

## NRR-PMDA-ECapture Resource

---

**From:** Feintuch, Karl  
**Sent:** Wednesday, February 08, 2012 3:56 PM  
**To:** Feintuch, Karl; McConnell, Matthew; Byrne, Thomas  
**Subject:** Duane Arnold Energy Center -Pre-application conference call to plan for processing a change to TS 3.8.4 DC Sources <ae>  
**Attachments:** oledata.mso; TS 3.8.4 markup.pdf

The conference call started at 3:30 PM and ended at 3:45 PM ET on 2/8/2012

Attending were:

For NRC: Feintuch, McConnell

For DAEC: Thomas Byrne, Dennis Pint, Steve Catron

Contemplated changes were discussed (see notes below). For planning purposes, DAEC (Byrne) will notify Karl Feintuch of the projected date of issuance of the amendment application.

Karl Feintuch  
USNRC  
301-415-3079

---

**From:** Feintuch, Karl  
**Sent:** Wednesday, February 08, 2012 1:00 PM  
**To:** 'Thomas.Byrne@nexteraenergy.com'  
**Cc:** McConnell, Matthew  
**Subject:** Pre-Application review - Notes for TS 3.8.4 DC Sources - TS change discussion

Based on our (Catron, Byrne, Feintuch) phone conversation on 2/6/2012, I prepared these notes for Reviewer McConnell. They would color his perceptions in participating in the call scheduled for today. Please review them with the objective of clarifying or correcting what I wrote so all parties accurately understand what your are attempting. An accurate version of the notes will be a record of the call. (Undetected errors remain mine.)

Karl Feintuch  
USNRC  
301-415-3079

===== begin notes =====

Below is a challenge from Duane Arnold.

I requested this summary (below and attached) as the result of a call from Duane Arnold's licensing manager (Steve Catron) this afternoon. They have a project to increase the number of battery cells for the Division 1 and 2 -125 VDC batteries. However, their assigned project team did not complete the necessary calculation to support a licensing amendment until after the deadline for our one year metric, relative to their next refueling outage. Now it is a matter of practicality to accomplish the needed licensing amendment within our resources. I will list the constraints below that I drew from this first conversation and suggest a follow-up conversation to see if we can be responsive.

Details follow as I know them at this time. I can open a pre-application review TAC if a cursory review of the licensee's impending application is encouraging.

- 1 - TS Changes to be requested:** See attached TS pages 3.8-17, 3.8-18, and 3.8-19, as marked by hand.
- 2 - Reason for change:** Increase capacity for Design Basis Accident and Fukushima response.
- 3 - Physical change:** Add two cells to each 125 VDC source.

- 4 - Physical change schedule:** Add cells during fall refueling outage (nominal 10/06/2012 to 12/06/2012); physically install the cell but not connect them without the amendment.
- 5 - Amendment issuance requested by:** First week in December 2012 (corresponding to nominal 12/06/2012 end of outage.)
- 6 - Planned date to submit application:** mid to late February 2012.
- 7 - Inferred [by PM] "SE to PM" date for issuance in Dec.2012:** Late October to Early November 2012 [We (DORL) typically need 6 weeks to issue the letter, and I am presuming seasonal stresses due to confluence of holidays, excess leave to be taken, rush because of end-of-year deadlines – kdf]
- 8 - Effective number of full months for Tech Branch to produce SE Memorandum:** 8 months = full March thru most of, or full, October 2012.
- 9 - Implementing strategy for issuance of SE Memorandum within 8 full months:**
- A - Apply LIC-109 processes such that (1) the application is "perfect" (no RAI items are needed – for the entire project) or (2) RAI cycle time(s) are 7 calendar days throughout the entire project. These accelerated cycle times would be the "as mutually agreed" times that supersede the default 30 day intervals. [Make allowance for other compelling circumstances.- kdf 2/8/2012]
  - B - Recommend an OGC Reviewer very experienced with TS 3.8.4 reviews.
  - C – Perceived benefit-to-cost: Benefit = Application of 9A and 9B can save about 2 months of processing time; if this strategy is practical for EEEB, then we brief the licensee on the Benefit to Cost considerations for achieving project goals.

