

**SPP TLR 5 Investigation Report
Temp Flowgate 16019
(Redbud – Arcadia 345 kV CKT 2)
TLR Level 5: October 7 2009
Report Issued: October 29, 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 16019 on October 7, 2009. Flowgate 16019 is an SPP proxy flowgate created for breaker outages on the Arcadia 345 kV ring bus. The Level 5 TLR was in effect from 12:25 until 15:55 CST on October 7, 2009. Projected flows on Redbud – Arcadia 345 kV CKT 2 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 650 MVA due to the outage of Redbud – Arcadia 345 kV CKT 1. Flow on the Limiting Element was 626 MVA.

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

At the time the Level 5B TLR was issued, the Limiting Element was rated at 650 MVA due to the ring bus outage at Arcadia. Flow on the Limiting Element was 626 MVA.

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.

Non-firm transactions had already been curtailed due to TLR action. 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.

SPP's outage coordination process identified potential for loading issues at Arcadia during the outage on the ring bus. Commitments were obtained from OG&E to reduce generation at Redbud during the outage. The temporary flowgate was created to obtain further reductions via TLR should the agreed upon reductions not be sufficient.

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. Times on the chart are CDT.

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 scheduled outage on the ring bus at Arcadia. 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 Flows were reduced on the flowgate as reported in the TLR Event History and NERC TLR Log on pages 3-5.

TLR Event History

16019 - Temp 17 - Redbud - Arcadia 345 CKT 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	10/07/2009 10:55	10/07/2009 10:59	10/07/2009 10:59:19	75.0	68.7	6.3	2	34
SUPERSEDED	3A	10/07/2009 12:00	10/07/2009 11:29	10/07/2009 11:28:59	0.0	0.0	0.0	0	0
SUPERSEDED	5B	10/07/2009 12:25	10/07/2009 12:15	10/07/2009 12:14:55	0.0	0.0	4.6	2	27
SUPERSEDED	5A	10/07/2009 14:00	10/07/2009 13:27	10/07/2009 13:26:25	0.0	0.0	47.3	2	24
SUPERSEDED	5A	10/07/2009 15:00	10/07/2009 14:28	10/07/2009 14:27:21	20.0	0.0	68.2	2	23
SUPERSEDED	5A	10/07/2009 16:00	10/07/2009 15:34	10/07/2009 15:34:09	35.0	0.0	35.2	2	2
TERMINATED	0	10/07/2009 15:55	10/07/2009 15:42	10/07/2009 15:42:18	0.0	0.0	0.0	0	0

10/29/2009 13:09:33 (CST)

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Event Summary

FILE SAVED AS: SWPP_16019_20091007_1055.htm

Incident: SWPP_16019_20091007_1055	Date: 10/07/2009	Reliability Coordinator: SWPP
Initial Conditions: Increased Flows		
Flowgate: 16019 - Temp 17 - Redbud - Arcadia 345...	Rating: 650	LODF: N/A
TLR Direction: Normal		
Effective StartTime: 10/07/2009 10:55	Effective EndTime: 10/07/2009 15:55	TLR Duration: 5 Hours and 0 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											
Oct 07 10:59	TLR 3B	CURRENT	2-NH 8-NN Total	1 / 0 1 / 0 2 / 0	30 4 38	6.0 0.4 6.3	30 4 34	6.0 0.4 6.3	0 0 0	0.0 0.0 0.0	NONE	ED-2 ED-8 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	654	N/A	N/A	N/A		
		NEXT	2-NH 8-NN Total	1 / 0 1 / 0 2 / 0	20 5 38	4.0 0.4 4.4	20 5 25	4.0 0.4 4.4	0 0 0	0.0 0.0 0.0	NONE	ED-2 ED-8 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0						
Oct 07 11:29	TLR 3A	NEXT	NONE						NONE			ED-2 ED-8 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	650	N/A	N/A	N/A		
Oct 07 12:15	TLR 5B	CURRENT	2-NH 8-NN Total	1 / 0 1 / 0 2 / 0	20 7 27	4.0 0.6 4.6	20 7 27	4.0 0.6 4.6	0 0 0	0.0 0.0 0.0	NONE	ED-2 ED-8 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 12.0 12.0	0.0 0.0 12.0 12.0	628	N/A	N/A	N/A		
		NEXT	2-NH 7-F Total	1 / 0 2 / 0 3 / 0	20 17 27	4.0 2.2 6.2	20 17 37	4.0 2.2 6.2	0 0 0	0.0 0.0 0.0	NONE	NONE									
Oct 07 13:27	TLR 5A	NEXT	2-NH 8-NN Total	1 / 0 1 / 0 2 / 0	20 4 24	4.0 0.4 4.3	20 4 24	4.0 0.4 4.3	0 0 0	0.0 0.0 0.0	NONE	ED-2 ED-8 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 34.0 9.0 0.0 43.0	0.0 34.0 9.0 0.0 43.0	642	N/A	N/A	N/A		
Oct 07 14:28	TLR 5A	NEXT	2-NH 8-NN Total	1 / 0 1 / 0 2 / 0	20 3 23	4.0 0.3 4.2	20 3 23	4.0 0.3 4.2	0 0 0	0.0 0.0 0.0	NONE	ED-2 ED-8 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 64.0 0.0 0.0 64.0	0.0 64.0 0.0 0.0 64.0	660	N/A	N/A	N/A		
Oct 07 15:34	TLR 5A	NEXT	7-F Total	2 / 0 2 / 0	2 2	0.2 0.2	2 2	0.2 0.2	0 0	0.0 0.0	NONE	ED-2 ED-8 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 34.9 0.0 0.0 34.9	0.0 34.9 0.0 0.0 34.9	651	N/A	N/A	N/A		

Oct 07 15:42	TLR 0	CURRENT	NONE	NONE	NONE	323	N/A	N/A	N/A
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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	6	130	130	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	5	23	23	0
7	4	19	19	0
Total	15	172	172	0

TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
SWPP	ED-2	0.0	0.0
	ED-6	132.9	132.9
	FIRM-7	21.0	21.0
Total for SWPP		153.9	153.9
Total		153.9	153.9

	A	B	C	D	
1	Reliability Log for October, 7			2009	
2	Time	Initials	Comments	Wednesday	
3	1159	MRH	Issued TLR Level 3B on Temp 17 Redbud-Arcadia 345 Ckt 2		
4	1228	MRH	Re-issued TLR Level 3B on Temp 17 Redbud-Arcadia 345 Ckt 2		
5	1314	MRH	Re-issued TLR Level 5B on Temp 17 Redbud-Arcadia 345 Ckt 2, feasibility and Loading		
6	1426	MRH	Re-issued TLR Level 5A on Temp 17 Redbud-Arcadia 345 Ckt 2, Feasibility and Loading		
7	1527	MRH	Re-issued TLR Level 5A on Temp 17 Redbud-Arcadia 345 Ckt 2, Feasibility and Loading		
8	1642	MRH	Re-issued TLR Level 0 on Temp 17 Redbud-Arcadia 345 Ckt 2. Rebbud-Arcadia 345 CKT 1 back in service		
9					
10					
11					
12					

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Post Cont. Limit

