SUPERSEDED	3A	06/22/2010 22:00	06/22/2010 21:42	06/22/2010 21:41:49	28.0	26.0	2.0	0	0
<a href="#">SUPERSEDED</a>	3A	06/22/2010 23:00	06/22/2010 22:27	06/22/2010 22:26:35	44.0	41.0	3.0	0	0
<a href="#">SUPERSEDED</a>	5B	06/22/2010 23:20	06/22/2010 23:08	06/22/2010 23:07:01	10.0	0.0	10.0	0	0
<a href="#">SUPERSEDED</a>	5B	06/23/2010 00:40	06/23/2010 00:27	06/23/2010 00:27:08	20.0	0.0	20.0	0	0
<a href="#">SUPERSEDED</a>	1	06/23/2010 00:55	06/23/2010 00:44	06/23/2010 00:44:36	0.0	0.0	0.0	0	0
<a href="#">TERMINATED</a>	0	06/23/2010 05:40	06/23/2010 05:27	06/23/2010 05:27:26	0.0	0.0	0.0	0	0



### 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	32.0	32.0
	FIRM-7	66.0	66.0
<b>Total for SWPP</b>		<b>98.0</b>	<b>98.0</b>
<b>Total</b>		<b>98.0</b>	<b>98.0</b>

Reliability Log for June, 22			2010
Time	Initials	Comments	
20-Jun-10		<b>Nashua PCBs R 5-8 and R 3-4 open per op guide due to loading on Flgt. 5382.</b>	
2241	LWB	Issued TLR level 3A on Temp. 10 Plat City-KCI flo Stranger-Craig #16439, eff limit set at 195 RTB solving 201, PCF at 232	
2326	LWB	Re-issued TLR level 3A on Temp. 10 Plat City-KCI flo Stranger-Craig #16439, eff limit set at 190 RTB solving 202, PCF at 240	

Reliability Log for June, 23			2010
Time	Initials	Comments	
20-Jun-10		<b>Nashua PCBs R 5-8 and R 3-4 open per op guide due to loading on Flgt. 5382.</b>	
23-Jun-10		<b>KCPL opened Ferrel View breaker 882 161kv to mitigate loading on Temp 10 flgt.</b>	
0007	LWB	Issued TLR level 5B on Temp. 10 Plat City-KCI flo Stranger-Craig #16439, eff limit set at 190 RTB solving 202, PCF at 240, Flowgate GLDF in IDC will not provide me any information. Had Andrew call IDC help desk.	
0018	LWB	Issued TLR level 3B COOPER_S flgt 6009	
0047	LWB	Called MISO St. Joe to request a trim back on the wind coming into SPP. Spoke to Jeff he stated he would look at the police between SPP and MISO on doing this. He stated the there is 2400 mw's coming into us.	
0127	LWB	Re-issued TLR level 5B on Temp. 10 Plat City-KCI flo Stranger-Craig #16439, eff limit set at 190 RTB solving 202, PCF at 240, Flowgate GLDF in IDC will not provide me any information. Had Andrew call IDC help desk.	
0129	LWB	Issued TLR level 3A COOPER_S flgt 6009	
0130	LWB	Ask shift engr to study reconfiguring the Nashua Buss form the way it is configured at presenty. Which is Nashua PCBs R 5-8 and R 3-4 open	
0134	LWB	In Andrew talking to KCPL Brian, he suggest that instead of opening the KCI line section that we open at Ferrel View 882 161kv buss this will allow for better loading on their system. Andrew's study reaffirmed this.	
0136	LWB	Spoke to Brian at KCPL he is in agreement to open Ferrel View breaker 882 on 161kv.	
0138	LWB	Brian at KCPL opened breaker 882 at Ferrell View to mitigate flgt Temp 10	
0144	LWB	Issued TLR level 1 on Temp. 10 Plat City-KCI flo Stranger-Craig #16439.	
0201	LWB	Jeff at MISO St. Paul called to report that he can not find an agreement between MISO and SPP to trim the wind back other than through a TLR procedure. The reason I had ask MISO if they could do this is because Mike Hill informed me last week that he had gotten MISO to do this for him a couple of week back.	
0227	LWB	Re-issued TLR level 3A COOPER_S flgt 6009	
0326	LWB	Re-issued TLR level 3A COOPER_S flgt 6009	
0427	LWB	Re-issued TLR level 3A COOPER_S flgt 6009	
0528	LRG	Re-issued TLR level 0 COOPER_S flgt 6009	
0627	LRG	Issued TLR level 0 on Temp. 10 Plat City-KCI flo Stranger-Craig #16439.	

# TEMP10\_16439

Real Time SOL

