

FILED
August 13, 2007
Data Center
Missouri Public
Service Commission

Pierie, Thomas C

From: Cooper, Richard D
Sent: Tuesday, November 30, 2004 10:05 PM
To: Zamberlan, Tony; Pierie, Tom; Hawkins, Chris P; Dan Berrien; OSAG; Power Supply, Supervisor; Schoolcraft, Steven J
Cc: Scott, Jeff T; Iselin, Christopher A; Buhr, Thomas A; Thompson, Phillip M; Ferguson, Robert W
Subject: Unit 1 and 2 Auto Shutdown

After I wrote the email below both units auto shutdown on what appears to have been due to the new Warrick probes for the upper reservoir. Relay 86DT picked up for both units. 86DT picks up in generate mode on extreme low level in the upper reservoir or when power is lost to the Warrick probes. We had plenty of level in the upper reservoir at the time, approx 1575. So the thought is we had an intermittent power blip to the Warrick probe relays and they shut down the units. Normally the units shutdown based on level from the level transducers. These are the setpoints I've sent out in emails from time to time. The Warrick probes are hard wired contacts that set above the normal pump shutdown levels; and there are corresponding Warrick probes that sit below the normal generate shutdown levels. The Warrick probes are emergency shutdowns monitoring extreme low and extreme high levels in the upper reservoir. Tonight the generate Warrick probes took both units off.

We have temporarily disabled the Warrick probes in both the generate and pump modes for tonight only. That means the Osage operators need to keep a close watch on the upper reservoir levels in generate and pump modes. The level setpoints I emailed out today should still shut down the units at the levels I indicated based on the level transducers. The Osage operators need to make sure this happens. There are no emergency backups now. In addition, if you lose upper reservoir communications (no levels being displayed) and the last reading you saw was up near the top in pump or near the bottom in generate you need to shutdown the units immediately. The Unit PLCs have not been programmed to shut down the units if communication (level indication) is lost, thinking we had enough time to get someone on site and we had the Warrick probes to back us up. We do not have Warrick probes backing us up, now. Also, if communication is lost between Osage and Taum Sauk such that control (Unit Start and Stop) is lost, call me immediately to shutdown the units or provide local level readings by sight.

Tony Zamberlan is due in on the AM on Wednesday, Dec 1st to help us troubleshoot this loss of power to the Warrick Probes (loose wire, flakey transformer, flakey Warrick probe relay, etc). We will at the least install a time delay in this circuit if we are not able to find the intermittent power loss and restore the Warrick probe operation. We don't want to run without the Warrick probes any longer than tonight.

To repeat part of my email I sent out earlier today, the normal transducer level shutdowns are:

Pump Unit Shutdown Levels

	<u>1st Pump OFF</u>	<u>2nd Pump OFF</u>	<u>All</u>
<u>Pumps OFF</u>			

~~STAMP~~ Exhibit No. 19
Case No(s). ES-2007-0474
Date 8-01-07 Rptr KE

EX 19

12/27/2005

IMG145772

UR	1592	1596	
1596.5	(There are Warrick probes above 1596.5)		
LR (at the dam)	736.5	736	736
Tallrace (at the plant)	730	729	728

Generate Unit Shutdown Levels

	<u>1st Gen OFF</u>	<u>2nd Gen OFF</u>	<u>All</u>
<u>Gen OFF</u>			
UR	1528	1525	
1524.5	(There are Warrick probes below 1524.5)		
LR	749	749.5	749.8

Thanks,
Rick Cooper

-----Original Message-----

From: Cooper, Richard D

Sent: Tuesday, November 30, 2004 6:57 PM

To: Zamberlan, Tony; Pierie, Tom; Hawkins, Chris P; Dan Berrien

Cc: Scott, Jeff T; Iselin, Christopher A; Schoolcraft, Steven J; OSAG; Buhr, Thomas A; Thompson, Phillip M; Power Supply, Supervisor; Ferguson, Robert W

Subject: Tatum Sauk Unit 1 and 2 Control

Tonight the Power Dispatcher (PD) put both units in dispatch, not the first time since we came back, and the units steadily ramped down from 225 MWs to 10 – 15 MWs and then started climbing back up. I looked at the setpoint on the governor screen and the units were following the setpoint. The setpoint was ramping up and down without a request from the PD. I once saw a setpoint of 250 MWs on the governor screen and the units were in runback due to MVA which is set at 230.

PD tried going back to efficiency at first and couldn't get it to go. The PD Supv tried at his computer and it went back to efficiency. The units responded and went back to the efficiency setpoint with out problem. The efficiency setpoint was rock steady and following the falling upper reservoir level as designed. This setpoint is generated internally inside the governor controls.

Something is seriously wrong with the dispatch signal coming from downtown thru the plant RTU. The PD Supv is going to turn a report into communications. For now we can only operate in efficiency mode in generate. The PD Supv said they had the same thing happen last week but after going from dispatch into efficiency, to catch the units, they went back to dispatch and it seemed to be working fine. This is the first I've heard of that incident. I don't know if it's a calculation error or something else. Seems like the units have operated in dispatch successfully at times over the last two weeks so I can't guess what's going on. I didn't see anything with the plant controls that would cause this.

There were no plant alarms, other than what we have been seeing, and the governor controls seemed to me to be doing what they were told to do by the dispatch signal from downtown.

Rick

12/27/2005

IMG145773

Chris Hawkins - I got a call from someone downtown complaining that when they were sending raise pulses our units were doing the opposite. Something about chopping the pulses off. He said he would contact you.

12/27/2005

IMG145774