The licensee is expediting the application effort at this time. I believe that EEEB and ITSB are the only cognizant Technical Branches for this TS change.

Karl Feintuch

===== begin Duane Arnold TS 3.8.4 change executive summary =====

**From:** Byrne, Thomas [<mailto:Thomas.Byrne@fpl.com>]

**Sent:** Monday, February 06, 2012 3:17 PM

**To:** Feintuch, Karl

**Cc:** Catron, Steve

**Subject:** DAEC Summary of Amendment Request for TS 3.8.4, DC Sources

Karl:  
The proposed amendment we discussed today would revise the DAEC TS by modifying existing Surveillance Requirements (SRs) regarding the battery terminal and charger voltages and amperage provided in SR 3.8.4.1 and SR 3.8.4.6. This amendment also deletes the one-time allowance provided in Amendment 247 (granted in 2002) to allow for online battery replacement. I figured I'd clean up the TS by removing this one-time allowance. See the attached pages for a markup of what will change. We're interested in getting approval by the first week of December 2012 if possible. Let me know if you require further information.  
Tom

**Thomas R. Byrne**  
**[Thomas.Byrne@nexteraenergy.com](mailto:Thomas.Byrne@nexteraenergy.com)**  
**Senior Licensing Engineer**  
**Duane Arnold Energy Center**  
**(319) 851-7929**



===== end Duane Arnold TS 3.8.4 change executive summary =====

===== end notes =====

### 3.8 ELECTRICAL POWER SYSTEMS

#### 3.8.4 DC Sources — Operating

LCO 3.8.4 Both Division 1 and Division 2 125 VDC electrical power subsystems and the 250 VDC electrical power subsystem shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

#### ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One 125 VDC electrical power subsystem inoperable.	A.1 Restore 125 VDC electrical power subsystem to OPERABLE status.	8 hours
<del>OR</del> NOTE: May be used on a one-time-only basis for each battery division.  <i>To Be Deleted</i>	A.2.1 Declare required feature(s), supported by the inoperable 125 VDC source, inoperable when the redundant required feature(s) are inoperable.	4 hours from discovery of Condition A concurrent with inoperability of redundant required feature(s).
	AND A.2.2 Restore 125 VDC electrical power subsystem to OPERABLE status.	10 days
B. Required Action and Associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	12 hours
	AND B.2. Be in MODE 4.	36 hours
C. 250 VDC electrical power subsystem inoperable.	C.1 Declare associated supported features inoperable.	Immediately
D. Two or more DC electrical power subsystems inoperable.	D.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is $\geq 126$ V on float charge for the 125 VDC battery and $\geq 252$ V for the 250 VDC battery.	7 days
SR 3.8.4.2	Verify no visible corrosion at battery terminals and connectors.  <u>OR</u>  Verify battery connection resistance within limits.	92 days
SR 3.8.4.3	Verify battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration that could degrade battery performance.	12 months
SR 3.8.4.4	Remove visible corrosion and verify battery cell to cell and terminal connections are coated with anti-corrosion material.	12 months
SR 3.8.4.5	Verify battery connection resistance within limits.	12 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>-----NOTE----- This Surveillance shall not be performed on the required battery chargers in MODE 1, 2 or 3. However, credit may be taken for unplanned events that satisfy this SR.</p> <p>----- Verify each required battery charger supplies <u>≥ 300</u> amps at <u>≥ 129 V</u> for the 125 VDC subsystem and <u>≥ 200</u> amps at <u>≥ 258 V</u> for the 250 VDC subsystem.</p>	24 months
<p>SR 3.8.4.7</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. The modified performance discharge test in SR 3.8.4.8 may be performed in lieu of the service test in SR 3.8.4.7.</li> <li>2. This Surveillance shall not be performed in MODE 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR.</li> </ol> <p>----- Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.</p>	24 months

(continued)

*These values  
will change*

SR 3.8.4.6