From: Graves, Sam [mailto:Samuel.Graves@nrc.gov]
Sent: Wednesday, September 04, 2019 10:03 AM
To: Zamber, Maria
Cc: Makor, Shiattin; Taylor, Nick
Subject: RE: RE: Waterford 3 Regulatory Assurance contact for the upcoming Open Phase Inspection

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Good morning Maria,

Attached please find the Request for Information related to the upcoming TI-194 inspection in December. I have asked for the technical documents by November 4th in the RFI, but that is a flexible date. Please let me know if you have any questions about the request or the inspection. This document will eventually be made public after the inspection report is issued.

I will be out of the office for most of September, but I will have access to email so that will be the most likely contact method.

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TI 2515/194 Inspection Documentation Request

Please provide the following documentation (Items 1 – 8) to the lead inspector prior to the onsite inspection date, preferably no later than November 4, 2019. Whenever practical, please provide copies electronically. Please provide an index of the requested documents which includes a brief description of the document and the numerical heading associated with the request (i.e., where it can be found in the list of documents requested).

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1. Copies of any calculations, analyses, and/or test reports performed to support the implementation of your open phase condition (OPC) solution. If, in your implementation, OPCs are not detected and alarmed in the control room please include documentation that:

    a. Demonstrates the OPC will not prevent functioning of important-to-safety SSCs; AND

    b. Detection of an OPC will occur within a short period of time (e.g., 24 hours).

2. Copies of any modification packages, including 10 CFR 50.59 evaluations if performed, used for or planned for the implementation of your OPC solution.

3. Copies of periodic maintenance, surveillance, setpoint calibration, and/or test procedures implemented or planned, for your OPC solution.

4. Copies of your licensing basis changes to Updated Final Safety Analysis Report (UFSAR) and/or Technical Specifications (TS), or equivalent, as applicable, which discuss the design features and analyses related to the effects of, and protection for, any open phase condition design vulnerability. If these documents have not been updated, provide documentation of your plans to do so.

5. Copies of any procurement specifications and acceptance testing documents related to the installation of your OPC solution.

6. Copies of any site training the inspector will need to accomplish to gain access to areas with, or planned, major electrical equipment used in your OPC solution (i.e. switchyard).

7. Provide documentation showing that with an OPC occurrence <u>and no</u> accident condition signal present, either:

    a. An OPC does not adversely affect the function of important-to-safety SSCs, OR

    b. TS LCOs are maintained, or the TS actions are met without entry into TS LCO 3.0.3 AND
        i. Important-to-safety equipment is not damaged by the OPC, AND
        ii. Shutdown safety is not compromised

8. With OPC occurrence and an accident condition signal present:

    a. Provide documentation showing that automatic detection and actuation will transfer loads required to mitigate postulated accidents to an alternate source and ensure that safety functions are preserved, as required by the current licensing bases, OR

    b. Provide documentation showing that all design basis accident acceptance criteria are met with the OPC, given other plant design features. Accident assumptions must include licensing provisions associated with single failures. Typically, licensing bases will not permit consideration of the OPC as the single failure since this failure is a non-safety system.

Please provide the following documentation to the inspector when onsite. Whenever practical, please provide copies electronically, except for drawings. Drawings should be provided as paper copies of sufficient size (ANSI "C" or "D") such that all details are legible.

9. A brief presentation describing your electric power system design and typical electrical transmission and distribution system alignments; OPC design schemes installed to detect, alarm and actuate; bus transfer schemes; and maintenance and surveillance requirements. This presentation should be a general overview of your system. Please schedule the overview shortly after the entrance meeting.

10. Plant layout and equipment drawings for areas that identify: (a) the physical plant locations of major electrical equipment used in your open phase condition solution; (b) the locations of detection and indication equipment used in the open phase condition sensing circuits.

11. If OPC actuation circuits are required, provide documentation that demonstrates continued coordination with the other protective devices in both the offsite electrical system (within Waterford's area of responsibility) and the onsite electrical systems.

12. Access to locations in which open phase condition equipment is installed or planned (i.e. switchyard, etc.)

13. Copies of documentation or testing that demonstrates your OPC solution minimizes spurious actuation or misoperation in the range of voltage imbalance normally expected in the transmission system that could cause undesired separation from an operable off-site power source.

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