

## Lent, Susan

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**From:** Lyon, Fred  
**Sent:** Thursday, January 31, 2013 2:16 PM  
**To:** 'Wideman Steve G'  
**Subject:** RE: Clarification Question re: EDG SR LAR (TAC No. ME7674)

Steve, please see the RAI (previously sent in the e-mail dated June 14, 2012) with the clarification below:

1. The LAR proposed to change the minimum voltage or minimum steady state voltage from  $\geq 3740$  V to  $\geq 3950$  V for SR 3.8.1.2, SR 3.8.1.7, SR 3.8.1.11, SR 3.8.1.12, SR 3.8.1.15, SR 3.8.1.19, and SR 3.8.1.20. The LAR states that the historical data from surveillance tests shows that the minimum operating voltage of the DG was above 4000 V and raising the minimum DG voltage more accurately reflects actual system voltage conditions, improves equipment operation, and will provide additional system design margin in the DG transient calculations. Four degraded voltage relays are set to monitor nominal bus voltage level. The degraded voltage relay setpoint is typically based on the minimum voltage required for equipment operability.
  - a) (Adequately responded)
  - b) What is the minimum *starting* voltage for large motors and the voltage drop at the remote safety busses associated with starting large motors such as the Essential Service Water System Pumps?

Clarification:

The LAR is proposing a minimum voltage of 3950V. With the DG output at 3950 Volts, provide the following details when the ESW pump STARTS:

- I. The instantaneous voltage at the safety busses monitored by protective devices such as degraded voltage and loss of voltage relays and clarify if any relays may actuate.
- II. The instantaneous voltage at 'electrically' remote safety busses (480V and below) where voltage sensitive components such as contactors may be energized and can potentially drop out.
- III. Identify any operating equipment such as rectifiers/inverters that may lock out as a consequence of momentary inadequate terminal voltage.

We will need the answer on the docket. Please provide it to your staff and let me know if we need to set up a discussion. Thanks, Fred