

**SPP TLR 5 Investigation Report
Flowgate 15812
(Temp 20 Arcadia 345/138 kV Transformer 1 for the loss of
Arcadia 345/138 kV Transformer 2)
(Temp 20)
TLR Level 5: May 26, 2009
Report Issued: June 2, 2009**

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 15812 on May 26, 2009. Flowgate 15812 is an SPP flowgate. The Level 5 TLR was in effect from 16:00 until 21:00 CST on May 26, 2009. Projected post-contingent flows on Arcadia 345/138 kV transformer exceeded the SOL. The flowgate was created due to the temporary outage of the Arcadia - Northwest 345 kV line.

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 493 MVA. Flow on the Limiting Element was 285 MVA. Flow on the Contingent Element was 300 MVA. The LODF was approximately 56%. Post-contingent flow on the Limiting Element was approximately 453 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 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% at the time the Level 5 TLR was issued. 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 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. 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 during the temporary outage of the Arcadia - Northwest 345 kV line. Due to this situation, no further actions were taken.

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

15812 - Temporary 20 Arcadia 345/138 XFR 1 (flo) Arcadia 345/138 XFR 2

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	05/26/2009 12:45	05/26/2009 12:35	05/26/2009 12:35:10	50.0	50.0	0.0	0	0
SUPERSEDED	3A	05/26/2009 14:00	05/26/2009 13:26	05/26/2009 13:26:33	89.0	89.0	0.0	0	0
SUPERSEDED	3A	05/26/2009 15:00	05/26/2009 14:32	05/26/2009 14:31:36	109.0	109.0	0.0	0	0
SUPERSEDED	5A	05/26/2009 16:00	05/26/2009 15:34	05/26/2009 15:32:52	119.0	0.0	119.0	1	3
SUPERSEDED	5A	05/26/2009 17:00	05/26/2009 16:28	05/26/2009 16:27:56	124.0	0.0	124.0	1	3
SUPERSEDED	5A	05/26/2009 18:00	05/26/2009 17:29	05/26/2009 17:28:54	123.0	0.0	123.0	1	3
SUPERSEDED	5A	05/26/2009 19:00	05/26/2009 18:30	05/26/2009 18:29:45	215.0	0.0	215.0	0	0
SUPERSEDED	5A	05/26/2009 20:00	05/26/2009 19:29	05/26/2009 19:29:25	117.0	0.0	117.0	0	0
SUPERSEDED	3A	05/26/2009 21:00	05/26/2009 20:32	05/26/2009 20:32:04	140.0	0.0	140.0	0	0
TERMINATED	0	05/26/2009 21:30	05/26/2009 21:17	05/26/2009 21:17:08	0.0	0.0	0.0	0	0

06/09/2009 09:49:10 (CST)

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May 28 19:29	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 46.0 71.0 0.0 117.0	0.0 46.0 71.0 0.0 117.0	282	432	268	N/A
May 28 20:32	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 140.0 0.0 140.0	0.0 140.0 0.0 140.0	269	412	255	N/A
May 28 21:17	TLR 0	CURRENT	NONE	NONE	NONE				207	317	198	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	3	9	9	0
Total	3	9	9	0

TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
SWPP	ED-2	0.0	0.0
	ED-6	186.0	186.0
	FIRM-7	651.5	651.4
Total for SWPP		837.5	837.4
Total		837.5	837.4

06/09/2009 09:49:02 (CST)

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A	B	C	D
Reliability Log for May, 26			2009
Time	Initials	Comments	
1335	RST	Issued TLR Level 3B on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812	
1426	RST	Re-issued TLR Level 3A on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812	
1531	RST	Re-issued TLR Level 3A on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812	
1632	RST	Re-issued TLR Level 5A on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812. Loading and feasibility	
1727	RST	Re-issued TLR Level 5A on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812. Loading and feasibility	
1828	MRH	Re-issued TLR Level 5A on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812. Loading and feasibility	
1929	MRH	Re-issued TLR Level 5A on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812. Loading and feasibility	
2029	MRH	Re-issued TLR Level 5A on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812. Loading and feasibility	
2132	MRH	Re-issued TLR Level 3A on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812.	
2217	MRH	Re-issued TLR Level 0 on Temp 20-Arcadoa 345/138 XFR 1 flo Arcadia 345/138 kv XFR 2 Flgt. 15812.	

15812 5/26/09

