

SPP TLR 5 Investigation Report
Flowgate TEMP01_16413
(Arcadia 345/138 kV Transformer for loss of Arcadia – Northwest 345 kV line)
TLR Level 5: June 5, 2010
Report Issued: July 14, 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 16413 on June 5, 2010. Flowgate 16413 is an SPP flowgate. The Level 5 TLR was in effect from 19:00 until 20:00 CST on June 5, 2010. Projected post-contingent flows on the Arcadia 345/138 kV transformer were expected to exceed 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 478 MVA. Flow on the Limiting Element was 242 MVA. Flow on the Contingent Element was 660 MVA. The LODF was approximately 32%. Post-contingent flow on the Limiting Element was approximately 455 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 or market flows 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 Arcadia 345/138 kV Transformer was showing in the RTCA application. After confirmation with the Balancing Authority, it was decided to build the temporary flowgate and issue TLR. 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 outages of the Arcadia – Seminole 345 kV and the Draper –Seminole #3 345 kV lines. These lines were out due to storm damage from storms in May. Since the temporary outages were 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 Flow were reduced on the flowgate as reported in the TLR Event History and NERC TLR Log on pages 3-5.

TLR Event History

16413 - Temp01 Arcadia 345/138 XFMR FTLO ARcadia-Northwest 345

Status	TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
								Tags	MW
SUPERSEDED	3B	06/05/2010 11:15	06/05/2010 11:06	06/05/2010 11:05:59	0.0	0.0	0.0	0	0
SUPERSEDED	3A	06/05/2010 13:00	06/05/2010 12:28	06/05/2010 12:27:34	29.0	29.0	0.0	0	0
SUPERSEDED	3A	06/05/2010 14:00	06/05/2010 13:28	06/05/2010 13:27:56	7.0	7.0	0.0	0	0
SUPERSEDED	3A	06/05/2010 15:00	06/05/2010 14:26	06/05/2010 14:26:04	20.0	20.0	0.0	0	0
SUPERSEDED	3A	06/05/2010 16:00	06/05/2010 15:29	06/05/2010 15:28:05	20.0	20.0	0.0	0	0
SUPERSEDED	3A	06/05/2010 17:00	06/05/2010 16:32	06/05/2010 16:32:07	46.0	46.0	0.0	0	0
SUPERSEDED	3A	06/05/2010 18:00	06/05/2010 17:30	06/05/2010 17:29:19	68.0	68.0	0.0	0	0
SUPERSEDED	5A	06/05/2010 19:00	06/05/2010 18:29	06/05/2010 18:28:40	0.0	0.0	0.0	0	0
SUPERSEDED	3A	06/05/2010 20:00	06/05/2010 19:34	06/05/2010 19:33:49	112.0	112.0	0.0	0	0
SUPERSEDED	3A	06/05/2010 21:00	06/05/2010 20:26	06/05/2010 20:25:59	84.0	48.0	36.0	0	0
SUPERSEDED	3A	06/05/2010 22:00	06/05/2010 21:33	06/05/2010 21:32:52	0.0	0.0	0.0	0	0
TERMINATED	0	06/05/2010 22:25	06/05/2010 22:13	06/05/2010 22:12:51	0.0	0.0	0.0	0	0

Jun 05 18:29 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	242	455	660	N/A
Jun 05 19:34 (CST)	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	245	453	644	N/A
Jun 05 20:26 (CST)	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 36.0 0.0 36.0	0.0 36.0 0.0 36.0	253	480	640	N/A
Jun 05 21:33 (CST)	TLR 3A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	220	372	471	N/A
Jun 05 22:13 (CST)	TLR 0	CURRENT	NONE	NONE	NONE				212	343	408	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
Total	0	0	0	0

TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
SWPP	ED-2	0.0	0.0
	ED-6	36.0	36.0
	FIRM-7	0.0	0.0
Total for SWPP		36.0	36.0
Total		36.0	36.0

Reliability Log for June, 5**2010**

Time	Initials	Comments	
1206	DGA	Issued TLR 3B on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413	
1327	DGA	Issued TLR 3A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413	
1427	DGA	Issued TLR 3A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413	
1526	DGA	Issued TLR 3A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413	
1628	DGA	Issued TLR 3A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413	
1732	LWB	Re-issued TLR 3A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413	
1829	LWB	Re-issued TLR 3A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413	
1928	LWB	Issued TLR 5A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413-feasibility	
2033	LWB	Issued TLR 3A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413.	
2125	LWB	Re-issued TLR 3A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413.	
2232	LWB	Re-issued TLR 3A on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413.	
2312	LWB	Issued TLR level 0 on Temp01 Arcadia 345/138 fto Arcadia-Northwest flgt # 16413.	

TEMP01_16413

— Real Time — SOL

