

Oconee SLRA: Breakout Questions
 SLRA Section B3.1, "Fatigue Monitoring"
 TRP: 60

Question Number	SLRA Section	SLRA Page	Background / Issue (As applicable/needed)	Discussion Question / Request
1	B3.1	B-281	<p>SLRA Section B3.1 indicates that the high energy line break (HELB) analyses do not exclude break locations based on fatigue so that the Fatigue Monitoring program does not apply to HELB. This discussion does not clearly describe whether the implicit fatigue analysis (SLRA 4.3.3) for the Non-Class 1 piping systems, which involves a stress range reduction factor, may have a potential impact on the HELB location postulation.</p> <p>In addition, the staff finds a need to clarify whether the HELB location postulation does not use cumulative usage factors as an input for the break location determination.</p>	<ol style="list-style-type: none"> 1. Clarify whether the implicit fatigue analysis (SLRA 4.3.3) for the Non-Class 1 piping systems, which involves a stress range reduction factor, has a potential impact on the HELB location postulation. If so, identify the HELB analysis as a TLAA and provide the disposition of the TLAA and its basis. 2. Clarify whether the HELB location postulation does not use cumulative usage factors as an input for the break location determination.

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2	B3.1	B-281	<p>SLRA Section B3.1 states that the program assures that the number of occurrences of each critical transient remains within the limits of the fatigue analyses. The SLRA also indicates that the design transients and associated design cycles are listed in Oconee UFSAR Tables 5-2 (RSC other than pressurizer surge line) and 5-23 (pressurizer surge line).</p> <p>This discussion does not clearly address whether the Fatigue Monitoring program ensures that each design cycle as well as the CUF and environmental CUF limit (1.0) is not exceeded during the subsequent period of extended operation.</p> <p>Enhancement 3 of the program, in part, states that the program will be enhanced to expand existing corrective action guidance associated with exceeding a cycle counting surveillance limit. Clarification is needed as to what the cycle counting surveillance limit means.</p>	<ol style="list-style-type: none"> 1. Clarify whether the Fatigue Monitoring program ensures that each design cycle as well as the CUF and environmental CUF limits (1.0) is not exceeded during the subsequent period of extended operation. If not, provide the basis for why each design cycle is not identified as the limits of the fatigue analyses. 2. Clarify whether the cycle counting surveillance limit addressed in Enhancement 3 includes the design cycles (UFSAR Tables 5-2 and 5-23) and other cycles assumed in flaw evaluations (e.g., flaw tolerance and crack growth evaluations) as well as the CUF and environmental CUF limit.

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3	B3.1	B-281	<p>The following reference addresses stress-based fatigue crack growth analyses and related activities (AD-EG-ALL-1632, Revision 2, Integrated Fatigue Management, Section 5.5.5, Item 2.c). The procedure also refers to the FatiguePro and WESTEM software as applicable computer software.</p> <p>These observations suggest that the Fatigue monitoring program uses stress-based monitoring for fatigue management. However, SLRA Section B3.1 does not clearly discuss the stress-based monitoring activities that are conducted as part of the Fatigue Monitoring program.</p> <p>In addition to the stress-based monitoring activities, the staff also needs to confirm that automatic cycle counting are performed by using the FatiguePro and WESTEM software in the Fatigue Monitoring program.</p>	<ol style="list-style-type: none"> 1. Describe the stress-based monitoring activities that are performed in the Fatigue Monitoring program, including the components under the stress-based fatigue monitoring. 2. Discuss the stress-based fatigue crack growth monitoring activities and related analyses that are referenced in the program procedure (AD-EG-ALL-1632, Revision 2, Item 2.c). 3. Clarify whether automatic cycle counting are performed by the using the FatiguePro and WESTEM software in the Fatigue Monitoring program.
4	UFSAR Table 18-1		<p>UFSAR, Table 18-1 lists the programs, activities and TLAAs for the initial license renewal term (60-year operation). The table does not identify the Fatigue Monitoring program but does identify the Thermal Fatigue Management program related to fatigue monitoring activities and TLAAs.</p>	<ol style="list-style-type: none"> 1. Clarify whether the Thermal Fatigue Management in UFSAR Table 18-1 is the existing program of the Fatigue Monitoring program for the subsequent period of extended operation. If not,

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			The staff needs to clarify whether the existing Thermal Fatigue Management is the existing program of the Fatigue Monitoring program for the subsequent period of extended operation.	identify the existing program of the Fatigue Monitoring program.