

SPP TLR 5 Investigation Report
Temp 5 Flowgate 16316
(Cherry Creek – Boyd 138 kV for the loss of Pleasant Valley – Hollywood 138 kV)
TLR Level 5: April 16, 2010
Report Issued: April 27, 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 16316 on April 16, 2010. Flowgate 16316 is an SPP flowgate created due to the planned maintenance outage of the Penn. – West Moore 138 kV line. The Level 5 TLR was in effect from 7:00 until 14:30 CST on April 16, 2010. Projected post contingent flows on the Cherry Creek – Boyd 138 kV line exceeded the SOL.

2. Facility/flowgate limitations and flows at the time the TLR was initiated.

At the time the initial Level 5A TLR was issued, the Limiting Element was rated at 191 MVA. Flow on the Limiting Element was 64 MVA. Flow on the Contingent Element was 178 MVA. The LODF was approximately 64%. Post-contingent flow on the Limiting Element was approximately 177 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 not enough non-firm transactions or market flows to provide the necessary relief on the flowgate. The TLR was escalated to a Level 5 in order to curtail firm transactions and firm market flow to relieve loading.

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 due to the outage of the Penn. – West Moore 138 kV line. The temporary flowgate was created in order to dispatch around the constraint via TLR to control the loading until the line was returned to service.

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 pages 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 due to the planned maintenance outage of the Penn. – West Moore 138 kV line. Since the temporary outages were the most significant factors 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 Flows were reduced on the flowgate as reported in the TLR Event History and NERC TLR Log on pages 3-5.

TLR Event History

16316 - Temp 5 Cherry Creek - Boyd 138 kV (ftlo) Pleasant Valley - Hollywood 138 kV

Status	TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
								Tags	MW
SUPERSEDED	3B	04/16/2010 04:20	04/16/2010 04:08	04/16/2010 04:08:12	50.0	27.0	23.0	0	0
SUPERSEDED	3A	04/16/2010 06:00	04/16/2010 05:29	04/16/2010 05:29:24	106.0	85.0	21.0	0	0
SUPERSEDED	5A	04/16/2010 07:00	04/16/2010 06:28	04/16/2010 06:27:22	0.0	0.0	28.0	0	0
SUPERSEDED	5A	04/16/2010 08:00	04/16/2010 07:28	04/16/2010 07:27:21	0.0	0.0	26.0	0	0
SUPERSEDED	5A	04/16/2010 09:00	04/16/2010 08:26	04/16/2010 08:26:09	0.0	0.0	20.0	0	0
SUPERSEDED	5A	04/16/2010 10:00	04/16/2010 09:36	04/16/2010 09:35:23	0.0	0.0	19.0	0	0
SUPERSEDED	5A	04/16/2010 11:00	04/16/2010 10:31	04/16/2010 10:30:22	0.0	0.0	24.0	0	0
SUPERSEDED	5A	04/16/2010 12:00	04/16/2010 11:38	04/16/2010 11:37:53	0.0	0.0	20.0	0	0
SUPERSEDED	5A	04/16/2010 13:00	04/16/2010 12:38	04/16/2010 12:38:22	0.0	0.0	15.0	0	0
SUPERSEDED	5A	04/16/2010 14:00	04/16/2010 13:35	04/16/2010 13:34:04	0.0	0.0	15.0	0	0
TERMINATED	0	04/16/2010 14:30	04/16/2010 14:19	04/16/2010 14:19:04	0.0	0.0	0.0	0	0

