

**SPP TLR 5 Investigation Report**  
**Flowgate 15316**  
**(Diana – Lonestar South 138 kV for loss of Wilkes – Welsh 345 kV)**  
**(TEMPORARY06)**  
**TLR Level 5: September 13, 2008 – September 14, 2008**  
**Report Issued: October 21, 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 15316 on September 13, 2008. Flowgate 15316 is an SPP flowgate. The Level 5 TLR was in effect from 20:10 on September 13 until 7:00 CST on September 14, 2008. Projected post-contingent flows on the Diana – Lonestar South 138 kV line exceeded the SOL. The flowgate was created due to overloads caused by outages due to Hurricane Ike. The monitored element on this flowgate has a dynamic temperature dependent rating. TLR was issued dependent on this calculated rating.

**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 287 MVA. Flow on the Limiting Element was 125 MVA. Flow on the Contingent Element was 505 MVA. The LODF was approximately 27%. Post-contingent flow on the Limiting Element was approximately 261 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 3-6.

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

There were no unplanned outages.

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

Curtailed non-firm transactions. Next hour flows for the 20:00 hour predicted that not enough non-firm could be curtailed 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 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.**

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 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 during the temporary outages caused by Hurricane Ike. Due to this situation, no actions were taken to avoid future hold/curtailments.

**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 3-6.

## TLR Event History

### 15316 - Temp 06 Diana - Lonestar South 138 kV ftlo Wilkes - Welsh 345 kV

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	09/13/2008 19:25	09/13/2008 19:14	09/13/2008 19:13:36	15.0	15.0	0.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/13/2008 20:10	09/13/2008 19:52	09/13/2008 19:52:08	15.0	0.0	15.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/13/2008 21:00	09/13/2008 20:33	09/13/2008 20:32:28	22.0	0.0	22.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/13/2008 22:00	09/13/2008 21:34	09/13/2008 21:33:49	29.0	0.0	29.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/13/2008 23:00	09/13/2008 22:35	09/13/2008 22:34:47	44.0	0.0	44.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/14/2008 00:00	09/13/2008 23:30	09/13/2008 23:30:02	30.0	0.0	30.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/14/2008 01:00	09/14/2008 00:28	09/14/2008 00:28:12	58.0	0.0	58.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/14/2008 02:00	09/14/2008 01:29	09/14/2008 01:28:35	40.0	0.0	40.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/14/2008 03:00	09/14/2008 02:30	09/14/2008 02:29:52	133.0	0.0	133.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/14/2008 04:00	09/14/2008 03:28	09/14/2008 03:28:13	46.0	0.0	46.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/14/2008 05:00	09/14/2008 04:28	09/14/2008 04:28:16	34.0	0.0	34.0	0	0
<a href="#">SUPERSEDED</a>	5A	09/14/2008 06:00	09/14/2008 05:37	09/14/2008 05:36:24	18.0	0.0	45.0	0	0
<a href="#">SUPERSEDED</a>	3A	09/14/2008 07:00	09/14/2008 06:33	09/14/2008 06:32:48	0.0	0.0	0.0	0	0
<a href="#">SUPERSEDED</a>	3A	09/14/2008 08:00	09/14/2008 07:33	09/14/2008 07:33:26	0.0	0.0	0.0	0	0
<a href="#">SUPERSEDED</a>	3A	09/14/2008 09:10	09/14/2008 08:52	09/14/2008 08:51:56	17.0	0.0	17.0	0	0
<a href="#">SUPERSEDED</a>	3A	09/14/2008 10:00	09/14/2008 09:38	09/14/2008 09:37:32	18.0	0.0	18.0	0	0
<a href="#">SUPERSEDED</a>	3A	09/14/2008 11:00	09/14/2008 10:34	09/14/2008 10:33:53	0.0	0.0	0.0	0	0
<a href="#">SUPERSEDED</a>	3A	09/14/2008 12:00	09/14/2008 11:33	09/14/2008 11:33:19	0.0	0.0	2.0	1	19
<a href="#">TERMINATED</a>	0	09/14/2008 13:00	09/14/2008 12:36	09/14/2008 12:35:51	0.0	0.0	0.0	0	0

