

**From:** [Wang, Alan](#)  
**To:** ["BURMEISTER, BARRY M"; "Joseph Clark \(JCLARK@entergy.com\)"; "WILLIAMSON, DANNY H"](#)  
**Cc:** [Burkhardt, Janet](#); [Chen, Qiao-Lynn](#)  
**Subject:** River Bend Station, Unit 1 (RBS) Request for Additional Information Regarding Degraded Voltage Surveillance Frequency Extension TS Change (ME7767)  
**Date:** Tuesday, August 07, 2012 3:10:54 PM  
**Attachments:** [Mazumdar\\_RD\\_2\\_RAI24MonthFuelCycleJuly2012.docx](#)

---

Barry, Danny and Joey,

By letter dated December 8, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11349A246), Entergy Operations, Inc (Entergy, the licensee) submitted Entergy Letter RBG-47193, "License Amendment Request 2011-05 Degraded Voltage Surveillance Frequency Extension and Allowable Value Changes." In this letter, Entergy submitted a request to extend the frequency of Surveillance Requirement (SR) 3.3.8.1.3 (calibration of loss of power instrumentation) from 18 to 24 months and revise certain allowable values in TS 3.3.8.1, "Loss of Power Instrumentation."

By letter dated May 2, 2012 (ADAMS Accession No. ML121250516) Entergy responded to the NRC's request for additional information, dated March 16, 2012 (ADAMS Accession No. ML120760376). The NRC staff has determined that the additional information is needed to complete our review. The LAR requests amendment of the TS to (1) extend the frequency of Surveillance Requirement (SR) 3.3.8.1.3 for calibration of Loss of Power instrumentation from 18 to 24 months, and (2) revise the associated Allowable Values (AV) in TS 3.3.8.1, Loss of Power Instrumentation. The NRC staff's questions pertaining to the proposed changes are attached. This request was discussed with Mr. Danny Williamson of your staff on August 7, 2012, and it was agreed that a response would be provided within 30 days of receipt of this email. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-1445 or via e-mail at [Alan.Wang@nrc.gov](mailto:Alan.Wang@nrc.gov).

Alan Wang  
Project Manager (River Bend Station)  
Nuclear Regulatory Commission  
Division of Operating Reactor Licensing

REQUEST FOR ADDITIONAL INFORMATION  
24-MONTH FUEL CYCLE EXTENSION  
RIVER BEND STATION, UNIT 1  
DOCKET NO.: 50-458

By letter dated May 2, 2012 (ML121250516) Entergy Operations, Inc. (licensee) responded to the NRC's request for additional information (RAI), dated March 16, 2012 (ML120760376). The NRC staff has determined that the following clarifications and/or information is needed to complete our review:

1. In RAI Responses 1, 3, 4 to RAI Request No. 1, that outliers were rejected based on t-Test. Indicate what additional investigations, other than t-Test, were performed.
2. It is stated in RAI Response 3 to RAI Request No. 1, that the maximum recorded drift was 6.31 VAC and it was not rejected as an outlier while the drift permitted by setpoint calculations for 30 months has been selected to be  $\pm 5.823$  VAC. Provide justification why maximum drift of 6.31 VAC is considered acceptable.
3. RAI Response 3 to RAI Request No. 1, Function 2.a, Division 3 – 4.16 kV Emergency Bus, indicates that more than 50 samples have been reviewed for Normality test. Provide a similar minimum number of samples used for each of the functions listed in RAI Response to REQUEST No. 1.
4. It is stated in response to Request No. 4, "The setpoint calculation methodology allows for using the Loop Calibration Tolerance instead of Loop Reference Accuracy to determine Loop Uncertainty when the Loop Calibration Tolerance is greater than the Loop Reference Accuracy." Clarify what parameters are used in calculating these two tolerances and how the adequacy of those parameters have been established.
5. Response to Request No. 4 states, "...the STP 'As-Found' and 'As-Left' calibration tolerance is the same..." Provide clarification how the the As-Found and As-Left tolerances are calculated, especially if drift is included in them.
6. Section 9.0 in Setpoint Calculation G13.18.3.1-004 addresses Maximum Loop Setting Tolerance,  $CT_{LV}$  and TRM. Explain what  $CT_{LV}$  and TRM represent and what tolerances are included in them.
7. Section 8.4 in Calculation G13.18.6.2-ENS\*007, Rev. 1, refers to References 3.2, 3.3, and 3.11, which the NRC staff has not received. Clause 8.4 addresses  $CT_{LT}$  and procedural as-left band (PALB) parameters. Provide the relevant information on how the  $CT_{LT}$  and PALB parameters are established, especially to ensure the 95/95 confidence level.
8. Assumption 7.1.2 in Calculation G13.18.6.2-ENS\*007, Rev. 1, states, "For conservatism all uncertainties given in vendor data specifications are assumed to

be  $2\sigma$  unless otherwise specified.” Provide justifications for this assumption.

(a) Please be sure to identify any components NOT purchased as safety-related (i.e., commercially dedicated)

(b) Please be sure to include the exact statement that the vendor made regarding the uncertainties (e.g., Tolerance interval, distribution, and confidence level).

9. Sections 8.7.3.1 and 8.7.3.2 in Calculation G13.18.6.2-ENS\*007 Rev. 1, state,

“Relay Drift for Time Delay Setting ( $DR_{RT}$ ) (Assumption 7.1.14)

$$DR_{RT} = \pm 3.725\% \text{ Setpoint}”$$

Assumption 7.1.14 states Instrument Drift is deleted.

Provide clarification between the above two statements.

10. Sections 8.3.1 and 8.3.2 in Calculation G13.18.6.2-ENS\*007 Rev. 1, refer to Sections 8.2.3, 8.1.3, and 8.1.5 but there are no Sections 8.2.3 and 8.1.5 in this calculation. Section 8.1.3 refers to Reference 3.9.1, and Assumption 7.1.6. Assumption 7.1.6 refers to Reference 3.9.6 which the NRC staff has not received. Provide the necessary information.