Event Summary

FILE SAVED AS: SWPP_16316_20100416_0420.htm

Incident:	SWPP_16316_20100416_0420	Date: 04/16/2010 (CST)	Reliability Coordinator: SWPP
Initial Conditions:	load increasing		
Flowgate:	16316 - Temp 5 Cherry Creek - Boyd 138...	Rating: 191	LODF: 63.76%
TLR Direction:	Normal		
Effective StartTime:	04/16/2010 04:20 (CST)	Effective EndTime: 04/16/2010 14:30 (CST)	TLR Duration: 10 Hours and 10 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 MVV	RC Ackn MVV	Type	Mkt	IDC MVV	RC Ackn MVV	Current	Post Cont.	Cont. Flow		
					MW	Relief	MW	Relief	MW	Relief												
Apr 16 04:08 (CST)	TLR 3B	CURRENT		NONE								NONE			ED-2	SWPP	0.0	0.0	73	195	192	N/A
															ED-6	SWPP	23.0	23.0				
		NEXT		NONE								NONE			ED-2	SWPP	0.0	0.0				
															ED-8	SWPP	21.0	21.0				
															FIRM-7	SWPP	0.0	0.0				
															Total		23.0	23.0				
Apr 16 05:29 (CST)	TLR 3A	NEXT		NONE								NONE			ED-2	SWPP	0.0	0.0	89	179	173	N/A
															ED-6	SWPP	21.0	21.0				
															FIRM-7	SWPP	0.0	0.0				
															Total		21.0	21.0				
Apr 16 06:28 (CST)	TLR 5A	NEXT		NONE								NONE			ED-2	SWPP	0.0	0.0	64	177	178	N/A
															ED-8	SWPP	28.0	28.0				
															FIRM-7	SWPP	0.0	0.0				
															FIRM-CREDIT	SWPP	0.0	0.0				
															Total		28.0	28.0				
Apr 16 07:28 (CST)	TLR 5A	NEXT		NONE								NONE			ED-2	SWPP	0.0	0.0	62	178	183	N/A
															ED-8	SWPP	26.0	26.0				
															FIRM-7	SWPP	0.0	0.0				
															FIRM-CREDIT	SWPP	0.0	0.0				
															Total		26.0	26.0				
Apr 16 08:28 (CST)	TLR 5A	NEXT		NONE								NONE			ED-2	SWPP	0.0	0.0	69	178	171	N/A
															ED-8	SWPP	20.0	20.0				
															FIRM-7	SWPP	0.0	0.0				
															FIRM-CREDIT	SWPP	0.0	0.0				
															Total		20.0	20.0				
Apr 16 09:36 (CST)	TLR 5A	NEXT		NONE								NONE			ED-2	SWPP	0.0	0.0	70	179	171	N/A
															ED-8	SWPP	19.0	19.0				
															FIRM-7	SWPP	0.0	0.0				
															FIRM-CREDIT	SWPP	0.0	0.0				
															Total		19.0	19.0				

Apr 18 10:31 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 24.0 0.0 0.0 24.0	0.0 24.0 0.0 0.0 24.0	70	179	172	N/A
Apr 18 11:38 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 20.0 0.0 0.0 20.0	0.0 20.0 0.0 0.0 20.0	69	172	163	N/A
Apr 18 12:38 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 15.0 0.0 0.0 15.0	0.0 15.0 0.0 0.0 15.0	71	178	168	N/A
Apr 18 13:35 (CST)	TLR 5A	NEXT	NONE	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 15.0 0.0 0.0 15.0	0.0 15.0 0.0 0.0 15.0	64	138	117	N/A
Apr 18 14:19 (CST)	TLR 0	CURRENT	NONE	NONE	NONE	NONE			65	140	119	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	211.0	211.0
	FIRM-7	0.0	0.0
Total for SWPP		211.0	211.0
Total		211.0	211.0

Reliability Log for April, 16**2010**

Time	Initials	Comments	Friday
0508	WRG	Re-issued TLR level 3B on Temp 05 CHERRY CRK - Boyd 138 KV (ftlo) Pleast Valley - Hollywd 138 KV 6316	
0629	LWB	Issued TLR level 3A on Temp 05 CHERRY CRK - Boyd 138 KV (ftlo) Pleast Valley - Hollywd 138 KV 16316	
0727	LWB	Re-issued TLR level 5A on Temp 05 Cherry Creek - Boyd 138 KV (ftlo) Pleast Valley - Hollyoowd 138 KV 16316 feasibility	
0827	LWB	Re-issued TLR level 5A on Temp 05 Cherry Creek - Boyd 138 KV (ftlo) Pleast Valley - Hollyoowd 138 KV 16316 feasibility	
0926	LWB	Re-issued TLR level 5A on Temp 05 Cherry Creek - Boyd 138 KV (ftlo) Pleast Valley - Hollyoowd 138 KV 16316 feasibility	
1035	LWB	Re-issued TLR level 5A on Temp 05 Cherry Creek - Boyd 138 KV (ftlo) Pleast Valley - Hollyoowd 138 KV 16316feasibility	
1130	LWB	Re-issued TLR level 5A on Temp 05 Cherry Creek - Boyd 138 KV (ftlo) Pleast Valley - Hollywood 138 KV 16316 feasibility	
1237	LWB	Re-issued TLR level 5A on Temp 05 Cherry Creek - Boyd 138 KV (ftlo) Pleast Valley - Hollywood 138 KV 16316 feasibility	
1338	LWB	Re-issued TLR level 5A on Temp 05 Cherry Creek - Boyd 138 KV (ftlo) Pleast Valley - Hollywood 138 KV 16316 feasibility	
1434	LWB	Re-issued TLR level 5A on Temp 05 Cherry Creek - Boyd 138 KV (ftlo) Pleast Valley - Hollywood 138 KV 16316, feasibility	
1519	LWB	Issued TLR level 0 on Temp 05 Cherry Creek - Boyd 138 KV (ftlo) Pleast Valley - Hollywood 138 KV 16316.	

Temp05_16316

— Post Cont. — SOL