10/24/2008 09:03:41 (CST)

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Sep 14 00:28	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 19.0 39.0 0.0 <b>58.0</b>	0.0 19.0 39.0 0.0 <b>58.0</b>	118	266	547	N/A
Sep 14 01:29	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 30.0 10.0 0.0 <b>40.0</b>	0.0 30.0 10.0 0.0 <b>40.0</b>	123	271	547	N/A
Sep 14 02:30	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 43.0 90.0 0.0 <b>133.0</b>	0.0 43.0 90.0 0.0 <b>133.0</b>	109	259	557	N/A
Sep 14 03:28	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 25.0 21.0 0.0 <b>46.0</b>	0.0 25.0 21.0 0.0 <b>46.0</b>	107	249	528	N/A
Sep 14 04:28	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 24.0 10.0 0.0 <b>34.0</b>	0.0 24.0 10.0 0.0 <b>34.0</b>	110	251	522	N/A
Sep 14 05:37	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT <b>Total</b>	SWPP SWPP SWPP SWPP	0.0 45.0 0.0 0.0 <b>45.0</b>	0.0 45.0 0.0 0.0 <b>45.0</b>	99	241	528	N/A
Sep 14 06:33	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 0.0 0.0 <b>0.0</b>	0.0 0.0 0.0 <b>0.0</b>	102	243	521	N/A
Sep 14 07:33	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 0.0 0.0 <b>0.0</b>	0.0 0.0 0.0 <b>0.0</b>	101	239	512	N/A
Sep 14 08:52	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 17.0 0.0 <b>17.0</b>	0.0 17.0 0.0 <b>17.0</b>	108	250	526	N/A
Sep 14 09:38	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 18.0 0.0 <b>18.0</b>	0.0 18.0 0.0 <b>18.0</b>	113	256	531	N/A
Sep 14 10:34	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 0.0 0.0 <b>0.0</b>	0.0 0.0 0.0 <b>0.0</b>	108	248	518	N/A
Sep 14 11:33	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 0.0 0.0 <b>0.0</b>	0.0 0.0 0.0 <b>0.0</b>	104	228	461	N/A
Sep 14 12:38	TLR 0	CURRENT	NONE	NONE	NONE				99	188	329	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	242.0	242.0
	FIRM-7	289.0	289.0
Total for SWPP		531.0	531.0
<b>Total</b>		<b>531.0</b>	<b>531.0</b>

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	A	B	C	D
1	<b>Reliability Log for September, 13</b>			<b>2008</b>
2	Time	Initials	Comments	
34	2013	RGH	Issued TLR level 3B on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316	
37	2052	"	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- EES Frontier Units showed up on the IDC GLDF report but are offline. Excluded these units in IDC.	
40	2132	"	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
44	2233	"	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
48	2334	"	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
1	<b>Reliability Log for September, 14</b>			<b>2008</b>
2	Time	Initials	Comments	
7	0030	RGH	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
11	0128	"	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
15	0228	"	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
18	0329	"	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
21	0428	"	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
23	0528	"	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
27	0636	AH	Issued TLR level 5A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 -- Excluded EES Frontier Units from NNL requirements due to they are offline	
30	0734	AH	Issued TLR level 3A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 --	
35	0834	AH	Issued TLR level 3A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 --	
39	0951	AH	Issued TLR level 3A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 --	
44	1037	AH	Issued TLR level 3A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 --	
51	1133	AH	Issued TLR level 3A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 --	
55	1229	AH	Issued TLR 5A on Temp 8 ,flgt# 15317 NTexas-Whitney 138 flo Pirkey-Diana345	
57	1233	AH	Issued TLR level 3A on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 --	
61	1335	AH	Issued TLR level 0 on Temp06 Diana - Lonestar South 138kv flo Wilkes - Welsh 345kv #15316 --	

15316 9-13-08

