for the assemblies experiencing fluence gradients outside the bounds of the measurement database was augmented with the same approach as demonstrated in the Response to SNPB RAI-6 in Reference 7.

The ACE/ATRIUM 11 critical power correlation (Reference 8) is used for the ATRIUM 11 fuel assemblies and the ACE/ATRIUM 10XM critical power correlation (Reference 9) is used for the ATRIUM 10XM fuel assemblies. The fuel- and plant-related uncertainties used in the BFE2-23 SLMCPR analysis are presented in Table 1. The radial and nodal power uncertainties used in the analysis include the effects of up to 50 % of the local power range monitors (LPRM) out-of-service, up to 18 traveling in-core probe (TIP) channels out-of-service, and a 2,500 effective full power hour (EFPH) LPRM calibration interval.

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Both the ACE/ATRIUM 11 (Reference 8) and the ACE/ATRIUM 10XM (Reference 9) critical power correlations have an SER restriction limiting the local peaking factor to **[ ]** Fuel expected to be resident in BFE2-23 has been designed to be below this limit. The maximum local peaking factor for the fresh ATRIUM 11 lattice is **[ ]** During each Monte Carlo trial of the SLMCPR calculation, all fuel rods in each assembly are evaluated using perturbed input parameters and the appropriate critical power correlation to determine the number of rods predicted to be in boiling transition. Key input parameters perturbed include nodal power, **[ ]** and assembly flow, etc. **[**

] The base additive constant uncertainty